

■工业用多层片式陶瓷电容器
Industrial MLCC

◆应用范围
Application



* 产品专门设计应用于工业级电子自动化设备、网络核心设备及其相关电子产品

The products are specially designed and applied to industrial electronic automation equipment, network core equipment and related electronic products

* 产品具有高可靠性，适用于应用条件苛刻、质量要求高、低失效率的各类电子产品

The product has high reliability and is suitable for various electronic products with harsh application conditions, high quality requirements and low failure rate.

* 执行标准：GB/T 21041-2007 GB/T 21042-2007

Executive Standard: GB/T 21041-2007 GB/T 21042-2007

■修订履历 Revision History

[illegible]

注：1.上述所提供之内容为产品规格说明。在产品未变更时，风华保有修改此内容不另行通知之所有权利，任何产品变更将会以 P C N 通知客户。

1. The content provided above is the produce specification, if the product is not changed, FENGHUA reserves all the right to modify this content without prior notice. any product change will be notified to the customer by PCN.

2.产品规格书中,同规格同容量同温度特性可交付的高电压型号规格,可以完全覆盖低压;同规格同容量同电压产品,温度特性 X7R 产品可覆盖 X7S,X7T,X6S,X5R (如 IM02B104K250NT 可以覆盖 IM02BS104K250NT,IM02BT104K250NT, IM02DS104K250NT, IM02X104K250NT),规格书中就不再列出详细型号规格。

2. In this product specification, the high Voltage model specifications that can be delivered with the same specification and the same capacity and temperature characteristics can completely cover the low Voltage; Same specifications, same capacity, same Voltage products ,Temperature characteristic X7R products covering X7S,X7T,X6S,X5R(such as IM02B104K250NT can cover IM02BS104K250NT,IM02BT104K250NT,IM02DS104K250NT,IM02X104K250NT) , The specification is no longer listed in this product specification.

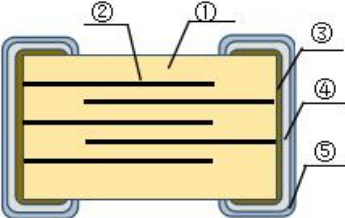
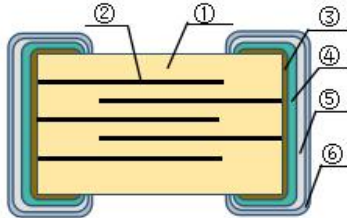
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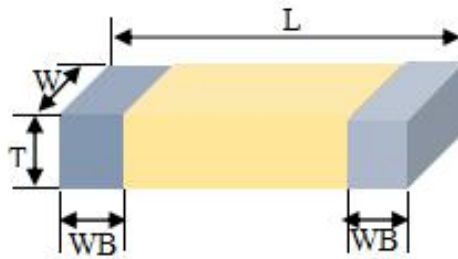
◆型号表示法
How To Order

IM	05	CG	101	J	500	N	T		
通用型工规品 General Industrial Series			标称容量 Nominal Capacitance		额定电压 Rated Voltage 单位(unit): V		包装方式 Package Styles		
尺寸规格 Size Code		表示方式 Express Method	实际值 Actual Value	表示方式 Express Method	实际值 Actual Value	表示方式 Express Method	包装方式 Package Styles		
		0R5	0.5	6R3	6.3	T	编带 7 寸 盘包装 Braided 7 inch disc packing		
		1R0	1.0	500	50×10^0				
		102	10×10^2	201	20×10^1	D	编带 13 寸 盘包装 Braided 13 inch disc packing		
		注：头两位数字为有效数字，第三位数字为 0 的个数；R 为小数点。 Note: the first two digits are significant; third digit denotes number of zeros; R=decimal point.		注：头两位数字为有效数字，第三位数字为 0 的个数；R 为小数点。 Note: the first two digits are significant; third digit denotes number of zeros; R=decimal point.					
尺寸规格 Size Code	EIA	长×宽 (L×W) mm							
01	0201	0.6×0.3							
02	0402	1.00×0.50							
03	0603	1.60×0.80							
05	0805	2.00×1.25							
06	1206	3.20×1.60							
10	1210	3.20×2.50							
08	1808	4.50×2.00							
12	1812	4.50×3.20							
20	2220	5.70×5.00							
		介质种类 Dielectric Code						端头材料 Terminal Material Styles	
		介质种类 Dielectric Code	介质材料 Dielectric					端头类别 Termination Styles	表示方式 Express Method
		CG	C0G					柔性端头 The flexible Termination	A
		X	X5R					三层电镀端头 Nickel Barrier Termination	N
		B	X7R						
		BS	X7S						
		BT	X7T						
		DS	X6S						
		DT	X6T						
				容量误差 Capacitance Tolerance					
				代码 Code	误差 Tolerance	备注 Note			
				A	±0.05pF	A、B、C、D 级误差适用于容量 ≤ 10pF 的产品。 These Capacitance tolerance A, B, C, D are just applicable the capacitance that equals to or less than 10pF。			
				B	±0.10pF				
				C	±0.25pF				
				D	±0.50pF				
				F	±1%				
				G	±2%				
				J	±5%				
				K	±10%				
				M	±20%				
				S	-20% +50%				
				Z	-20% +80%				

◆ 产品结构

◆产品结构

项目 Item	N 端头 (Cu/Ni/Sn 三层端头) N-Terminal (Cu/Ni/Sn Three-layer Terminal)	A 端头 (柔性端头) A-Terminal (Flexible Terminal)
结构示意图 Structure Diagram		
代码描述 Code Description	①陶瓷介质(Ceramic Dielectric) ②镍电极(Nickel Electrode) ③铜电极层(Copper electrode Layer) ④镍层(Nickel Layer) ⑤锡层(Tin Layer)	①陶瓷介质(Ceramic Dielectric) ②镍电极(Nickel Electrode) ③铜电极层(Copper electrode Layer) ④导电性树脂 (Conductive Resin) ⑤镍层(Nickel Layer) ⑥锡层(Tin Layer)

◆产品尺寸
Product Dimensions


备注：1、产品具体厚度“T”查阅本承认书中“容量范围及其电压”。

2、可根据客户的特殊要求设计符合客户需求的产品。

Note: 1、The specific thickness of the product can read “capacity range and Voltage” in this approval sheet.

2、We can design according to customer special requirements

≤50V 通用产品

			尺寸 Dimensions (mm)				尺寸代码 Size code
型号 Type	尺寸代码 British	公制表示 Metric expression	L	W	T	WB	
IM01	0201	0603	0.60±0.03	0.30±0.03	0.30±0.03	0.15±0.05	BA
			0.60±0.09	0.30±0.09	0.30±0.09	0.15±0.05	BB
IM02	0402	1005	1.00±0.05	0.50±0.05	0.50±0.05	0.25±0.10	CA
			1.00±0.15	0.50±0.15	0.50±0.15	0.25±0.10	CB
			1.00±0.20	0.50±0.20	0.50±0.20	0.25±0.10	CC
IM03	0603	1608	1.60±0.10	0.80±0.10	0.80±0.10	0.35±0.20	DA
			1.60±0.20	0.80±0.20	0.80±0.20	0.35±0.20	DB
IM05	0805	2012	2.00±0.20	1.25±0.20	0.80±0.20	0.50±0.20	EA
					1.25±0.20		EB
IM06	1206	3216	3.20±0.30	1.60±0.30	0.80±0.20	0.60±0.30	FA
					1.25±0.20		FB
					1.60±0.30		FC
IM10	1210	3225	3.20±0.30	2.50±0.30	1.25±0.20	0.60±0.30	GA
					1.60±0.30		GB
					2.50±0.30		GD
IM08	1808	4520	4.50±0.40	2.00±0.20	1.60±0.30	0.60±0.30	HA
IM12	1812	4532	4.50±0.40	3.20±0.30	1.60±0.30	0.60±0.30	IB
					2.50±0.30		ID
IM20	2220	5750	5.70±0.40	5.00±0.40	1.60±0.30	0.70±0.30	LA
					2.00±0.30		LB

≥100V 中高压产品

			尺寸 Dimensions (mm)				尺寸代码 Size code
型号 Type	尺寸代码 British	公制表示 Metric expression	L	W	T	WB	
IM02	0402	1005	1.00±0.05	0.50±0.05	0.50±0.05	0.25±0.10	CA
IM03	0603	1608	1.60±0.10	0.80±0.10	0.80±0.10	0.35±0.20	DA
IM05	0805	2012	2.00±0.20	1.25±0.20	0.80±0.20	0.50±0.20	EA
					1.25±0.20		EB
IM06	1206	3216	3.20±0.30	1.60±0.30	0.80±0.20	0.60±0.30	FA
					1.25±0.20		FB
					1.60±0.30		FC
IM10	1210	3225	3.20±0.30	2.50±0.30	1.25±0.20	0.60±0.30	GA
					1.60±0.30		GB
					2.00±0.30		GC
					2.50±0.30		GD
IM08	1808	4520	4.50±0.40	2.00±0.20	1.60±0.30	0.60±0.30	HA
					2.00±0.30		HB
IM12	1812	4532	4.50±0.40	3.20±0.30	1.25±0.20	0.60±0.30	IA
					1.60±0.30		IB
					2.00±0.30		IC
					2.50±0.30		ID
IM20	2220	5750	5.70±0.40	5.00±0.40	1.60±0.30	0.70±0.30	LA
					2.00±0.30		LB
					2.50±0.30		LC

◆温度系数/特性 Temperature Coefficient /Characteristics

介质种类 Dielectric	参考温度点 Reference Temperature Point	标称温度系数 Temperature Coefficient	工作温度范围 Operation Temperature Range
C0G	25°C	0±30 ppm/°C	-55°C~125°C
X5R	25°C	±15%	-55°C~85°C
X6S	25°C	±22%	-55°C~105°C
X6T	25°C	-33%~+22%	-55°C~105°C
X7R	25°C	±15%	-55°C~125°C
X7S	25°C	±22%	-55°C~125°C
X7T	25°C	-33%~+22%	-55°C~125°C

◆容量范围及其电压
Capacitance Range and Operating Voltage

* II 类电容器具体电压对应容量及厚度情况列表

A list of the specific Voltage-specific capacitors of Class II capacitors

尺寸 Dimension	IM01											
材料 Dielectric	X7R				X7S				X7T			
容量/电压 Capacity/ Voltage	≤10V	16V	25V	50V	≤10V	16V	25V	50V	≤10V	16V	25V	50V
100pF	BA	BA	BA	BA	BA	BA	BA	BA	BA	BA	BA	BA
120pF	BA	BA	BA	BA	BA	BA	BA	BA	BA	BA	BA	BA
150pF	BA	BA	BA	BA	BA	BA	BA	BA	BA	BA	BA	BA
180pF	BA	BA	BA	BA	BA	BA	BA	BA	BA	BA	BA	BA
220pF	BA	BA	BA	BA	BA	BA	BA	BA	BA	BA	BA	BA
470pF	BA	BA	BA	BA	BA	BA	BA	BA	BA	BA	BA	BA
680pF	BA	BA	BA	BA	BA	BA	BA	BA	BA	BA	BA	BA
1nF	BA	BA	BA	BA	BA	BA	BA	BA	BA	BA	BA	BA
1.5nF	BA	BA	BA	BA	BA	BA	BA	BA	BA	BA	BA	BA
1.8nF	BA	BA	BA	BA	BA	BA	BA	BA	BA	BA	BA	BA
2.2nF	BA	BA	BA	BA	BA	BA	BA	BA	BA	BA	BA	BA
2.7nF	BA	BA	BA	BA	BA	BA	BA	BA	BA	BA	BA	BA
3.3nF	BA	BA	BA	BA	BA	BA	BA	BA	BA	BA	BA	BA
3.9nF	BA	BA	BA	BA	BA	BA	BA	BA	BA	BA	BA	BA
4.7nF	BA	BA	BA	BA	BA	BA	BA		BA	BA	BA	
5.6nF	BA	BA	BA		BA	BA	BA		BA	BA	BA	
6.8nF	BA	BA	BA		BA	BA	BA		BA	BA	BA	
10nF	BA	BA	BA		BA	BA	BA		BA	BA	BA	
15nF					BA	BA			BA	BA		
18nF					BA	BA			BA	BA		
22nF					BA	BA			BA	BA		
27nF					BA	BA			BA	BA		
33nF					BA	BA			BA	BA		
47nF					BA	BA			BA	BA		
100nF					BB	BB			BB	BB		

代码 Code	BA	BB
T	0.30±0.03	0.30±0.09

尺寸 Dimension	IM01											
材料 Dielectric	X6S				X6T				X5R			
容量/电压 Capacity/ Voltage	≤10V	16V	25V	50V	≤10V	16V	25V	50V	≤10V	16V	25V	50V
100pF	BA	BA	BA	BA	BA	BA	BA	BA	BA	BA	BA	BA
120pF	BA	BA	BA	BA	BA	BA	BA	BA	BA	BA	BA	BA
150pF	BA	BA	BA	BA	BA	BA	BA	BA	BA	BA	BA	BA
180pF	BA	BA	BA	BA	BA	BA	BA	BA	BA	BA	BA	BA
220pF	BA	BA	BA	BA	BA	BA	BA	BA	BA	BA	BA	BA
470pF	BA	BA	BA	BA	BA	BA	BA	BA	BA	BA	BA	BA
680pF	BA	BA	BA	BA	BA	BA	BA	BA	BA	BA	BA	BA
1nF	BA	BA	BA	BA	BA	BA	BA	BA	BA	BA	BA	BA
1.5nF	BA	BA	BA	BA	BA	BA	BA	BA	BA	BA	BA	BA
1.8nF	BA	BA	BA	BA	BA	BA	BA	BA	BA	BA	BA	BA
2.2nF	BA	BA	BA	BA	BA	BA	BA	BA	BA	BA	BA	BA
2.7nF	BA	BA	BA	BA	BA	BA	BA	BA	BA	BA	BA	BA
3.3nF	BA	BA	BA	BA	BA	BA	BA	BA	BA	BA	BA	BA
3.9nF	BA	BA	BA	BA	BA	BA	BA	BA	BA	BA	BA	BA
4.7nF	BA	BA	BA	BA	BA	BA	BA	BA	BA	BA	BA	BA
5.6nF	BA	BA	BA		BA	BA	BA		BA	BA	BA	
6.8nF	BA	BA	BA		BA	BA	BA		BA	BA	BA	
10nF	BA	BA	BA		BA	BA	BA		BA	BA	BA	
15nF	BA	BA			BA	BA			BA	BA		
18nF	BA	BA			BA	BA			BA	BA		
22nF	BA	BA			BA	BA			BA	BA		
27nF	BA	BA			BA	BA			BA	BA		
33nF	BA	BA			BA	BA			BA	BA		
47nF	BA	BA			BA	BA			BA	BA		
100nF	BB	BB			BB	BB			BB	BB		

代码 Code	BA	BB
T	0.30±0.03	0.30±0.09

尺寸 Dimension	IM02														
材料 Dielectric	X7R					X7S					X7T				
容量/电压 Capacity/ Voltage	≤10V	16V	25V	50V	100V	≤10V	16V	25V	50V	100V	≤10V	16V	25V	50V	100V
100pF	CA	CA	CA	CA		CA	CA	CA	CA		CA	CA	CA	CA	
120pF	CA	CA	CA	CA		CA	CA	CA	CA		CA	CA	CA	CA	
150pF	CA	CA	CA	CA	CA	CA	CA	CA	CA	CA	CA	CA	CA	CA	CA
180pF	CA	CA	CA	CA	CA	CA	CA	CA	CA	CA	CA	CA	CA	CA	CA
220pF	CA	CA	CA	CA	CA	CA	CA	CA	CA	CA	CA	CA	CA	CA	CA
470pF	CA	CA	CA	CA	CA	CA	CA	CA	CA	CA	CA	CA	CA	CA	CA
680pF	CA	CA	CA	CA	CA	CA	CA	CA	CA	CA	CA	CA	CA	CA	CA
1nF	CA	CA	CA	CA	CA	CA	CA	CA	CA	CA	CA	CA	CA	CA	CA
1.5nF	CA	CA	CA	CA	CA	CA	CA	CA	CA	CA	CA	CA	CA	CA	CA
1.8nF	CA	CA	CA	CA	CA	CA	CA	CA	CA	CA	CA	CA	CA	CA	CA
2.2nF	CA	CA	CA	CA	CA	CA	CA	CA	CA	CA	CA	CA	CA	CA	CA
2.7nF	CA	CA	CA	CA	CA	CA	CA	CA	CA	CA	CA	CA	CA	CA	CA
3.3nF	CA	CA	CA	CA	CA	CA	CA	CA	CA	CA	CA	CA	CA	CA	CA
3.9nF	CA	CA	CA	CA	CA	CA	CA	CA	CA	CA	CA	CA	CA	CA	CA
4.7nF	CA	CA	CA	CA	CA	CA	CA	CA	CA	CA	CA	CA	CA	CA	CA
5.6nF	CA	CA	CA	CA	CA	CA	CA	CA	CA	CA	CA	CA	CA	CA	CA
6.8nF	CA	CA	CA	CA	CA	CA	CA	CA	CA	CA	CA	CA	CA	CA	CA
10nF	CA	CA	CA	CA	CA	CA	CA	CA	CA	CA	CA	CA	CA	CA	CA
15nF	CA	CA	CA	CA		CA	CA	CA	CA		CA	CA	CA	CA	
18nF	CA	CA	CA	CA		CA	CA	CA	CA		CA	CA	CA	CA	
27nF	CA	CA	CA	CA		CA	CA	CA	CA		CA	CA	CA	CA	
33nF	CA	CA	CA	CA		CA	CA	CA	CA		CA	CA	CA	CA	
22nF	CA	CA	CA	CA		CA	CA	CA	CA		CA	CA	CA	CA	
47nF	CA	CA	CA	CA		CA	CA	CA	CA		CA	CA	CA	CA	
68nF	CA	CA	CA	CA		CA	CA	CA	CA		CA	CA	CA	CA	
100nF	CA	CA	CA	CA		CA	CA	CA	CA		CA	CA	CA	CA	
220nF						CB	CB				CB	CB	CB		
270nF											CB	CB			
330nF											CB	CB			
470nF											CB	CB			
680nF											CB				
1uF											CB				

代码 Code	CA	CB
T	0.50±0.05	0.50±0.15

尺寸 Dimension	IM02														
材料 Dielectric	X6S					X6T					X5R				
容量/电压 Capacity/ Voltage	≤10V	16V	25V	50V	100V	≤10V	16V	25V	50V	100V	≤10V	16V	25V	50V	100V
100pF	CA	CA	CA	CA		CA	CA	CA	CA		CA	CA	CA	CA	
120pF	CA	CA	CA	CA		CA	CA	CA	CA		CA	CA	CA	CA	
150pF	CA	CA	CA	CA		CA	CA	CA	CA		CA	CA	CA	CA	
180pF	CA	CA	CA	CA		CA	CA	CA	CA		CA	CA	CA	CA	
220pF	CA	CA	CA	CA		CA	CA	CA	CA		CA	CA	CA	CA	
470pF	CA	CA	CA	CA		CA	CA	CA	CA		CA	CA	CA	CA	
680pF	CA	CA	CA	CA		CA	CA	CA	CA		CA	CA	CA	CA	
1nF	CA	CA	CA	CA	CA	CA	CA	CA	CA	CA	CA	CA	CA	CA	CA
1.5nF	CA	CA	CA	CA	CA	CA	CA	CA	CA	CA	CA	CA	CA	CA	CA
1.8nF	CA	CA	CA	CA	CA	CA	CA	CA	CA	CA	CA	CA	CA	CA	CA
2.2nF	CA	CA	CA	CA	CA	CA	CA	CA	CA	CA	CA	CA	CA	CA	CA
2.7nF	CA	CA	CA	CA	CA	CA	CA	CA	CA	CA	CA	CA	CA	CA	CA
3.3nF	CA	CA	CA	CA	CA	CA	CA	CA	CA	CA	CA	CA	CA	CA	CA
3.9nF	CA	CA	CA	CA	CA	CA	CA	CA	CA	CA	CA	CA	CA	CA	CA
4.7nF	CA	CA	CA	CA	CA	CA	CA	CA	CA	CA	CA	CA	CA	CA	CA
5.6nF	CA	CA	CA	CA		CA	CA	CA	CA		CA	CA	CA	CA	
6.8nF	CA	CA	CA	CA		CA	CA	CA	CA		CA	CA	CA	CA	
10nF	CA	CA	CA	CA		CA	CA	CA	CA		CA	CA	CA	CA	
15nF	CA	CA	CA	CA		CA	CA	CA	CA		CA	CA	CA	CA	
18nF	CA	CA	CA	CA		CA	CA	CA	CA		CA	CA	CA	CA	
22nF	CA	CA	CA	CA		CA	CA	CA	CA		CA	CA	CA	CA	
27nF	CA	CA	CA	CA		CA	CA	CA	CA		CA	CA	CA	CA	
33nF	CA	CA	CA	CA		CA	CA	CA	CA		CA	CA	CA	CA	
47nF	CA	CA	CA	CA		CA	CA	CA	CA		CA	CA	CA	CA	
68nF	CA	CA	CA	CA		CA	CA	CA	CA		CA	CA	CA	CA	
100nF	CA	CA	CA	CA		CA	CA	CA	CA		CA	CA	CA	CA	
220nF	CB	CB	CB			CB	CB	CB			CB	CB	CB		
270nF						CB	CB				CB	CB			
330nF						CB	CB				CB	CB			
470nF						CB	CB				CB	CB			
680nF						CB					CB	CB			
1uF						CB					CB	CB			

代码 Code	CA	CB
T	0.50±0.05	0.50±0.15

尺寸 Dimension	IM03													
材料 Dielectric	X7R							X7S						
容量/电压 Capacity/ Voltage	≤6.3V	10V	16V	25V	50V	100V	200-250 V	≤6.3V	10V	16V	25V	50V	100V	200-250 V
150pF	DA	DA	DA	DA	DA	DA	DA	DA	DA	DA	DA	DA	DA	DA
180pF	DA	DA	DA	DA	DA	DA	DA	DA	DA	DA	DA	DA	DA	DA
220pF	DA	DA	DA	DA	DA	DA	DA	DA	DA	DA	DA	DA	DA	DA
470pF	DA	DA	DA	DA	DA	DA	DA	DA	DA	DA	DA	DA	DA	DA
680pF	DA	DA	DA	DA	DA	DA	DA	DA	DA	DA	DA	DA	DA	DA
1nF	DA	DA	DA	DA	DA	DA	DA	DA	DA	DA	DA	DA	DA	DA
1.5nF	DA	DA	DA	DA	DA	DA	DA	DA	DA	DA	DA	DA	DA	DA
1.8nF	DA	DA	DA	DA	DA	DA	DA	DA	DA	DA	DA	DA	DA	DA
2.2nF	DA	DA	DA	DA	DA	DA	DA	DA	DA	DA	DA	DA	DA	DA
2.7nF	DA	DA	DA	DA	DA	DA	DA	DA	DA	DA	DA	DA	DA	DA
3.3nF	DA	DA	DA	DA	DA	DA	DA	DA	DA	DA	DA	DA	DA	DA
3.9nF	DA	DA	DA	DA	DA	DA	DA	DA	DA	DA	DA	DA	DA	DA
4.7nF	DA	DA	DA	DA	DA	DA	DA	DA	DA	DA	DA	DA	DA	DA
5.6nF	DA	DA	DA	DA	DA	DA	DA	DA	DA	DA	DA	DA	DA	DA
6.8nF	DA	DA	DA	DA	DA	DA	DA	DA	DA	DA	DA	DA	DA	DA
10nF	DA	DA	DA	DA	DA	DA	DA	DA	DA	DA	DA	DA	DA	DA
15nF	DA	DA	DA	DA	DA	DA		DA	DA	DA	DA	DA	DA	
18nF	DA	DA	DA	DA	DA	DA		DA	DA	DA	DA	DA	DA	
22nF	DA	DA	DA	DA	DA	DA		DA	DA	DA	DA	DA	DA	
27nF	DA	DA	DA	DA	DA	DA		DA	DA	DA	DA	DA	DA	
33nF	DA	DA	DA	DA	DA	DA		DA	DA	DA	DA	DA	DA	
47nF	DA	DA	DA	DA	DA	DA		DA	DA	DA	DA	DA	DA	
56nF	DA	DA	DA	DA	DA	DA		DA	DA	DA	DA	DA	DA	
68nF	DA	DA	DA	DA	DA	DA		DA	DA	DA	DA	DA	DA	
100nF	DA	DA	DA	DA	DA	DA		DA	DA	DA	DA	DA	DA	
220nF	DA	DA	DA	DA	DA			DA	DA	DA	DA	DA		
270nF	DA	DA	DA	DA	DA			DA	DA	DA	DA	DA		
330nF	DA	DA	DA	DA	DA			DA	DA	DA	DA	DA		
470nF	DA	DA	DA	DA	DA			DA	DA	DA	DA	DA		
680nF								DA	DA	DA	DA	DA		
1uF								DB	DB	DB	DB	DB		

代码 Code	DA	DB
T	0.80±0.10	0.80±0.20

尺寸 Dimension	IM03												
材料 Dielectric	X7T							X6S					
容量/电压 Capacity/ Voltage	≤6.3V	10V	16V	25V	50V	100V	200-250 V	10V	16V	25V	50V	100V	200V
150pF	DA	DA	DA	DA	DA	DA	DA	DA	DA	DA	DA	DA	DA
180pF	DA	DA	DA	DA	DA	DA	DA	DA	DA	DA	DA	DA	DA
220pF	DA	DA	DA	DA	DA	DA	DA	DA	DA	DA	DA	DA	DA
470pF	DA	DA	DA	DA	DA	DA	DA	DA	DA	DA	DA	DA	DA
680pF	DA	DA	DA	DA	DA	DA	DA	DA	DA	DA	DA	DA	DA
1nF	DA	DA	DA	DA	DA	DA	DA	DA	DA	DA	DA	DA	DA
1.5nF	DA	DA	DA	DA	DA	DA	DA	DA	DA	DA	DA	DA	DA
1.8nF	DA	DA	DA	DA	DA	DA	DA	DA	DA	DA	DA	DA	DA
2.2nF	DA	DA	DA	DA	DA	DA	DA	DA	DA	DA	DA	DA	DA
2.7nF	DA	DA	DA	DA	DA	DA	DA	DA	DA	DA	DA	DA	DA
3.3nF	DA	DA	DA	DA	DA	DA	DA	DA	DA	DA	DA	DA	DA
3.9nF	DA	DA	DA	DA	DA	DA	DA	DA	DA	DA	DA	DA	DA
4.7nF	DA	DA	DA	DA	DA	DA	DA	DA	DA	DA	DA	DA	DA
5.6nF	DA	DA	DA	DA	DA	DA	DA	DA	DA	DA	DA	DA	DA
6.8nF	DA	DA	DA	DA	DA	DA	DA	DA	DA	DA	DA	DA	DA
10nF	DA	DA	DA	DA	DA	DA	DA	DA	DA	DA	DA	DA	DA
15nF	DA	DA	DA	DA	DA	DA		DA	DA	DA	DA	DA	
18nF	DA	DA	DA	DA	DA	DA		DA	DA	DA	DA	DA	
22nF	DA	DA	DA	DA	DA	DA		DA	DA	DA	DA	DA	
27nF	DA	DA	DA	DA	DA	DA		DA	DA	DA	DA	DA	
33nF	DA	DA	DA	DA	DA	DA		DA	DA	DA	DA	DA	
47nF	DA	DA	DA	DA	DA	DA		DA	DA	DA	DA	DA	
56nF	DA	DA	DA	DA	DA	DA		DA	DA	DA	DA	DA	
68nF	DA	DA	DA	DA	DA	DA		DA	DA	DA	DA	DA	
100nF	DA	DA	DA	DA	DA	DA		DA	DA	DA	DA	DA	
220nF	DA	DA	DA	DA	DA			DA	DA	DA	DA		
270nF	DA	DA	DA	DA	DA			DA	DA	DA	DA		
330nF	DA	DA	DA	DA	DA			DA	DA	DA	DA		
470nF	DA	DA	DA	DA	DA			DA	DA	DA	DA		
680nF	DA	DA	DA	DA	DA			DA	DA	DA	DA		
1uF	DB	DB	DB	DB	DB			DB	DB	DB	DB		
1.5uF	DB	DB	DB	DB									
2.2uF	DB	DB	DB	DB									
3.3uF	DB	DB											
4.7uF	DB	DB											
6.8uF	DB												
10uF	DB												

代码 Code	DA	DB
T	0.80±0.10	0.80±0.20

尺寸 Dimension	IM03													
材料 Dielectric	X6T							X5R						
容量/电压 Capacity/ Voltage	≤6.3V	10V	16V	25V	50V	100V	200V	≤6.3V	10V	16V	25V	50V	100V	200-250 V
150pF	DA	DA	DA	DA	DA	DA	DA	DA	DA	DA	DA	DA	DA	DA
180pF	DA	DA	DA	DA	DA	DA	DA	DA	DA	DA	DA	DA	DA	DA
220pF	DA	DA	DA	DA	DA	DA	DA	DA	DA	DA	DA	DA	DA	DA
470pF	DA	DA	DA	DA	DA	DA	DA	DA	DA	DA	DA	DA	DA	DA
680pF	DA	DA	DA	DA	DA	DA	DA	DA	DA	DA	DA	DA	DA	DA
1nF	DA	DA	DA	DA	DA	DA	DA	DA	DA	DA	DA	DA	DA	DA
1.5nF	DA	DA	DA	DA	DA	DA	DA	DA	DA	DA	DA	DA	DA	DA
1.8nF	DA	DA	DA	DA	DA	DA	DA	DA	DA	DA	DA	DA	DA	DA
2.2nF	DA	DA	DA	DA	DA	DA	DA	DA	DA	DA	DA	DA	DA	DA
2.7nF	DA	DA	DA	DA	DA	DA	DA	DA	DA	DA	DA	DA	DA	DA
3.3nF	DA	DA	DA	DA	DA	DA	DA	DA	DA	DA	DA	DA	DA	DA
3.9nF	DA	DA	DA	DA	DA	DA	DA	DA	DA	DA	DA	DA	DA	DA
4.7nF	DA	DA	DA	DA	DA	DA	DA	DA	DA	DA	DA	DA	DA	DA
5.6nF	DA	DA	DA	DA	DA	DA	DA	DA	DA	DA	DA	DA	DA	DA
6.8nF	DA	DA	DA	DA	DA	DA	DA	DA	DA	DA	DA	DA	DA	DA
10nF	DA	DA	DA	DA	DA	DA	DA	DA	DA	DA	DA	DA	DA	DA
15nF	DA	DA	DA	DA	DA	DA		DA	DA	DA	DA	DA	DA	
18nF	DA	DA	DA	DA	DA	DA		DA	DA	DA	DA	DA	DA	
22nF	DA	DA	DA	DA	DA	DA		DA	DA	DA	DA	DA	DA	
27nF	DA	DA	DA	DA	DA	DA		DA	DA	DA	DA	DA	DA	
33nF	DA	DA	DA	DA	DA	DA		DA	DA	DA	DA	DA	DA	
47nF	DA	DA	DA	DA	DA	DA		DA	DA	DA	DA	DA	DA	
56nF	DA	DA	DA	DA	DA	DA		DA	DA	DA	DA	DA	DA	
68nF	DA	DA	DA	DA	DA	DA		DA	DA	DA	DA	DA	DA	
100nF	DA	DA	DA	DA	DA	DA		DA	DA	DA	DA	DA	DA	
220nF	DA	DA	DA	DA	DA			DA	DA	DA	DA	DA		
270nF	DA	DA	DA	DA	DA			DA	DA	DA	DA	DA		
330nF	DA	DA	DA	DA	DA			DA	DA	DA	DA	DA		
470nF	DA	DA	DA	DA	DA			DA	DA	DA	DA	DA		
680nF	DA	DA	DA	DA	DA			DA	DA	DA	DA	DA		
1uF	DB	DB	DB	DB	DB			DB	DB	DB	DB	DB		
1.5uF	DB	DB	DB	DB				DB	DB	DB	DB			
2.2uF	DB	DB	DB	DB				DB	DB	DB	DB			
3.3uF	DB	DB						DB	DB					
4.7uF	DB	DB						DB	DB					
6.8uF	DB							DB	DB					
10uF	DB							DB	DB					

代码 Code	DA	DB
T	0.80±0.10	0.80±0.20

尺寸 Dimension	IM05															
材料 Dielectric	X7R								X7S							
容量/电压 Capacity/ Voltage	≤6.3V	10V	16V	25V	50V	100V	200-250 V	500-630 V	≤6.3V	10V	16V	25V	50V	100V	200-250 V	500-630 V
150pF	EA	EA	EA	EA	EA	EA	EA		EA	EA	EA	EA	EA	EA	EA	
180pF	EA	EA	EA	EA	EA	EA	EA		EA	EA	EA	EA	EA	EA	EA	
220pF	EA	EA	EA	EA	EA	EA	EA		EA	EA	EA	EA	EA	EA	EA	
470pF	EA	EA	EA	EA	EA	EA	EA		EA	EA	EA	EA	EA	EA	EA	
680pF	EA	EA	EA	EA	EA	EA	EA		EA	EA	EA	EA	EA	EA	EA	
1nF	EA	EA	EA	EA	EA	EA	EA	EB	EA	EA	EA	EA	EA	EA	EA	EB
1.5nF	EA	EA	EA	EA	EA	EA	EA	EB	EA	EA	EA	EA	EA	EA	EA	EB
1.8nF	EA	EA	EA	EA	EA	EA	EA	EB	EA	EA	EA	EA	EA	EA	EA	EB
2.2nF	EA	EA	EA	EA	EA	EA	EA	EB	EA	EA	EA	EA	EA	EA	EA	EB
2.7nF	EA	EA	EA	EA	EA	EA	EA	EB	EA	EA	EA	EA	EA	EA	EA	EB
3.3nF	EA	EA	EA	EA	EA	EA	EA	EB	EA	EA	EA	EA	EA	EA	EA	EB
3.9nF	EA	EA	EA	EA	EA	EA	EA	EB	EA	EA	EA	EA	EA	EA	EA	EB
4.7nF	EA	EA	EA	EA	EA	EA	EA	EB	EA	EA	EA	EA	EA	EA	EA	EB
5.6nF	EA	EA	EA	EA	EA	EA	EA	EB	EA	EA	EA	EA	EA	EA	EA	EB
6.8nF	EA	EA	EA	EA	EA	EA	EA	EB	EA	EA	EA	EA	EA	EA	EA	EB
10nF	EA	EA	EA	EA	EA	EA	EA	EB	EA	EA	EA	EA	EA	EA	EA	EB
15nF	EA	EA	EA	EA	EA	EA	EA		EA	EA	EA	EA	EA	EA	EA	
18nF	EA	EA	EA	EA	EA	EA	EA		EA	EA	EA	EA	EA	EA	EA	
22nF	EA	EA	EA	EA	EA	EA	EB		EA	EA	EA	EA	EA	EA	EB	
27nF	EA	EA	EA	EA	EA	EA	EB		EA	EA	EA	EA	EA	EA	EB	
33nF	EA	EA	EA	EA	EA	EA	EB		EA	EA	EA	EA	EA	EA	EB	
47nF	EA	EA	EA	EA	EA	EA			EA	EA	EA	EA	EA	EA		
56nF	EA	EA	EA	EA	EA	EA			EA	EA	EA	EA	EA	EA		
68nF	EA	EA	EA	EA	EA	EB			EA	EA	EA	EA	EA	EB		
100nF	EA	EA	EA	EA	EA	EB			EA	EA	EA	EA	EA	EB		
220nF	EA	EA	EA	EA	EA	EB			EA	EA	EA	EA	EA	EB		
270nF	EA	EA	EA	EA	EA				EA	EA	EA	EA	EA			
330nF	EA	EA	EA	EA	EA				EA	EA	EA	EA	EA			
470nF	EB	EB	EB	EB	EB				EB	EB	EB	EB	EB			
680nF	EB	EB	EB	EB	EB				EB	EB	EB	EB	EB			
1uF	EB	EB	EB	EB	EB				EB	EB	EB	EB	EB			
1.5uF	EB	EB	EB	EB	EB				EB	EB	EB	EB	EB			
2.2uF	EB	EB	EB	EB	EB				EB	EB	EB	EB	EB			
4.7uF	EB	EB	EB	EB					EB	EB	EB	EB				

代码 Code	EA	EB
T	0.80±0.20	1.25±0.20

尺寸 Dimension	IM05							
材料 Dielectric	X7T							
容量/电压 Capacity/ Voltage	≤6.3V	10V	16V	25V	50V	100V	200-250V	500-630V
150pF	EA	EA	EA	EA	EA	EA	EA	
180pF	EA	EA	EA	EA	EA	EA	EA	
220pF	EA	EA	EA	EA	EA	EA	EA	
470pF	EA	EA	EA	EA	EA	EA	EA	
680pF	EA	EA	EA	EA	EA	EA	EA	
1nF	EA	EA	EA	EA	EA	EA	EA	EB
1.5nF	EA	EA	EA	EA	EA	EA	EA	EB
1.8nF	EA	EA	EA	EA	EA	EA	EA	EB
2.2nF	EA	EA	EA	EA	EA	EA	EA	EB
2.7nF	EA	EA	EA	EA	EA	EA	EA	EB
3.3nF	EA	EA	EA	EA	EA	EA	EA	EB
3.9nF	EA	EA	EA	EA	EA	EA	EA	EB
4.7nF	EA	EA	EA	EA	EA	EA	EA	EB
5.6nF	EA	EA	EA	EA	EA	EA	EA	EB
6.8nF	EA	EA	EA	EA	EA	EA	EA	EB
10nF	EA	EA	EA	EA	EA	EA	EA	EB
15nF	EA	EA	EA	EA	EA	EA	EA	
18nF	EA	EA	EA	EA	EA	EA	EA	
22nF	EA	EA	EA	EA	EA	EA	EB	
27nF	EA	EA	EA	EA	EA	EA	EB	
33nF	EA	EA	EA	EA	EA	EA	EB	
47nF	EA	EA	EA	EA	EA	EA		
56nF	EA	EA	EA	EA	EA	EA		
68nF	EA	EA	EA	EA	EA	EB		
100nF	EA	EA	EA	EA	EA	EB		
220nF	EA	EA	EA	EA	EA	EB		
270nF	EA	EA	EA	EA	EA			
330nF	EA	EA	EA	EA	EA			
470nF	EB	EB	EB	EB	EB			
680nF	EB	EB	EB	EB	EB			
1uF	EB	EB	EB	EB	EB			
1.5uF	EB	EB	EB	EB	EB			
2.2uF	EB	EB	EB	EB	EB			
3.3uF	EB	EB	EB	EB				
4.7uF	EB	EB	EB	EB				
6.8uF	EB							
10uF	EB							
22uF	EB							

代码 Code	EA	EB
T	0.80±0.20	1.25±0.20

尺寸 Dimension	IM05							
材料 Dielectric	X6S/X6T							
容量/电压 Capacity/ Voltage	≤6.3V	10V	16V	25V	50V	100V	200-250V	500-630V
150pF	EA	EA	EA	EA	EA	EA	EA	
180pF	EA	EA	EA	EA	EA	EA	EA	
220pF	EA	EA	EA	EA	EA	EA	EA	
470pF	EA	EA	EA	EA	EA	EA	EA	
680pF	EA	EA	EA	EA	EA	EA	EA	
1nF	EA	EA	EA	EA	EA	EA	EA	EB
1.5nF	EA	EA	EA	EA	EA	EA	EA	EB
1.8nF	EA	EA	EA	EA	EA	EA	EA	EB
2.2nF	EA	EA	EA	EA	EA	EA	EA	EB
2.7nF	EA	EA	EA	EA	EA	EA	EA	EB
3.3nF	EA	EA	EA	EA	EA	EA	EA	EB
3.9nF	EA	EA	EA	EA	EA	EA	EA	EB
4.7nF	EA	EA	EA	EA	EA	EA	EA	EB
5.6nF	EA	EA	EA	EA	EA	EA	EA	EB
6.8nF	EA	EA	EA	EA	EA	EA	EA	EB
10nF	EA	EA	EA	EA	EA	EA	EA	EB
15nF	EA	EA	EA	EA	EA	EA	EB	
18nF	EA	EA	EA	EA	EA	EA	EB	
22nF	EA	EA	EA	EA	EA	EA	EB	
27nF	EA	EA	EA	EA	EA	EA	EB	
33nF	EA	EA	EA	EA	EA	EA	EB	
47nF	EA	EA	EA	EA	EA	EA		
56nF	EA	EA	EA	EA	EA	EA		
68nF	EA	EA	EA	EA	EA	EB		
100nF	EA	EA	EA	EA	EA	EB		
220nF	EA	EA	EA	EA	EA	EB		
270nF	EA	EA	EA	EA	EA			
330nF	EA	EA	EA	EA	EA			
470nF	EB	EB	EB	EB	EB			
680nF	EB	EB	EB	EB	EB			
1uF	EB	EB	EB	EB	EB			
1.5uF	EB	EB	EB	EB	EB			
2.2uF	EB	EB	EB	EB	EB			
3.3uF	EB	EB	EB	EB				
4.7uF	EB	EB	EB	EB				
6.8uF	EB	EB						
10uF	EB	EB						
22uF	EB							

代码 Code	EA	EB
T	0.80±0.20	1.25±0.20

尺寸 Dimension	IM05							
材料 Dielectric	X5R							
容量/电压 Capacity/ Voltage	≤6.3V	10V	16V	25V	50V	100V	200-250V	500-630V
150pF	EA	EA	EA	EA	EA	EA	EA	
180pF	EA	EA	EA	EA	EA	EA	EA	
220pF	EA	EA	EA	EA	EA	EA	EA	
470pF	EA	EA	EA	EA	EA	EA	EA	
680pF	EA	EA	EA	EA	EA	EA	EA	
1nF	EA	EA	EA	EA	EA	EA	EA	EB
1.5nF	EA	EA	EA	EA	EA	EA	EA	EB
1.8nF	EA	EA	EA	EA	EA	EA	EA	EB
2.2nF	EA	EA	EA	EA	EA	EA	EA	EB
2.7nF	EA	EA	EA	EA	EA	EA	EA	EB
3.3nF	EA	EA	EA	EA	EA	EA	EA	EB
3.9nF	EA	EA	EA	EA	EA	EA	EA	EB
4.7nF	EA	EA	EA	EA	EA	EA	EA	EB
5.6nF	EA	EA	EA	EA	EA	EA	EA	EB
6.8nF	EA	EA	EA	EA	EA	EA	EA	EB
10nF	EA	EA	EA	EA	EA	EA	EA	EB
15nF	EA	EA	EA	EA	EA	EA	EA	
18nF	EA	EA	EA	EA	EA	EA	EA	
22nF	EA	EA	EA	EA	EA	EA	EB	
27nF	EA	EA	EA	EA	EA	EA	EB	
33nF	EA	EA	EA	EA	EA	EA	EB	
47nF	EA	EA	EA	EA	EA	EA		
56nF	EA	EA	EA	EA	EA	EA		
68nF	EA	EA	EA	EA	EA	EB		
100nF	EA	EA	EA	EA	EA	EB		
220nF	EA	EA	EA	EA	EA	EB		
270nF	EA	EA	EA	EA	EA			
330nF	EA	EA	EA	EA	EA			
470nF	EB	EB	EB	EB	EB			
680nF	EB	EB	EB	EB	EB			
1uF	EB	EB	EB	EB	EB			
1.5uF	EB	EB	EB	EB	EB			
2.2uF	EB	EB	EB	EB	EB			
3.3uF	EB	EB	EB	EB				
4.7uF	EB	EB	EB	EB				
6.8uF	EB	EB	EB	EB				
10uF	EB	EB	EB	EB				
22uF	EB							

代码 Code	EA	EB
T	0.80±0.20	1.25±0.20

尺寸 Dimension	IM06											
材料 Dielectric	X7R											
容量/电压 Capacity/ Voltage	4V	6.3V	10V	16V	25V	50V	100V	200~250 V	500~630 V	1000V	2000V	2500V
100pF							FA	FA	FA	FB	FB	
120pF							FA	FA	FA	FB	FB	
150pF							FA	FA	FA	FB	FB	
180pF							FA	FA	FA	FB	FB	
220pF		FA	FA	FA	FA	FA	FA	FA	FA	FB	FB	
470pF		FA	FA	FA	FA	FA	FA	FA	FA	FB	FB	
680pF		FA	FA	FA	FA	FA	FA	FA	FA	FB	FB	
1nF		FA	FA	FA	FA	FA	FA	FA	FA	FB	FB	FB
1.5nF		FA	FA	FA	FA	FA	FA	FA	FA	FB	FB	
1.8nF		FA	FA	FA	FA	FA	FA	FA	FA	FB	FB	
2.2nF		FA	FA	FA	FA	FA	FA	FA	FA	FB	FB	
3.3nF		FA	FA	FA	FA	FA	FA	FA	FB	FB	FB	
3.9nF		FA	FA	FA	FA	FA	FA	FA	FB	FB	FB	
4.7nF		FA	FA	FA	FA	FA	FA	FA	FB	FB	FB	
5.6nF		FA	FA	FA	FA	FA	FA	FA	FB	FB	FC	
6.8nF		FA	FA	FA	FA	FA	FA	FA	FB	FB	FC	
10nF		FA	FA	FA	FA	FA	FA	FA	FB	FB		
15nF		FA	FA	FA	FA	FA	FA	FA	FB			
18nF		FA	FA	FA	FA	FA	FA	FA	FB			
22nF		FA	FA	FA	FA	FA	FA	FB	FB			
27nF		FA	FA	FA	FA	FA	FA	FB	FB			
33nF		FA	FA	FA	FA	FA	FA	FB	FB			
47nF		FA	FA	FA	FA	FA	FA	FB	FC			
56nF		FA	FA	FA	FA	FA	FA	FB				
68nF		FA	FA	FA	FA	FA	FB	FB				
100nF		FA	FA	FA	FA	FA	FB	FC				
150nF		FA	FA	FA	FA	FA	FB	FC				
220nF		FA	FA	FA	FA	FA	FB	FC				
270nF		FA	FA	FA	FA	FA	FB	FC				
330nF		FB	FB	FB	FB	FB	FB	FC				
470nF		FB	FB	FB	FB	FB	FC	FC				
680nF		FB	FB	FB	FB	FB	FC	FC				
1uF	FC	FC	FC	FC	FC	FC	FC					
1.5uF	FC	FC	FC	FC	FC	FC						
2.2uF	FC	FC	FC	FC	FC	FC						
3.3uF	FC	FC	FC	FC	FC							
4.7uF	FC	FC	FC	FC	FC							
10uF	FC	FC	FC	FC	FC							

代码 Code	FA	FB	FC
T	0.80±0.20	1.25±0.20	1.60±0.30

尺寸 Dimension	IM06											
材料 Dielectric	X7S											
容量/电压 Capacity/ Voltage	4V	6.3V	10V	16V	25V	50V	100V	200~250V	500~630V	1000V	2000V	2500V
100pF							FA	FA	FA	FB	FB	
120pF							FA	FA	FA	FB	FB	
150pF							FA	FA	FA	FB	FB	
180pF							FA	FA	FA	FB	FB	
220pF		FA	FA	FA	FA	FA	FA	FA	FA	FB	FB	
470pF		FA	FA	FA	FA	FA	FA	FA	FA	FB	FB	
680pF		FA	FA	FA	FA	FA	FA	FA	FA	FB	FB	
1nF		FA	FA	FA	FA	FA	FA	FA	FA	FB	FB	FB
1.5nF		FA	FA	FA	FA	FA	FA	FA	FA	FB	FB	
1.8nF		FA	FA	FA	FA	FA	FA	FA	FA	FB	FB	
2.2nF		FA	FA	FA	FA	FA	FA	FA	FA	FB	FB	
2.7nF		FA	FA	FA	FA	FA	FA	FA	FB	FB	FB	
3.3nF		FA	FA	FA	FA	FA	FA	FA	FB	FB	FB	
3.9nF		FA	FA	FA	FA	FA	FA	FA	FB	FB	FB	
4.7nF		FA	FA	FA	FA	FA	FA	FA	FB	FB	FB	
5.6nF		FA	FA	FA	FA	FA	FA	FA	FB	FB	FC	
6.8nF		FA	FA	FA	FA	FA	FA	FA	FB	FB	FC	
10nF		FA	FA	FA	FA	FA	FA	FA	FB	FB		
15nF		FA	FA	FA	FA	FA	FA	FA	FB			
18nF		FA	FA	FA	FA	FA	FA	FA	FB			
22nF		FA	FA	FA	FA	FA	FA	FB	FB			
27nF		FA	FA	FA	FA	FA	FA	FB	FB			
33nF		FA	FA	FA	FA	FA	FA	FB	FB			
47nF		FA	FA	FA	FA	FA	FA	FB	FC			
56nF		FA	FA	FA	FA	FA	FA	FB				
68nF		FA	FA	FA	FA	FA	FB	FB				
100nF		FA	FA	FA	FA	FA	FB	FC				
150nF		FA	FA	FA	FA	FA	FB	FC				
220nF		FA	FA	FA	FA	FA	FB	FC				
270nF		FA	FA	FA	FA	FA	FB	FC				
330nF		FB	FB	FB	FB	FB	FB	FC				
470nF		FB	FB	FB	FB	FB	FC	FC				
680nF		FB	FB	FB	FB	FB	FC	FC				
1uF	FC	FC	FC	FC	FC	FC	FC					
1.5uF	FC	FC	FC	FC	FC	FC						
2.2uF	FC	FC	FC	FC	FC	FC						
3.3uF	FC	FC	FC	FC	FC							
4.7uF	FC	FC	FC	FC	FC							

代码 Code	FA	FB	FC
T	0.80±0.20	1.25±0.20	1.60±0.30

尺寸 Dimension	IM06											
材料 Dielectric	X7T											
容量/电压 Capacity/ Voltage	4V	6.3V	10V	16V	25V	50V	100V	200~250V	500~630V	1000V	2000V	2500V
100pF							FA	FA	FA	FB	FB	
120pF							FA	FA	FA	FB	FB	
150pF							FA	FA	FA	FB	FB	
180pF							FA	FA	FA	FB	FB	
220pF		FA	FA	FA	FA	FA	FA	FA	FA	FB	FB	
470pF		FA	FA	FA	FA	FA	FA	FA	FA	FB	FB	
680pF		FA	FA	FA	FA	FA	FA	FA	FA	FB	FB	
1nF		FA	FA	FA	FA	FA	FA	FA	FA	FB	FB	FB
1.5nF		FA	FA	FA	FA	FA	FA	FA	FA	FB	FB	
1.8nF		FA	FA	FA	FA	FA	FA	FA	FA	FB	FB	
2.2nF		FA	FA	FA	FA	FA	FA	FA	FA	FB	FB	
2.7nF		FA	FA	FA	FA	FA	FA	FA	FB	FB	FB	
3.3nF		FA	FA	FA	FA	FA	FA	FA	FB	FB	FB	
3.9nF		FA	FA	FA	FA	FA	FA	FA	FB	FB	FB	
4.7nF		FA	FA	FA	FA	FA	FA	FA	FB	FB	FB	
5.6nF		FA	FA	FA	FA	FA	FA	FA	FB	FB	FC	
6.8nF		FA	FA	FA	FA	FA	FA	FA	FB	FB	FC	
10nF		FA	FA	FA	FA	FA	FA	FA	FB	FB		
15nF		FA	FA	FA	FA	FA	FA	FA	FB			
18nF		FA	FA	FA	FA	FA	FA	FA	FB			
22nF		FA	FA	FA	FA	FA	FA	FB	FB			
27nF		FA	FA	FA	FA	FA	FA	FB	FB			
33nF		FA	FA	FA	FA	FA	FA	FB	FB			
47nF		FA	FA	FA	FA	FA	FA	FB	FC			
56nF		FA	FA	FA	FA	FA	FA	FB				
68nF		FA	FA	FA	FA	FA	FB	FB				
100nF		FA	FA	FA	FA	FA	FB	FC				
150nF		FA	FA	FA	FA	FA	FB	FC				
220nF		FA	FA	FA	FA	FA	FB	FC				
270nF		FA	FA	FA	FA	FA	FB	FC				
330nF		FB	FB	FB	FB	FB	FB	FC				
470nF		FB	FB	FB	FB	FB	FC	FC				
680nF		FB	FB	FB	FB	FB	FC	FC				
1uF	FC	FC	FC	FC	FC	FC	FC					
1.5uF	FC	FC	FC	FC	FC	FC						
2.2uF	FC	FC	FC	FC	FC	FC						
3.3uF	FC	FC	FC	FC	FC	FC						
4.7uF	FC	FC	FC	FC	FC	FC						
6.8uF	FC	FC	FC	FC	FC							
10uF	FC	FC	FC	FC	FC							
22uF	FC	FC	FC									
47uF	FC	FC										
100uF	FC											

代码 Code	FA	FB	FC
T	0.80±0.20	1.25±0.20	1.60±0.30

尺寸 Dimension	IM06										
材料 Dielectric	X6S										
容量/电压 Capacity/ Voltage	4V	6.3V	10V	16V	25V	50V	100V	200~250V	500~630V	1000V	2000V
100pF							FA	FA	FA	FB	FB
120pF							FA	FA	FA	FB	FB
150pF							FA	FA	FA	FB	FB
180pF							FA	FA	FA	FB	FB
220pF		FA	FA	FA	FA	FA	FA	FA	FA	FB	FB
470pF		FA	FA	FA	FA	FA	FA	FA	FA	FB	FB
680pF		FA	FA	FA	FA	FA	FA	FA	FA	FB	FB
1nF		FA	FA	FA	FA	FA	FA	FA	FA	FB	FB
1.5nF		FA	FA	FA	FA	FA	FA	FA	FA	FB	FB
1.8nF		FA	FA	FA	FA	FA	FA	FA	FA	FB	FB
2.2nF		FA	FA	FA	FA	FA	FA	FA	FA	FB	FB
2.7nF		FA	FA	FA	FA	FA	FA	FA	FB	FB	FB
3.3nF		FA	FA	FA	FA	FA	FA	FA	FB	FB	FB
3.9nF		FA	FA	FA	FA	FA	FA	FA	FB	FB	FB
4.7nF		FA	FA	FA	FA	FA	FA	FA	FB	FB	FB
5.6nF		FA	FA	FA	FA	FA	FA	FA	FB	FB	FC
6.8nF		FA	FA	FA	FA	FA	FA	FA	FB	FB	FC
10nF		FA	FA	FA	FA	FA	FA	FA	FB	FB	
15nF		FA	FA	FA	FA	FA	FA	FA	FB		
18nF		FA	FA	FA	FA	FA	FA	FA	FB		
22nF		FA	FA	FA	FA	FA	FA	FB	FB		
27nF		FA	FA	FA	FA	FA	FA	FB	FB		
33nF		FA	FA	FA	FA	FA	FA	FB	FB		
47nF		FA	FA	FA	FA	FA	FA	FB	FC		
56nF		FA	FA	FA	FA	FA	FA	FB			
68nF		FA	FA	FA	FA	FA	FB	FB			
100nF		FA	FA	FA	FA	FA	FB	FC			
150nF		FA	FA	FA	FA	FA	FB	FC			
220nF		FA	FA	FA	FA	FA	FB	FC			
270nF		FA	FA	FA	FA	FA	FB	FC			
330nF		FB	FB	FB	FB	FB	FB	FC			
470nF		FB	FB	FB	FB	FB	FC	FC			
680nF		FB	FB	FB	FB	FB	FC	FC			
1uF	FC	FC	FC	FC	FC	FC	FC				
1.5uF	FC	FC	FC	FC	FC	FC					
2.2uF	FC	FC	FC	FC	FC	FC					
3.3uF	FC	FC	FC	FC	FC	FC					
4.7uF	FC	FC	FC	FC	FC	FC					
6.8uF	FC	FC	FC	FC	FC						
10uF	FC	FC	FC	FC	FC						
22uF	FC	FC	FC								
47uF	FC	FC									
100uF	FC										

代码 Code	FA	FB	FC
T	0.80±0.20	1.25±0.20	1.60±0.30

尺寸 Dimension	IM06										
材料 Dielectric	X6T										
容量/电压 Capacity/ Voltage	4V	6.3V	10V	16V	25V	50V	100V	200~250V	500~630V	1000V	2000V
100pF								FA		FB	FB
120pF								FA		FB	FB
150pF							FA	FA	FA	FB	FB
180pF							FA	FA	FA	FB	FB
220pF		FA	FA	FA	FA	FA	FA	FA	FA	FB	FB
470pF		FA	FA	FA	FA	FA	FA	FA	FA	FB	FB
680pF		FA	FA	FA	FA	FA	FA	FA	FA	FB	FB
1nF		FA	FA	FA	FA	FA	FA	FA	FA	FB	FB
1.5nF		FA	FA	FA	FA	FA	FA	FA	FA	FB	FB
1.8nF		FA	FA	FA	FA	FA	FA	FA	FA	FB	FB
2.2nF		FA	FA	FA	FA	FA	FA	FA	FA	FB	FB
2.7nF		FA	FA	FA	FA	FA	FA	FA	FB	FB	FB
3.3nF		FA	FA	FA	FA	FA	FA	FA	FB	FB	FB
3.9nF		FA	FA	FA	FA	FA	FA	FA	FB	FB	FB
4.7nF		FA	FA	FA	FA	FA	FA	FA	FB	FB	FB
5.6nF		FA	FA	FA	FA	FA	FA	FA	FB	FB	FC
6.8nF		FA	FA	FA	FA	FA	FA	FA	FB	FB	FC
10nF		FA	FA	FA	FA	FA	FA	FA	FB	FB	
15nF		FA	FA	FA	FA	FA	FA	FA	FB		
18nF		FA	FA	FA	FA	FA	FA	FA	FB		
22nF		FA	FA	FA	FA	FA	FA	FB	FB		
27nF		FA	FA	FA	FA	FA	FA	FB	FB		
33nF		FA	FA	FA	FA	FA	FA	FB	FB		
47nF		FA	FA	FA	FA	FA	FA	FB	FB		
56nF		FA	FA	FA	FA	FA	FA	FB			
68nF		FA	FA	FA	FA	FA	FB	FB			
100nF		FA	FA	FA	FA	FA	FB	FC			
150nF		FA	FA	FA	FA	FA	FB	FC			
220nF		FA	FA	FA	FA	FA	FB	FC			
270nF		FA	FA	FA	FA	FA	FB	FC			
330nF		FB	FB	FB	FB	FB	FB	FC			
470nF		FB	FB	FB	FB	FB	FC	FC			
680nF		FB	FB	FB	FB	FB	FC	FC			
1uF	FC	FC	FC	FC	FC	FC	FC				
1.5uF	FC	FC	FC	FC	FC	FC					
2.2uF	FC	FC	FC	FC	FC	FC					
3.3uF	FC	FC	FC	FC	FC	FC					
4.7uF	FC	FC	FC	FC	FC	FC					
6.8uF	FC	FC	FC	FC	FC						
10uF	FC	FC	FC	FC	FC						
22uF	FC	FC	FC								
47uF	FC	FC									
100uF	FC										

代码 Code	FA	FB	FC
T	0.80±0.20	1.25±0.20	1.60±0.30

尺寸 Dimension	IM06											
材料 Dielectric	X5R											
容量/电压 Capacity/ Voltage	4V	6.3V	10V	16V	25V	50V	100V	200~250V	500~630V	1000V	2000V	2500V
100pF							FA	FA	FA	FB	FB	
120pF							FA	FA	FA	FB	FB	
150pF							FA	FA	FA	FB	FB	
180pF							FA	FA	FA	FB	FB	
220pF		FA	FA	FA	FA	FA	FA	FA	FA	FB	FB	
470pF		FA	FA	FA	FA	FA	FA	FA	FA	FB	FB	
680pF		FA	FA	FA	FA	FA	FA	FA	FA	FB	FB	
1nF		FA	FA	FA	FA	FA	FA	FA	FA	FB	FB	FB
1.5nF		FA	FA	FA	FA	FA	FA	FA	FA	FB	FB	
1.8nF		FA	FA	FA	FA	FA	FA	FA	FA	FB	FB	
2.2nF		FA	FA	FA	FA	FA	FA	FA	FA	FB	FB	
2.7nF		FA	FA	FA	FA	FA	FA	FA	FB	FB	FB	
3.3nF		FA	FA	FA	FA	FA	FA	FA	FB	FB	FB	
3.9nF		FA	FA	FA	FA	FA	FA	FA	FB	FB	FB	
4.7nF		FA	FA	FA	FA	FA	FA	FA	FB	FB	FB	
5.6nF		FA	FA	FA	FA	FA	FA	FA	FB	FB	FC	
6.8nF		FA	FA	FA	FA	FA	FA	FA	FB	FB	FC	
10nF		FA	FA	FA	FA	FA	FA	FA	FB	FB		
15nF		FA	FA	FA	FA	FA	FA	FA	FB			
18nF		FA	FA	FA	FA	FA	FA	FA	FB			
22nF		FA	FA	FA	FA	FA	FA	FB	FB			
27nF		FA	FA	FA	FA	FA	FA	FB	FB			
33nF		FA	FA	FA	FA	FA	FA	FB	FB			
47nF		FA	FA	FA	FA	FA	FA	FB	FC			
56nF		FA	FA	FA	FA	FA	FA	FB				
68nF		FA	FA	FA	FA	FA	FB	FB				
100nF		FA	FA	FA	FA	FA	FB	FC				
150nF		FA	FA	FA	FA	FA	FB	FC				
220nF		FA	FA	FA	FA	FA	FB	FC				
270nF		FA	FA	FA	FA	FA	FB	FC				
330nF		FB	FB	FB	FB	FB	FB	FC				
470nF		FB	FB	FB	FB	FB	FC	FC				
680nF		FB	FB	FB	FB	FB	FC	FC				
1uF	FC	FC	FC	FC	FC	FC	FC					
1.5uF	FC	FC	FC	FC	FC	FC						
2.2uF	FC	FC	FC	FC	FC	FC						
3.3uF	FC	FC	FC	FC	FC	FC						
4.7uF	FC	FC	FC	FC	FC	FC						
6.8uF	FC	FC	FC	FC	FC							
10uF	FC	FC	FC	FC	FC							
22uF	FC	FC	FC									
47uF	FC	FC										
100uF	FC	FC										

代码 Code	FA	FB	FC
T	0.80±0.20	1.25±0.20	1.60±0.30

尺寸 Dimension	IM10						
材料 Dielectric	X7R						
容量/电压 Capacity/ Voltage	25V	50V	100V	200V~250V	500V~630V	1000V	2000V
220pF	GA	GA	GA			GA	GA
470pF	GA	GA	GA			GA	GA
680pF	GA	GA	GA		GA	GA	GA
1nF	GA	GA	GA	GA	GA	GA	GA
1.5nF	GA	GA	GA	GA	GA	GA	GA
1.8nF	GA	GA	GA	GA	GA	GA	GA
2.2nF	GA	GA	GA	GA	GA	GA	GA
2.7nF	GA	GA	GA	GA	GA	GA	GA
3.3nF	GA	GA	GA	GA	GA	GA	GA
3.9nF	GA	GA	GA	GA	GA	GA	GA
4.7nF	GA	GA	GA	GA	GA	GB	GB
5.6nF	GA	GA	GA	GA	GA	GB	GB
6.8nF	GA	GA	GA	GA	GA	GB	GB
10nF	GA	GA	GA	GA	GA	GB	GB
15nF	GA	GA	GA	GA	GA	GB	
18nF	GA	GA	GA	GA	GA	GB	
22nF	GA	GA	GA	GA	GA	GB	
27nF	GA	GA	GA	GA	GA		
33nF	GA	GA	GA	GA	GB		
47nF	GA	GA	GA	GA	GB		
56nF	GA	GA	GA	GA	GB		
68nF	GA	GA	GA	GA	GB		
100nF	GA	GA	GA	GA	GB		
150nF	GA	GA	GA	GC			
220nF	GA	GA	GA	GC			
270nF	GA	GA	GB	GC			
330nF	GA	GA	GB	GC			
470nF	GA	GA	GB				
680nF	GB	GB	GB				
1uF	GB	GB	GB				
1.5uF	GB	GB	GD				
2.2uF	GD	GD	GD				
3.3uF	GD	GD					
4.7uF	GD	GD					

代码 Code	GA	GB	GC	GD
T	1.25±0.20	1.60±0.30	2.00±0.30	2.50±0.30

尺寸 Dimension	IM10						
材料 Dielectric	X7S						
容量/电压 Capacity/ Voltage	25V	50V	100V	200V~250V	500V~630V	1000V	2000V
220pF	GA	GA	GA			GA	GA
470pF	GA	GA	GA			GA	GA
680pF	GA	GA	GA		GA	GA	GA
1nF	GA	GA	GA	GA	GA	GA	GA
1.5nF	GA	GA	GA	GA	GA	GA	GA
1.8nF	GA	GA	GA	GA	GA	GA	GA
2.2nF	GA	GA	GA	GA	GA	GA	GA
2.7nF	GA	GA	GA	GA	GA	GA	GA
3.3nF	GA	GA	GA	GA	GA	GA	GA
3.9nF	GA	GA	GA	GA	GA	GA	GA
4.7nF	GA	GA	GA	GA	GA	GB	GB
5.6nF	GA	GA	GA	GA	GA	GB	GB
6.8nF	GA	GA	GA	GA	GA	GB	GB
10nF	GA	GA	GA	GA	GA	GB	GB
15nF	GA	GA	GA	GA	GA	GB	
18nF	GA	GA	GA	GA	GA	GB	
22nF	GA	GA	GA	GA	GA	GB	
27nF	GA	GA	GA	GA	GA		
33nF	GA	GA	GA	GA	GB		
47nF	GA	GA	GA	GA	GB		
56nF	GA	GA	GA	GA	GB		
68nF	GA	GA	GA	GA	GB		
100nF	GA	GA	GA	GA	GB		
150nF	GA	GA	GA	GC			
220nF	GA	GA	GA	GC			
270nF	GA	GA	GB	GC			
330nF	GA	GA	GB	GC			
470nF	GA	GA	GB				
680nF	GB	GB	GB				
1uF	GB	GB	GB				
1.5uF	GB	GB	GD				
2.2uF	GD	GD	GD				
3.3uF	GD	GD					
4.7uF	GD	GD					

代码 Code	GA	GB	GC	GD
T	1.25±0.20	1.60±0.30	2.00±0.30	2.50±0.30

尺寸 Dimension	IM10						
材料 Dielectric	X7T						
容量/电压 Capacity/ Voltage	25V	50V	100V	200V~250V	500V~630V	1000V	2000V
220pF	GA	GA	GA			GA	GA
470pF	GA	GA	GA			GA	GA
680pF	GA	GA	GA		GA	GA	GA
1nF	GA	GA	GA	GA	GA	GA	GA
1.5nF	GA	GA	GA	GA	GA	GA	GA
1.8nF	GA	GA	GA	GA	GA	GA	GA
2.2nF	GA	GA	GA	GA	GA	GA	GA
2.7nF	GA	GA	GA	GA	GA	GA	GA
3.3nF	GA	GA	GA	GA	GA	GA	GA
3.9nF	GA	GA	GA	GA	GA	GA	GA
4.7nF	GA	GA	GA	GA	GA	GB	GB
5.6nF	GA	GA	GA	GA	GA	GB	GB
6.8nF	GA	GA	GA	GA	GA	GB	GB
10nF	GA	GA	GA	GA	GA	GB	GB
15nF	GA	GA	GA	GA	GA	GB	
18nF	GA	GA	GA	GA	GA	GB	
22nF	GA	GA	GA	GA	GA	GB	
27nF	GA	GA	GA	GA	GA		
33nF	GA	GA	GA	GA	GB		
47nF	GA	GA	GA	GA	GB		
56nF	GA	GA	GA	GA	GB		
68nF	GA	GA	GA	GA	GB		
100nF	GA	GA	GA	GA	GB		
150nF	GA	GA	GA	GC			
220nF	GA	GA	GA	GC			
270nF	GA	GA	GB	GC			
330nF	GA	GA	GB	GC			
470nF	GA	GA	GB				
680nF	GB	GB	GB				
1uF	GB	GB	GB				
1.5uF	GB	GB	GD				
2.2uF	GD	GD	GD				
3.3uF	GD	GD					
4.7uF	GD	GD					
6.8uF	GD						
10uF	GD						

代码 Code	GA	GB	GC	GD
T	1.25±0.20	1.60±0.30	2.00±0.30	2.50±0.30

尺寸 Dimension	IM10									
材料 Dielectric	X6S					X6T				
容量/电压 Capacity/ Voltage	100V	200~250V	500~630V	1000V	2000V	100V	200~250V	500~630V	1000V	2000V
220pF	GA			GA	GA	GA			GA	GA
470pF	GA			GA	GA	GA			GA	GA
680pF	GA		GA	GA	GA	GA		GA	GA	GA
1nF	GA	GA	GA	GA	GA	GA	GA	GA	GA	GA
1.5nF	GA	GA	GA	GA	GA	GA	GA	GA	GA	GA
1.8nF	GA	GA	GA	GA	GA	GA	GA	GA	GA	GA
2.2nF	GA	GA	GA	GA	GA	GA	GA	GA	GA	GA
2.7nF	GA	GA	GA	GA	GA	GA	GA	GA	GA	GA
3.3nF	GA	GA	GA	GA	GA	GA	GA	GA	GA	GA
3.9nF	GA	GA	GA	GA	GA	GA	GA	GA	GA	GA
4.7nF	GA	GA	GA	GB	GB	GA	GA	GA	GB	GB
5.6nF	GA	GA	GA	GB	GB	GA	GA	GA	GB	GB
6.8nF	GA	GA	GA	GB	GB	GA	GA	GA	GB	GB
10nF	GA	GA	GA	GB	GB	GA	GA	GA	GB	GB
15nF	GA	GA	GA	GB		GA	GA	GA	GB	
18nF	GA	GA	GA	GB		GA	GA	GA	GB	
22nF	GA	GA	GA	GB		GA	GA	GA	GB	
27nF	GA	GA	GA			GA	GA	GA		
33nF	GA	GA	GB			GA	GA	GB		
47nF	GA	GA	GB			GA	GA	GB		
56nF	GA	GA	GB			GA	GA	GB		
68nF	GA	GA	GB			GA	GA	GB		
100nF	GA	GA	GB			GA	GA	GB		
150nF	GA	GC				GA	GC			
220nF	GA	GC				GA	GC			
270nF	GB	GC				GB	GC			
330nF	GB	GC				GB	GC			
470nF	GB					GB				
680nF	GB					GB				
1uF	GB					GB				
1.5uF	GD					GD				
2.2uF	GD					GD				
3.3uF						GD				
4.7uF						GD				

代码 Code	GA	GB	GC	GD
T	1.25±0.20	1.60±0.30	2.00±0.30	2.50±0.30

尺寸 Dimension	IM10						
材料 Dielectric	X5R						
容量/电压 Capacity/ Voltage	25V	50V	100V	200V~250V	500V~630V	1000V	2000V
220pF	GA	GA	GA			GA	GA
470pF	GA	GA	GA			GA	GA
680pF	GA	GA	GA		GA	GA	GA
1nF	GA	GA	GA	GA	GA	GA	GA
1.5nF	GA	GA	GA	GA	GA	GA	GA
1.8nF	GA	GA	GA	GA	GA	GA	GA
2.2nF	GA	GA	GA	GA	GA	GA	GA
2.7nF	GA	GA	GA	GA	GA	GA	GA
3.3nF	GA	GA	GA	GA	GA	GA	GA
3.9nF	GA	GA	GA	GA	GA	GA	GA
4.7nF	GA	GA	GA	GA	GA	GB	GB
5.6nF	GA	GA	GA	GA	GA	GB	GB
6.8nF	GA	GA	GA	GA	GA	GB	GB
10nF	GA	GA	GA	GA	GA	GB	GB
15nF	GA	GA	GA	GA	GA	GB	
18nF	GA	GA	GA	GA	GA	GB	
22nF	GA	GA	GA	GA	GA	GB	
27nF	GA	GA	GA	GA	GA		
33nF	GA	GA	GA	GA	GB		
47nF	GA	GA	GA	GA	GB		
56nF	GA	GA	GA	GA	GB		
68nF	GA	GA	GA	GA	GB		
100nF	GA	GA	GA	GA	GB		
150nF	GA	GA	GA	GC			
220nF	GA	GA	GA	GC			
270nF	GA	GA	GB	GC			
330nF	GA	GA	GB	GC			
470nF	GA	GA	GB				
680nF	GB	GB	GB				
1uF	GB	GB	GB				
1.5uF	GB	GB	GD				
2.2uF	GD	GD	GD				
3.3uF	GD	GD	GD				
4.7uF	GD	GD	GD				
6.8uF	GD	GD					
10uF	GD	GD					
22uF	GD						

代码 Code	GA	GB	GC	GD
T	1.25±0.20	1.60±0.30	2.00±0.30	2.50±0.30

尺寸 Dimension	IM08								
材料 Dielectric	X7R/X7S/X7T								
容量/电压 Capacity/ Voltage	50V	100V	200-250V	500-630V	1000V	2000V	3000V	4000V	5000V
100pF						HA	HA		
120pF	HA	HA	HA	HA	HA	HA	HA		
150pF	HA	HA	HA	HA	HA	HA	HA	HA	HA
180pF	HA	HA	HA	HA	HA	HA	HA	HA	HA
220pF	HA	HA	HA	HA	HA	HA	HA	HA	HA
470pF	HA	HA	HA	HA	HA	HA	HA	HA	HA
680pF	HA	HA	HA	HA	HA	HA	HA	HA	HA
1nF	HA	HA	HA	HA	HA	HA	HA	HA	HA
1.5nF	HA	HA	HA	HA	HA	HA	HA		
1.8nF	HA	HA	HA	HA	HA	HA	HA		
2.2nF	HA	HA	HA	HA	HA	HA	HA		
2.7nF	HA	HA	HA	HA	HA	HA	HA		
3.3nF	HA	HA	HA	HA	HA	HA	HA		
3.9nF	HA	HA	HA	HA	HA	HA	HA		
4.7nF	HA	HA	HA	HA	HA	HA	HA		
5.6nF	HA	HA	HA	HA	HA	HA			
6.8nF	HA	HA	HA	HA	HA	HA			
10nF	HA	HA	HA	HA	HA	HA			
15nF	HA	HA	HA	HA	HA				
18nF	HA	HA	HA	HA	HA				
22nF	HA	HA	HA	HA	HA				
27nF	HA	HA	HA	HA					
33nF	HA	HA	HA	HA					
47nF	HA	HA	HA	HA					
56nF	HA	HA	HA						
68nF	HA	HA	HA						
100nF	HA	HA	HA						
150nF	HA	HA	HA						
220nF	HA	HA	HA						
270nF	HA	HA	HA						
330nF	HA	HA	HA						
470nF	HA	HA	HA						
680nF	HA								
1uF	HA								
1.5uF	HA								
2.2uF	HA								
3.3uF	HA								
4.7uF	HA								

代码 Code	HA
T	1.60±0.30

尺寸 Dimension	IM08									
材料 Dielectric	X6S					X6T				
容量/电压 Capacity/ Voltage	500~630V	1000V	2000V	3000V	5000V	500~630V	1000V	2000V	3000V	5000V
100pF			HA	HA				HA	HA	
120pF			HA	HA				HA	HA	
150pF			HA	HA	HA			HA	HA	HA
180pF			HA	HA	HA			HA	HA	HA
220pF		HA	HA	HA	HA		HA	HA	HA	HA
470pF		HA	HA	HA	HA		HA	HA	HA	HA
680pF		HA	HA	HA	HA		HA	HA	HA	HA
1nF		HA	HA	HA	HA		HA	HA	HA	HA
1.5nF		HA	HA	HA			HA	HA	HA	
1.8nF		HA	HA	HA			HA	HA	HA	
2.2nF		HA	HA	HA			HA	HA	HA	
2.7nF		HA	HA	HA			HA	HA	HA	
3.3nF		HA	HA	HA			HA	HA	HA	
3.9nF		HA	HA	HA			HA	HA	HA	
4.7nF		HA	HA	HA			HA	HA	HA	
5.6nF		HA	HA				HA	HA		
6.8nF		HA	HA				HA	HA		
10nF		HA	HA				HA	HA		
15nF		HA					HA			
18nF		HA					HA			
22nF		HA					HA			
27nF										
33nF										
47nF	HA					HA				

代码 Code	HA
T	1.60±0.30

尺寸 Dimension	IM08								
材料 Dielectric	X5R								
容量/电压 Capacity/ Voltage	50V	100V	200-250V	500-630V	1000V	2000V	3000V	4000V	5000V
100pF						HA	HA		
120pF	HA	HA	HA	HA		HA	HA		
150pF	HA	HA	HA	HA		HA	HA	HA	HA
180pF	HA	HA	HA	HA		HA	HA	HA	HA
220pF	HA	HA	HA	HA	HA	HA	HA	HA	HA
470pF	HA	HA	HA	HA	HA	HA	HA	HA	HA
680pF	HA	HA	HA	HA	HA	HA	HA	HA	HA
1nF	HA	HA	HA	HA	HA	HA	HA	HA	HA
1.5nF	HA	HA	HA	HA	HA	HA	HA		
1.8nF	HA	HA	HA	HA	HA	HA	HA		
2.2nF	HA	HA	HA	HA	HA	HA	HA		
2.7nF	HA	HA	HA	HA	HA	HA	HA		
3.3nF	HA	HA	HA	HA	HA	HA	HA		
3.9nF	HA	HA	HA	HA	HA	HA	HA		
4.7nF	HA	HA	HA	HA	HA	HA	HA		
5.6nF	HA	HA	HA	HA	HA	HA			
6.8nF	HA	HA	HA	HA	HA	HA			
10nF	HA	HA	HA	HA	HA	HA			
15nF	HA	HA	HA	HA	HA				
18nF	HA	HA	HA	HA	HA				
22nF	HA	HA	HA	HA	HA				
27nF	HA	HA	HA	HA					
33nF	HA	HA	HA	HA					
47nF	HA	HA	HA	HA					
56nF	HA	HA	HA						
68nF	HA	HA	HA						
100nF	HA	HA	HA						
150nF	HA	HA	HA						
220nF	HA	HA	HA						
270nF	HA	HA	HA						
330nF	HA	HA	HA						
470nF	HA	HA	HA						
680nF	HA								
1uF	HA								
1.5uF	HA								
2.2uF	HA								
3.3uF	HA								
4.7uF	HA								

代码 Code	HA
T	1.60±0.30

尺寸 Dimension	IM12								
材料 Dielectric	X7R/X7S/X7T								
容量/电压 Capacity/ Voltage	50V	100V	200-250V	500-630V	1000V	2000V	3000V	4000V	5000V
150pF							IB	IB	
180pF				IB			IB	IB	
220pF				IB		IB	IB	IB	
330pF				IB	IB	IB	IB	IB	
470pF	IA			IB	IB	IB	IB	IB	
680pF	IA		IB	IB	IB	IB	IB	IB	
1nF	IA		IB	IB	IB	IB	IB	IB	
1.5nF	IA		IB	IB	IB	IB	IB	IB	
1.8nF	IA		IB	IB	IB	IB	IB	IB	
2.2nF	IA		IB	IB	IB	IB	IB	IB	IC
2.7nF	IA		IB	IB	IB	IB	IB	IB	
3.3nF	IA		IB	IB	IB	IB	IB	IB	
3.9nF	IA		IB	IB	IB	IB	IB		
4.7nF	IA		IB	IB	IB	IB	IB		
5.6nF	IA		IB	IB	IB	IB	ID		
6.8nF	IA		IB	IB	IB	IB	ID		
10nF	IA	IB	IB	IB	IB	IB	ID		
15nF	IA	IB	IB	IB	IB	IC			
18nF	IA	IB	IB	IB	IB	IC			
22nF	IA	IB	IB	IB	IB				
27nF	IA	IB	IB	IB	IB				
33nF	IA	IB	IB	IB	IB				
47nF	IA	IB	IB	IB	IB				
56nF	IA	IB	IB	IB	IC				
68nF	IA	IB	IB	IB					
100nF	IA	IB	IB	IB					
150nF	IA	IB	IB	IC					
220nF	IA	IB	IB	IC					
270nF	IA	IB	IC						
330nF	IA	IB	IC						
470nF	IA	IB	IC						
680nF	IA	IC	IC						
1uF	IA	IC	IC						
1.5uF	ID	IC							
2.2uF	ID	IC							
3.3uF	ID								
4.7uF	ID								
6.8uF	ID								

代码 Code	IA	IB	IC	ID
T	1.25±0.20	1.60±0.30	2.00±0.30	2.50±0.30

尺寸 Dimension	IM12						
材料 Dielectric	X6S/X6T						
容量/电压 Capacity/ Voltage	100V	200~250V	500~630V	1000V	2000V	3000V	5000V
150pF						IB	
180pF						IB	
220pF				IB	IB	IB	
470pF				IB	IB	IB	
680pF		IB		IB	IB	IB	
1nF		IB		IB	IB	IB	
1.5nF		IB		IB	IB	IB	
1.8nF		IB	IB	IB	IB	IB	
2.2nF		IB	IB	IB	IB	IB	IC
2.7nF		IB	IB	IB	IB	IB	
3.3nF		IB	IB	IB	IB	IB	
3.9nF		IB	IB	IB	IB	IB	
4.7nF		IB	IB	IB	IB	IB	
5.6nF		IB	IB	IB	IB	ID	
6.8nF		IB	IB	IB	IB	ID	
10nF	IB	IB	IB	IB	IB	ID	
15nF	IB	IB	IB	IB	IC		
18nF	IB	IB	IB	IB	IC		
22nF	IB	IB	IB	IB			
27nF	IB	IB	IB	IB			
33nF	IB	IB	IB	IB			
47nF	IB	IB	IB	IC			
56nF	IB	IB	IB	IC			
68nF	IB	IB	IB				
100nF	IB	IB	IB				
150nF	IB	IB	IC				
220nF	IB	IB	IC				
270nF	IB	IC					
330nF	IB	IC					
470nF	IB	IC					
680nF	IC	IC					
1uF	IC	IC					
1.5uF	IC						
2.2uF	IC						

代码 Code	IA	IB	IC	ID
T	1.25±0.20	1.60±0.30	2.00±0.30	2.50±0.30

尺寸 Dimension	IM12								
材料 Dielectric	X5R								
容量/电压 Capacity/ Voltage	50V	100V	200-250V	500-630V	1000V	2000V	3000V	4000V	5000V
150pF							IB	IB	
180pF				IB			IB	IB	
220pF				IB		IB	IB	IB	
330pF				IB	IB	IB	IB	IB	
470pF	IA			IB	IB	IB	IB	IB	
680pF	IA		IB	IB	IB	IB	IB	IB	
1nF	IA		IB	IB	IB	IB	IB	IB	
1.5nF	IA		IB	IB	IB	IB	IB	IB	
1.8nF	IA		IB	IB	IB	IB	IB	IB	
2.2nF	IA		IB	IB	IB	IB	IB	IB	IC
2.7nF	IA		IB	IB	IB	IB	IB	IB	
3.3nF	IA		IB	IB	IB	IB	IB	IB	
3.9nF	IA		IB	IB	IB	IB	IB		
4.7nF	IA		IB	IB	IB	IB	IB		
5.6nF	IA		IB	IB	IB	IB	ID		
6.8nF	IA		IB	IB	IB	IB	ID		
10nF	IA	IB	IB	IB	IB	IB	ID		
15nF	IA	IB	IB	IB	IB	IC			
18nF	IA	IB	IB	IB	IB	IC			
22nF	IA	IB	IB	IB	IB				
27nF	IA	IB	IB	IB	IB				
33nF	IA	IB	IB	IB	IB				
47nF	IA	IB	IB	IB	IC				
56nF	IA	IB	IB	IB	IC				
68nF	IA	IB	IB	IB					
100nF	IA	IB	IB	IB					
150nF	IA	IB	IB	IC					
220nF	IA	IB	IB	IC					
270nF	IA	IB	IC						
330nF	IA	IB	IC						
470nF	IA	IB	IC						
680nF	IA	IC	IC						
1uF	IA	IC	IC						
1.5uF	ID	IC							
2.2uF	ID	IC							
3.3uF	ID								
4.7uF	ID								
6.8uF	ID								

代码 Code	IA	IB	IC	ID
T	1.25±0.20	1.60±0.30	2.00±0.30	2.50±0.30

尺寸 Dimension	IM20					
材料 Dielectric	X7R					
电压 Voltage	100V	250V	500V-630V	1000V	2000V	3000V
1nF	LA	LA	LA	LA	LA	LA
1.2nF	LA	LA	LA	LA	LA	LA
1.5nF	LA	LA	LA	LA	LA	LA
1.8nF	LA	LA	LA	LA	LA	LA
2.2nF	LA	LA	LA	LA	LA	LA
3.3nF	LA	LA	LA	LA	LA	LA
4.7nF	LA	LA	LA	LA	LA	LB
5.6nF	LA	LA	LA	LA	LA	
6.8nF	LA	LA	LA	LA	LA	
10nF	LA	LA	LA	LA	LA	
15nF	LA	LA	LA	LA	LA	
18nF	LA	LA	LA	LA	LA	
22nF	LA	LA	LA	LA	LA	
27nF	LA	LA	LA	LA	LB	
33nF	LA	LA	LA	LA	LB	
39nF	LA	LA	LA	LA	LB	
47nF	LA	LA	LA	LA	LB	
56nF	LA	LA	LA	LA		
100nF	LA	LA	LA	LB		
220nF	LA	LA	LA			
330nF	LA	LA	LA			
470nF	LA	LA	LB			
1uF	LA	LA				
10uF	LB					

代码 Code	LA	LB
T	1.60±0.30	2.00±0.30

尺寸 Dimension	IM20					
材料 Dielectric	X5R					
电压 Voltage	100V	250V	500V-630V	1000V	2000V	3000V
1nF	LA	LA	LA	LA	LA	LA
1.2nF	LA	LA	LA	LA	LA	LA
1.5nF	LA	LA	LA	LA	LA	LA
1.8nF	LA	LA	LA	LA	LA	LA
2.2nF	LA	LA	LA	LA	LA	LA
3.3nF	LA	LA	LA	LA	LA	LA
4.7nF	LA	LA	LA	LA	LA	LB
5.6nF	LA	LA	LA	LA	LA	
6.8nF	LA	LA	LA	LA	LA	
10nF	LA	LA	LA	LA	LA	
15nF	LA	LA	LA	LA	LA	
18nF	LA	LA	LA	LA	LA	
22nF	LA	LA	LA	LA	LA	
27nF	LA	LA	LA	LA	LB	
33nF	LA	LA	LA	LA	LB	
39nF	LA	LA	LA	LA	LB	
47nF	LA	LA	LA	LA	LB	
56nF	LA	LA	LA	LA		
100nF	LA	LA	LA	LB		
220nF	LA	LA	LA			
330nF	LA	LA	LA			
470nF	LA	LA	LB			
1uF	LA	LA				
10uF	LB					

代码 Code	LA	LB
T	1.60±0.30	2.00±0.30

* I 类电容器具体电压对应容量及厚度情况列表

A list of the specific Voltage-specific capacitors of Class I capacitors

材料 Dielectric	COG(NPO)								
尺寸 Dimension	IM01				IM02				
容量/电压 Capacity/ Voltage	≤10V	16V	25V	50V	≤10V	16V	25V	50V	100V
0.1pF	BA	BA	BA	BA	CA	CA	CA	CA	CA
0.22pF	BA	BA	BA	BA	CA	CA	CA	CA	CA
0.3pF	BA	BA	BA	BA	CA	CA	CA	CA	CA
0.47pF	BA	BA	BA	BA	CA	CA	CA	CA	CA
3.3pF	BA	BA	BA	BA	CA	CA	CA	CA	CA
3.6pF	BA	BA	BA	BA	CA	CA	CA	CA	CA
3.9pF	BA	BA	BA	BA	CA	CA	CA	CA	CA
4.7pF	BA	BA	BA	BA	CA	CA	CA	CA	CA
5.0pF	BA	BA	BA	BA	CA	CA	CA	CA	CA
5.6pF	BA	BA	BA	BA	CA	CA	CA	CA	CA
6.8pF	BA	BA	BA	BA	CA	CA	CA	CA	CA
8.0pF	BA	BA	BA	BA	CA	CA	CA	CA	CA
8.2pF	BA	BA	BA	BA	CA	CA	CA	CA	CA
10pF	BA	BA	BA	BA	CA	CA	CA	CA	CA
22pF	BA	BA	BA	BA	CA	CA	CA	CA	CA
27pF	BA	BA	BA	BA	CA	CA	CA	CA	CA
33pF	BA	BA	BA	BA	CA	CA	CA	CA	CA
39pF	BA	BA	BA	BA	CA	CA	CA	CA	CA
47pF	BA	BA	BA	BA	CA	CA	CA	CA	CA
56pF	BA	BA	BA	BA	CA	CA	CA	CA	CA
68pF	BA	BA	BA	BA	CA	CA	CA	CA	CA
100pF	BA	BA	BA	BA	CA	CA	CA	CA	CA
120pF	BA	BA	BA	BA	CA	CA	CA	CA	
150pF	BA	BA	BA	BA	CA	CA	CA	CA	
180pF	BA	BA	BA	BA	CA	CA	CA	CA	
220pF	BA	BA	BA	BA	CA	CA	CA	CA	
270pF					CA	CA	CA	CA	
330pF					CA	CA	CA	CA	
390pF					CA	CA	CA	CA	
470pF					CA	CA	CA	CA	
560pF					CA	CA	CA	CA	
680pF					CA	CA	CA	CA	
1nF					CA	CA	CA	CA	
1.2nF									

代码 Code	BA	CA
T	0.30±0.03	0.50±0.05

材料 Dielectric	COG(NPO)														
尺寸 Dimension	IM03						IM05								
容量/电压 Capacity/ Voltage	≤10V	16V	25V	50V	100V	200V	≤6.3V	10V	16V	25V	50V	100V	200-250V	500-630V	1000V
0.1pF	DA	DA	DA	DA	DA	DA	EA	EA	EA	EA	EA	EA	EA	EA	
0.22pF	DA	DA	DA	DA	DA	DA	EA	EA	EA	EA	EA	EA	EA	EA	
0.3pF	DA	DA	DA	DA	DA	DA	EA	EA	EA	EA	EA	EA	EA	EA	
0.47pF	DA	DA	DA	DA	DA	DA	EA	EA	EA	EA	EA	EA	EA	EA	
3.3pF	DA	DA	DA	DA	DA	DA	EA	EA	EA	EA	EA	EA	EA	EA	
3.6pF	DA	DA	DA	DA	DA	DA	EA	EA	EA	EA	EA	EA	EA	EA	
3.9pF	DA	DA	DA	DA	DA	DA	EA	EA	EA	EA	EA	EA	EA	EA	
4.7pF	DA	DA	DA	DA	DA	DA	EA	EA	EA	EA	EA	EA	EA	EA	
5.0pF	DA	DA	DA	DA	DA	DA	EA	EA	EA	EA	EA	EA	EA	EA	
5.6pF	DA	DA	DA	DA	DA	DA	EA	EA	EA	EA	EA	EA	EA	EA	
6.8pF	DA	DA	DA	DA	DA	DA	EA	EA	EA	EA	EA	EA	EA	EA	EA
8.0pF	DA	DA	DA	DA	DA	DA	EA	EA	EA	EA	EA	EA	EA	EA	EA
8.2pF	DA	DA	DA	DA	DA	DA	EA	EA	EA	EA	EA	EA	EA	EA	EA
10pF	DA	DA	DA	DA	DA	DA	EA	EA	EA	EA	EA	EA	EA	EA	EB
22pF	DA	DA	DA	DA	DA	DA	EA	EA	EA	EA	EA	EA	EA	EA	EB
27pF	DA	DA	DA	DA	DA	DA	EA	EA	EA	EA	EA	EA	EA	EA	EB
33pF	DA	DA	DA	DA	DA	DA	EA	EA	EA	EA	EA	EA	EA	EA	EB
39pF	DA	DA	DA	DA	DA	DA	EA	EA	EA	EA	EA	EA	EA	EA	EB
47pF	DA	DA	DA	DA	DA	DA	EA	EA	EA	EA	EA	EA	EA	EA	EB
56pF	DA	DA	DA	DA	DA	DA	EA	EA	EA	EA	EA	EA	EA	EA	EB
68pF	DA	DA	DA	DA	DA	DA	EA	EA	EA	EA	EA	EA	EA	EA	EB
100pF	DA	DA	DA	DA	DA	DA	EA	EA	EA	EA	EA	EA	EA	EA	EB
120pF	DA	DA	DA	DA	DA	DA	EA	EA	EA	EA	EA	EA	EA	EA	
150pF	DA	DA	DA	DA	DA	DA	EA	EA	EA	EA	EA	EA	EA	EA	
180pF	DA	DA	DA	DA	DA	DA	EA	EA	EA	EA	EA	EA	EA	EB	
220pF	DA	DA	DA	DA	DA	DA	EA	EA	EA	EA	EA	EA	EA	EB	
270pF	DA	DA	DA	DA	DA	DA	EA	EA	EA	EA	EA	EA	EA	EB	
330pF	DA	DA	DA	DA	DA	DA	EA	EA	EA	EA	EA	EA	EA	EB	
390pF	DA	DA	DA	DA	DA	DA	EA	EA	EA	EA	EA	EA	EA	EB	
470pF	DA	DA	DA	DA	DA	DA	EA	EA	EA	EA	EA	EA	EA	EB	
560pF	DA	DA	DA	DA	DA		EA	EA	EA	EA	EA	EA	EA		
680pF	DA	DA	DA	DA	DA		EA	EA	EA	EA	EA	EA	EA		
1nF	DA	DA	DA	DA	DA		EA	EA	EA	EA	EA	EA	EA		
1.2nF	DA	DA	DA	DA			EA	EA	EA	EA	EA	EA	EB		
1.5nF	DA	DA	DA	DA			EA	EA	EA	EA	EA	EA	EB		
2.2nF	DA	DA	DA	DA			EA	EA	EA	EA	EA	EA			
2.7nF							EA	EA	EA	EA	EA				
3.3nF							EA	EA	EA	EA	EA				
4.7nF							EA	EA	EA	EA	EA				
6.8nF							EA	EA	EA	EA	EA				
10nF							EA	EA	EA	EA	EA				

代码 Code	DA	EA	EB
T	0.80±0.10	0.80±0.20	1.25±0.20

材料 Dielectric	COG(NPO)											
尺寸 Dimension	IM06											
容量/电压 Capacity/ Voltage	6.3V	10V	16V	25V	50V	100V	200-250V	500V	630V	1000V	2000V	3000V
0.1pF								FA				
0.22pF								FA				
0.3pF	FA	FA	FA	FA	FA			FA				
0.5pF	FA	FA	FA	FA	FA		FA	FA				
1.8pF	FA	FA	FA	FA	FA		FA	FA				
2.0pF	FA	FA	FA	FA	FA		FA	FA			FB	
8.0pF	FA	FA	FA	FA	FA		FA	FA			FB	
8.2pF	FA	FA	FA	FA	FA		FA	FA			FB	
10pF	FA	FA	FA	FA	FA		FA	FA			FB	
12pF	FA	FA	FA	FA	FA		FA	FA			FB	
15pF	FA	FA	FA	FA	FA		FA	FB			FB	
18pF	FA	FA	FA	FA	FA		FA	FB			FB	
22pF	FA	FA	FA	FA	FA		FA	FB			FB	
27pF	FA	FA	FA	FA	FA		FA	FB			FB	
33pF	FA	FA	FA	FA	FA		FA	FB			FB	FB
39pF	FA	FA	FA	FA	FA		FA	FA			FB	
47pF	FA	FA	FA	FA	FA	FA	FA	FA			FB	
56pF	FA	FA	FA	FA	FA	FA	FA	FB			FB	
68pF	FA	FA	FA	FA	FA	FA	FA	FB	FB		FC	
82pF	FA	FA	FA	FA	FA	FA	FA	FB	FB		FC	
100pF	FA	FA	FA	FA	FA	FA	FA	FB	FB		FC	
120pF	FA	FA	FA	FA	FA	FA	FA	FA	FA	FB	FB	
150pF	FA	FA	FA	FA	FA	FA	FA	FA	FB	FB	FC	
180pF	FA	FA	FA	FA	FA	FA	FA	FA	FB	FB	FC	
220pF	FA	FA	FA	FA	FA	FA	FA	FA	FB	FB	FC	
270pF	FA	FA	FA	FA	FA	FA	FA	FB	FB	FB		
300pF	FA	FA	FA	FA	FA	FA	FA	FB	FB	FB		
330pF	FA	FA	FA	FA	FA	FA	FA	FB	FB	FB		
390pF	FA	FA	FA	FA	FA	FA	FA	FB	FB	FB		
470pF	FA	FA	FA	FA	FA	FA	FA	FB	FB	FB		
560pF	FA	FA	FA	FA	FA	FA	FA	FB	FB	FC		
680pF	FA	FA	FA	FA	FA	FA	FA	FB	FB	FC		
820pF	FA	FA	FA	FA	FA	FA	FA	FC	FC	FC		
1nF	FA	FA	FA	FA	FA	FA	FB	FC	FC	FC		
1.2nF	FB	FB	FB	FB	FB	FA		FC	FC			
1.5nF	FB	FB	FB	FB	FB	FA		FC	FC			
1.8nF	FB	FB	FB	FB	FB	FA						
2.2nF	FB	FB	FB	FB	FB	FA						
2.7nF	FB	FB	FB	FB	FB							
3.3nF	FB	FB	FB	FB	FB							
3.9nF	FB	FB	FB	FB	FB							
4.7nF	FB	FB	FB	FB	FB							
6.8nF	FC	FC	FC	FC	FC							
10nF	FC	FC	FC	FC	FC							

代码 Code	FA	FB	FC
T	0.80±0.20	1.25±0.20	1.60±0.30

材料 Dielectric	COG(NPO)										
尺寸 Dimension	IM10						IM08				
容量/电压 Capacity/ Voltage	100V	200-250V	500V	630V	1000V	2000V	500V	1000V	2000V	3000V	5000V
1.0pF										HA	
1.8pF										HA	
2.0pF							HA			HA	
3.0pF							HA			HA	HA
3.3pF							HA			HA	HA
4.7pF							HA			HA	HA
5.0pF							HA			HA	HA
5.6pF							HA			HA	HA
6.8pF							HA			HA	HA
8.0pF							HA			HA	HA
8.2pF							HA			HA	HA
10pF			GA			GA	HA			HA	HA
12pF			GA			GA	HA			HA	HA
15pF			GA			GA	HA			HA	HA
18pF			GA			GA	HA			HA	HA
22pF			GA			GA	HA			HA	HA
27pF			GA			GA	HA			HA	HA
33pF			GA			GA	HA	HA		HA	HA
39pF			GA			GA	HA	HA		HA	HA
47pF			GA			GB	HA	HA		HA	HA
56pF			GA			GB	HA	HA		HA	HA
68pF			GA		GB	GB	HA	HA		HA	HA
82pF			GA		GB	GB	HA	HA		HA	HB
100pF	GA	GA	GA	GB	GB	GB	HA	HA	HA	HA	HB
120pF	GA	GA	GA	GB	GC	GB	HA	HA	HA	HA	
150pF	GA	GA	GA	GB	GC	GB	HA	HA	HA	HA	
180pF	GA	GA	GA	GB	GC	GB	HA	HA	HA	HA	
220pF	GA	GA	GA	GB	GC	GB	HA	HA	HA	HA	
270pF	GA	GA	GA	GB	GC	GB	HA	HA	HA	HB	
300pF	GA	GA	GA	GB	GC	GB	HA	HA	HA	HB	
330pF	GA	GA	GA	GB	GC	GC	HA	HA	HA	HB	
390pF	GA	GA	GA		GC		HA	HA	HA		
470pF	GA	GA	GA		GC		HA	HB	HB		
560pF	GA	GA	GA		GB		HA	HB	HB		
680pF	GA	GA	GA		GB		HA	HB	HB		
820pF	GA	GA	GA		GC		HA	HB	HB		
1nF	GA	GA	GB		GC		HA	HA	HA		
1.2nF	GA	GA	GB		GC		HA				
1.5nF	GA	GA	GB		GC		HA				
1.8nF	GA	GA	GB		GC		HA				
2.2nF	GA	GA	GB				HA	HB			
2.7nF	GA	GA	GC				HA				
3.3nF	GA						HA				
3.9nF	GA						HA				
4.7nF	GA						HA				
6.8nF	GA			GD	GD						

材料 Dielectric	COG(NPO)										
尺寸 Dimension	IM10						IM08				
容量/电压 Capacity/ Voltage	100V	200-250V	500V	630V	1000V	2000V	500-630V	1000V	2000V	3000V	5000V
10nF				GD							
15nF				GD							
18nF				GD							
22nF				GD							

代码 Code	GA	GB	GC	GD	HA	HB
T	1.25±0.20	1.60±0.30	2.00±0.30	2.50±0.30	1.60±0.30	2.00±0.30

材料 Dielectric	COG(NPO)												
尺寸 Dimension	IM12								IM20				
容量/电压 Capacity/ Voltage	100V	200V	500V	630V	1000V	2000V	3000V	5000V	250V	500V	1000V	2000V	3000V
1pF													
1.5pF													
1.8pF													
2.0pF								IB					
2.2pF								IB					
3.0pF								IB					
3.3pF					IB		IB	IB					
4.7pF					IB		IB	IB					
5.0pF					IB		IB	IB					
5.6pF					IB		IB	IB					
6.8pF					IB		IB	IB					
8.0pF					IB		IB	IB					
8.2pF					IB		IB	IB					
10pF					IB		IB	IB		LA			
12pF					IB		IB	IB		LA			
15pF					IB		IB	IB		LA			
18pF					IB		IB	IB		LA			
22pF			IA		IB	IB	IB			LA			
27pF			IA		IB	IB	IB			LA			
33pF			IA		IB	IB	IB			LA			
39pF			IA		IB	IB	IB			LA			
47pF			IA		IB	IB	IB			LA			
56pF	IA		IA		IB	IB	IB			LA			
68pF	IA		IA		IB	IB	IB			LA			
100pF	IA		IA		IB	IB	IB			LA			LA
120pF	IA		IA		IB	IB	IB			LA			LA
150pF	IA		IA		IB	IB	IB			LA			LA
180pF	IA		IA		IB	IB	IB			LA			LA
220pF	IA		IA		IB	IB	IB			LA			LB
270pF	IA		IA		IB	IB	IC			LA		LA	LB
300pF	IA		IA		IB	IB	IC			LA			LB
330pF	IA		IA		IB	IB	IC			LA			LB
390pF	IA		IA		IB	IB	IC			LA			LB

材料 Dielectric	COG(NPO)												
尺寸 Dimension	IM12								IM20				
容量/电压 Capacity/ Voltage	100V	200V	500V	630V	1000V	2000V	3000V	5000V	250V	500V	1000V	2000V	3000V
470pF	IA		IA		IB	IB	IC			LA			LB
560pF	IA		IA		IB	IB				LA			LB
680pF	IA		IA		IB	LC			LA	LA			LB
820pF	IA		IA		IB	LC			LA	LA			LB
1nF	IA		IA	IB	IB	ID			LA	LA	LA		LB
1.2nF	IA		IB		IB				LA	LA	LC		LC
1.5nF	IB		IB		IB				LA	LA	LC		LC
1.8nF	IB		IB		ID				LA	LA	LC		LC
2.2nF	IB		IB		ID				LA	LA	LC		LC
2.7nF	IB		IB						LA	LA	LC		
3.3nF	IB		IB						LA	LA	LC		
3.9nF	IB		IB						LA	LA	LC		
4.7nF	IB	IB	IB		ID				LA	LA	LC		
6.8nF	IB								LA		LC		
10nF	ID								LA				
15nF	ID												
18nF	ID												
22nF	ID												
33nF	ID												

代码 Code	IA	IB	IC	ID	LA	LB	LC
T	1.25±0.20	1.60±0.30	2.00±0.30	2.50±0.30	1.60±0.30	2.00±0.30	2.50±0.30

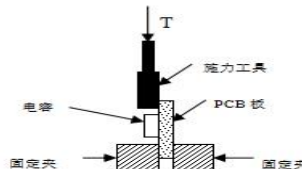
◆可靠性测试
Reliability Test

项目 Item	技术规格 Technical Specification		测试方法 Test Method and Remarks						
1、容量 Capacitance	I 类 Class I	应符合指定的误差级别 Should be within the specified tolerance.	标称容量 Capacitance	测试频率 Measuring Frequency	测试电压 Measuring Voltage				
			≤1000pF	1MHz±10%	1.0±0.2Vrms				
			> 1000 pF	1KHz±10%					
	II 类 Class II	应符合指定的误差级别 Should be within the specified tolerance.	测试温度： 25℃±3℃ Test Temperature: 25℃±3℃ C≤10μF： 测试频率: 1KHz±10% 测试电压: 1.0±0.2Vrms Test Frequency: 1KHz±10% Test Voltage: 1.0±0.2Vrms C> 10μF： 测试频率: 120±24 Hz 测试电压:0.5±0.1Vrms Test Frequency: 120±24 Hz Test Voltage: 0.5±0.1Vrms						
2、绝缘电阻(IR) Insulation Resistance	<table><tr><td>I 类 Class I</td><td>C≤10 nF, Ri≥50000MΩ C> 10 nF, Ri•CR≥500S</td></tr><tr><td>II 类 Class II</td><td>C≤25 nF, Ri≥10000MΩ C>25 nF, Ri•CR≥100S</td></tr></table>		I 类 Class I	C≤10 nF, Ri≥50000MΩ C> 10 nF, Ri•CR≥500S	II 类 Class II	C≤25 nF, Ri≥10000MΩ C>25 nF, Ri•CR≥100S	测试电压： Ur≤1000V，额定电压 Ur>1000V，1000V 测试时间: 60±5 秒 测试湿度：20%~75% 测试温度： 25℃±3℃ 测试充放电电流： ≤50mA Measuring Voltage: Ur≤1000V，Rated Voltage Ur>1000V，1000V Duration: 60±5s Test Humidity: ≤75% Test Temperature: 25℃±3℃ Test Current: ≤50mA		
	I 类 Class I	C≤10 nF, Ri≥50000MΩ C> 10 nF, Ri•CR≥500S							
	II 类 Class II	C≤25 nF, Ri≥10000MΩ C>25 nF, Ri•CR≥100S							
注：S=Ω·F									
3、损耗角正切 (DF, tanδ) Dissipation Factor	I 类 Class I	DF	标称容量 Capacitance	测试频率 Measuring Frequency	测试电压 Measuring Voltage				
		≤1/（400+20C）	Cr<30pF	1MHz±10% (C> 1000 pF, 1KHz±10%)	1.0±0.2Vrms				
		≤0.1%	Cr≥30pF						

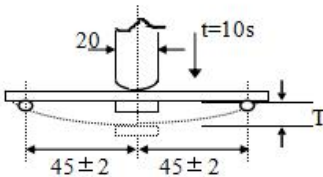
项目 Item	技术规格 Technical Specification									测试方法 Test Method and Remarks
损耗角正切 (DF, tanδ) Dissipation Factor	II 类 Class II		电压	DF (*10-4)	0201	0402	0603	0805	1206 及以上	C≤10μF 测试频率: 1KHz±10% 测试电压: 1.0±0.2Vrms Test Frequency: 1KHz±10% Test Voltage: 1.0±0.2Vrms C>10μF 测试频率: 120±24 Hz 测试电压: 0.5±0.1Vrms Test Frequency: 120±24 Hz Test Voltage: 0.5±0.1Vrms
			> 100V	≤250	All	≤0.01μF	≤0.01μF	≤0.033μF	≤0.68μF	
				≤500	——	——	——	——	——	
			100V	≤250	——	≤0.01μF	≤0.1μF	≤0.1μF	≤1μF	
				≤350	——	——	——	——	——	
				≤500	——	——	——	≤0.22μF	≤4.7μF	
			50V	≤250	——	≤0.01μF	≤0.047μF	——	≤0.68μF	
				≤350	——	≤0.047μF	≤0.33μF	≤0.47μF	——	
				≤500	≤0.0047μF	≤0.1μF	——	——	——	
				≤750	——	——	——	≤1μF	≤2.2μF	
			25V	≤1000	——	——	≤1μF	≤2.2μF	≤10 μ F	
				≤250	——	≤0.01μF	≤0.047μF	——	≤0.68μF	
				≤350	≤0.0033μF	≤0.047μF	≤0.33μF	≤0.47μF	——	
				≤500	≤0.01μF	≤0.1μF	——	——	——	
				≤750	——	≤0.22μF	——	≤1μF	≤2.2μF	
			16V	≤1000	——	——	≤2.2μF	≤10 μ F	≤10μF	
				≤250	——	≤0.01μF	≤0.047μF	——	≤0.68μF	
				≤350	≤0.0033μF	≤0.047μF	≤0.33μF	≤0.47μF	——	
				≤500	≤0.015μF	≤0.1μF	——	——	——	
				≤750	≤0.047μF	≤0.22μF	——	≤1μF	≤2.2μF	
			≤10V	≤1000	≤0.1μF	≤1μF	≤2.2μF	≤10μF	≤10μF	
				≤250	——	≤0.01μF	≤0.047μF	——	≤0.68μF	
				≤350	≤0.0033μF	≤0.047μF	≤0.33μF	≤0.47μF	——	
				≤500	≤0.015μF	≤0.1μF	——	——	——	
				≤750	≤0.047μF	≤0.22μF	——	≤1μF	≤2.2μF	
			4、介质耐电强 度(DWV) Dielectric Withstanding Voltage	不应有介质被击穿 或损伤 No breakdown or damage.		Ur<100V	测量电压: I 类: 300% Ur II 类: 250% Ur 时间: 1~5 秒 充/放电电流: 不应超过 50mA Measuring Voltage: I class:300% Ur II class :250% Ur Duration: 1~5s Charge/ Discharge Current: 50mA max.			
100V≤Ur <500V	施加额定电压的 200%, 5 秒, 最大电流不超过 50mA Force 200%Rated Voltage for 5 second. Max current should not exceed 50 mA.									
500V≤Ur ≤1000V	施加额定电压的 150%, 5 秒, 最大电流不超过 50mA Force 150%Rated Voltage for 5 second. Max current should not exceed 50 mA.									
1000V<Ur ≤2000V	施加额定电压的 120%, 5 秒, 最大电流不超过 50mA Force 120%Rated Voltage for 5 seconds. Max current should not exceed 50 mA.									
2000V<Ur ≤5000V	施加额定电压的 120%, 5 秒, 最大电流不超过 10mA Force 120%Rated Voltage for 5 seconds. Max current should not exceed 10 mA.									

项目 Item	技术规格 Technical Specification	测试方法 Test Method and Remarks																																																
5、温度循环 Temperature Cycle	<table><tr><th>项目 Item</th><th>I 类 Class I</th><th>II 类 Class II</th></tr><tr><td>$\Delta C/C$</td><td>$\leq \pm 2.5\%$ or $\pm 0.25\text{pF}$, 取两者中最大者 $\leq \pm 2.5\%$ or $\pm 0.25\text{pF}$ whichever is larger.</td><td>$\pm 15\%$</td></tr><tr><td>DF</td><td colspan="2">同初始标准 Same to initial value.</td></tr><tr><td>IR</td><td colspan="2">同初始标准 Same to initial value.</td></tr><tr><td colspan="3">外观：无可见损伤 Appearance：No visible damage</td></tr><tr><td colspan="3"></td></tr></table>	项目 Item	I 类 Class I	II 类 Class II	$\Delta C/C$	$\leq \pm 2.5\%$ or $\pm 0.25\text{pF}$, 取两者中最大者 $\leq \pm 2.5\%$ or $\pm 0.25\text{pF}$ whichever is larger.	$\pm 15\%$	DF	同初始标准 Same to initial value.		IR	同初始标准 Same to initial value.		外观：无可见损伤 Appearance：No visible damage						※预处理（仅针对 II 类电容器）： 上限类别温度，1 小时；恢复：24±1h。 初始测量 循环次数：100 次,一个循环分以下 4 步： <table><tr><th>阶段</th><th>温度（℃）</th><th>时间（分钟）</th></tr><tr><td>第 1 步</td><td>下限温度(C0G/X7R/X7S/X7T /X6S/X6T/X5R:-55)</td><td>30</td></tr><tr><td>第 2 步</td><td>常温（+20）</td><td>2-3</td></tr><tr><td>第 3 步</td><td>上限温度 (C0G/X7R/X7S/X7T: +125 X5R:+85 X6S/X6T:+105)</td><td>30</td></tr><tr><td>第 4 步</td><td>常温（+20）</td><td>2-3</td></tr></table> 试验后放置（恢复）时间：24±2h Preheating conditions: up-category temperature, 1h Recovery time: 24±1h Initial Measurement Cycling Times: 100 times, 1 cycle, 4 steps: <table><tr><th>Step</th><th>Temperature（℃）</th><th>Time (min)</th></tr><tr><td>1</td><td>Low- category temp. (C0G/X7R/X7S/X7T /X6S/X6T/X5R: -55)</td><td>30</td></tr><tr><td>2</td><td>Normal temp. (+20)</td><td>2-3</td></tr><tr><td>3</td><td>Up- category temp. (C0G/X7R/X7S/X7T: +125 X5R:+85 X6S/X6T:+105)</td><td>30</td></tr><tr><td>4</td><td>Normal temp. (+20)</td><td>2-3</td></tr></table> Recovery time after test: 24±2h	阶段	温度（℃）	时间（分钟）	第 1 步	下限温度(C0G/X7R/X7S/X7T /X6S/X6T/X5R:-55)	30	第 2 步	常温（+20）	2-3	第 3 步	上限温度 (C0G/X7R/X7S/X7T: +125 X5R:+85 X6S/X6T:+105)	30	第 4 步	常温（+20）	2-3	Step	Temperature（℃）	Time (min)	1	Low- category temp. (C0G/X7R/X7S/X7T /X6S/X6T/X5R: -55)	30	2	Normal temp. (+20)	2-3	3	Up- category temp. (C0G/X7R/X7S/X7T: +125 X5R:+85 X6S/X6T:+105)	30	4	Normal temp. (+20)	2-3
		项目 Item	I 类 Class I	II 类 Class II																																														
		$\Delta C/C$	$\leq \pm 2.5\%$ or $\pm 0.25\text{pF}$, 取两者中最大者 $\leq \pm 2.5\%$ or $\pm 0.25\text{pF}$ whichever is larger.	$\pm 15\%$																																														
		DF	同初始标准 Same to initial value.																																															
		IR	同初始标准 Same to initial value.																																															
		外观：无可见损伤 Appearance：No visible damage																																																
阶段	温度（℃）	时间（分钟）																																																
第 1 步	下限温度(C0G/X7R/X7S/X7T /X6S/X6T/X5R:-55)	30																																																
第 2 步	常温（+20）	2-3																																																
第 3 步	上限温度 (C0G/X7R/X7S/X7T: +125 X5R:+85 X6S/X6T:+105)	30																																																
第 4 步	常温（+20）	2-3																																																
Step	Temperature（℃）	Time (min)																																																
1	Low- category temp. (C0G/X7R/X7S/X7T /X6S/X6T/X5R: -55)	30																																																
2	Normal temp. (+20)	2-3																																																
3	Up- category temp. (C0G/X7R/X7S/X7T: +125 X5R:+85 X6S/X6T:+105)	30																																																
4	Normal temp. (+20)	2-3																																																
6、破坏性物理 分析 Destructive Physical Analysis	无缺陷或异常 No defects or abnormalities	按照 EIA-469 Accounting to EIA-469																																																
7、外观 Appearance	无可见损伤 No visible damage	目视检查 Visual inspection																																																
8、尺寸 Physical Dimension	在规定尺寸范围内 Within the specified dimensions	使用卡尺 Use caliper																																																

项目 Item	技术规格 Technical Specification			测试方法 Test Method and Remarks
9、耐湿负荷 Humidity load	$\Delta C/C$		I 类: $\pm 7.5\%$ 或 $\pm 0.75pF$,取两者之中较大者 II 类: $\leq \pm 12.5\%$ Class I : $\pm 7.5\%$ or $\pm 0.75pF$, whichever is larger. Class II : $\leq \pm 12.5\%$	※预处理（仅针对 II 类电容器）： 在 140℃~150℃下预热 1h±10min 后，在室温下放置 24±2h。 温度：40±2℃ 湿度：90~95%RH 电压： Ur<1000V：额定电压 Ur≥1000V：1000V 时间：500 小时 在实验结束后，0201≥47nF、0402≥37nF、0603≥1uF、0805≥4.7uF、1206≥10uF 的产品在 150.℃温度下，保持 1h 后，再放置 24±2h 后再测试电性能。 ※Preconditioning(class II only): After preheating at 140℃~150℃ for 1h±10min, place at room temperature for 24±2h. ; Recovery time: 24±1hTemperature: 40±2℃ Humidity: 90~95%RH Voltage: Ur<1000V：Rated Voltage Ur≥1000V：1000V Duration: 500h After experiment, 0201≥47nF、0402≥37nF、0603≥1uF、0805≥4.7uF、1206≥10uF product need to keep in 150℃、1hand measurement o be made after being kept at room temperature for 24±2h.
	DF		≤2 倍初始标准 Not more than twice of initial value.	
	IR	I 类 Class I	Ri≥5000MΩ或 Ri•CR≥50S 取两者之中较小者。 Ri≥5000MΩ或 Ri•CR≥50S whichever is smaller.	
		II 类 Class II	Ri≥1000MΩ或 Ri•CR≥10S 取两者之中较小者。 Ri≥1000MΩ或 Ri•CR≥10S whichever is smaller.	
	外观：无损伤			
10、振动 Vibration	项目 Item	I 类 Class I	II 类 Class II	5g 的力 20 分钟，三个方向每个方向 12 个循环。 注意：使用 8"X5" 印刷线路板，.031"厚，在长的一边有 7 个固定点，在对面的边的角有 2 个固定点。产品在距离固定点 2" 内安装。测试频率从 10-2000 赫兹。 The force of 5g is 20 minutes, 12 cycles each of 3 orientations. Note: Use 8" x 5" PCB. 0.31" thick 7 secure points on one long side and 2 secure points at corners of opposite sides. Parts mounted within 2" from any secure point. Test from 10-2000 Hz.
	$\Delta C/C$	≤±2.5%或±0.25pF， 取两者中最大者 ≤±2.5%或±0.25pF, whichever is larger.	≤±10%	
	DF	同初始标准 Same to initial value.		
	IR	同初始标准 Same to initial value.		
	外观 Appearance	无可见损伤 No visible damage		

项目 Item	技术规格 Technical Specification	测试方法 Test Method and Remarks																									
11、寿命试验 Life Test	<table><tr><td>ΔC/C</td><td>I 类：≤±3%或±0.3pF 取两者之中较大者 ≤±3%或±0.3pF, whichever is larger. II 类：≤±20% I class:≤±2% or ±1pF, whichever is larger. II class: ≤±20% or ±1pF</td></tr><tr><td>DF</td><td>小于 2 倍初始标准 Not more than twice of initial value</td></tr><tr><td rowspan="2">IR</td><td>I 类：Ri≥4000MΩ或 Ri•CR≥10S 取两者之中较小者. Class I:Ri≥4000MΩorRi•CR≥10S whichever is smaller.</td></tr><tr><td>II 类：Ri≥2000MΩ或 Ri•CR≥50S 取两者之中较小者. Class II:Ri≥2000MΩorRi•CR≥50S whichever is smaller.</td></tr></table>	ΔC/C	I 类：≤±3%或±0.3pF 取两者之中较大者 ≤±3%或±0.3pF, whichever is larger. II 类：≤±20% I class:≤±2% or ±1pF, whichever is larger. II class: ≤±20% or ±1pF	DF	小于 2 倍初始标准 Not more than twice of initial value	IR	I 类：Ri≥4000MΩ或 Ri•CR≥10S 取两者之中较小者. Class I:Ri≥4000MΩorRi•CR≥10S whichever is smaller.	II 类：Ri≥2000MΩ或 Ri•CR≥50S 取两者之中较小者. Class II:Ri≥2000MΩorRi•CR≥50S whichever is smaller.	时间 Duration：1000h 温度 Temperature：上限温度 Up- category temp. 充电电流 Charge/ Discharge Current：50mA max 电压 Voltage： ①Ur<500V： I 类： 2.0Ur II 类： 见下表 <table><tr><th>容量 Capacitance</th><th>试验电 压 Applied Voltage</th><th>容量 Capacitance</th><th>试验电 压 Applied Voltage</th></tr><tr><td>100nF≥0201≥10nF</td><td rowspan="6">1.5Ur</td><td>0201<10nF</td><td rowspan="6">2.0Ur</td></tr><tr><td>1uF≥0402≥47nF</td><td>0402<47nF</td></tr><tr><td>4.7uF≥0603≥220nF</td><td>0603<220nF</td></tr><tr><td>10uF≥0805≥0.47uF</td><td>0805<0.47uF</td></tr><tr><td>22uF≥1206≥1uF</td><td>1206<1uF</td></tr><tr><td>22uF≥1210≥1uF</td><td>1210<1uF</td></tr></table>	容量 Capacitance	试验电 压 Applied Voltage	容量 Capacitance	试验电 压 Applied Voltage	100nF≥0201≥10nF	1.5Ur	0201<10nF	2.0Ur	1uF≥0402≥47nF	0402<47nF	4.7uF≥0603≥220nF	0603<220nF	10uF≥0805≥0.47uF	0805<0.47uF	22uF≥1206≥1uF	1206<1uF	22uF≥1210≥1uF	1210<1uF
	ΔC/C	I 类：≤±3%或±0.3pF 取两者之中较大者 ≤±3%或±0.3pF, whichever is larger. II 类：≤±20% I class:≤±2% or ±1pF, whichever is larger. II class: ≤±20% or ±1pF																									
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容量 Capacitance	试验电 压 Applied Voltage	容量 Capacitance	试验电 压 Applied Voltage																								
100nF≥0201≥10nF	1.5Ur	0201<10nF	2.0Ur																								
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4.7uF≥0603≥220nF		0603<220nF																									
10uF≥0805≥0.47uF		0805<0.47uF																									
22uF≥1206≥1uF		1206<1uF																									
22uF≥1210≥1uF		1210<1uF																									
	外观：无损伤 Visual Appearance: No visible damage	除上表之外的，按 1.0Ur 施加电压 ② 500V≤Ur≤630V：1.2 Ur ③ Ur>630V：1.0Ur																									
12、端头结合 强度 Termination Adhesion	外观无可见损伤 No visible damage.	如图所示：慢慢施加一个 T 的力到电容侧面瓷体上，并保持 60+1 秒。 As shown in the picture , Slowly apply a T force to the porcelain body on the side of the capacitor and hold for 60+1 seconds. <table><tr><th>规格</th><th>施加力 T</th></tr><tr><td><IM03</td><td>2N</td></tr><tr><td>≥IM03</td><td>5N</td></tr></table> 	规格	施加力 T	<IM03	2N	≥IM03	5N																			
	规格	施加力 T																									
<IM03	2N																										
≥IM03	5N																										

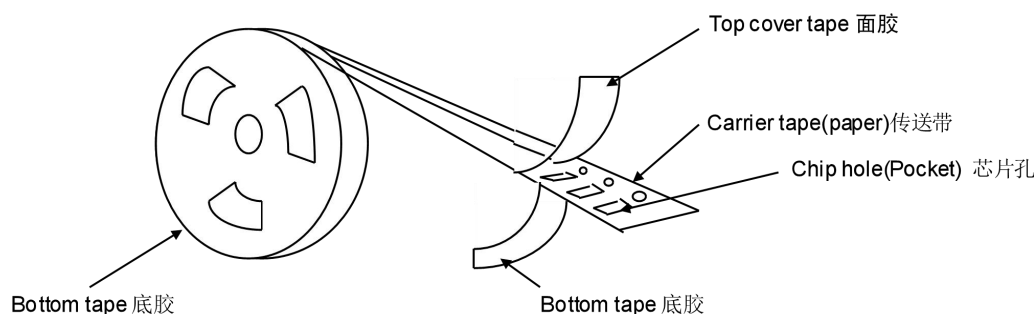
项目 Item	技术规格 Technical Specification			测试方法 Test Method and Remarks
13、可焊性 Solderability	上锡率应大于 95% 外观: 无可见损伤。 At least 95% of the terminal electrode is covered by new solder. Visual Appearance: No visible damage.			将电容在 80~120℃的温度下预热 10~30 秒。 Preheating conditions:80 to 120℃; 10~30s.
				有铅焊料: (Sn/Pb: 63/37) 浸锡温度: 235±5℃ 浸锡时间: 2±0. 5s Pb-Sn soldering Solder Temperature: 235±5℃ Duration: 2±0.5s
14、耐焊接热 Resistance to Soldering Heat	项目 Item	I 类	II 类	将电容在 100~200℃的温度下预热 60-120 秒。 浸锡温度: 265±5℃; 浸锡时间: 10±1s 然后取出溶剂清洗干净,在 10 倍以上的显微镜底下观察。 试验后放置时间: 24±2h Preheating conditions: 100 to 200℃; 60~120s. Solder Temperature: 265±5℃; Duration: 10±1s Clean the capacitor with solvent and examine it with a 10X(min.) microscope. Recovery Time: 24±2h Recovery condition: Room temperature
	Δ C/C	≤ ±2.5%或 ±0.25pF, 取较大值 ≤ ± 2.5% or ± 0.25PF , whichever is larger	± 15%	
	DF	同初始标准 Same to initial value.		
	IR	同初始标准 Same to initial value.		
	外观: 无可见损伤 上锡率: ≥95% Appearance: No visible damage. At least 95% of the terminal electrode is covered by new solder.			
15、抗弯曲强度 Resistance to Flexure of Substrate (Bending Strength)	项目 Item	I 类	II 类	试验基板: PCB 弯曲深度: T=1mm (N 端头) 弯曲深度: T=3mm (A 端头) 施压速度: 1mm/sec.; 单位: mm 保持时间: 60 s 应在弯曲状态下进行测量 Test Board: PCB Warp: 1mm (N-Terminal) 3mm (A-Terminal) Speed: 1mm/sec. Unit: mm Hold time: 60 sec The measurement should be made with the board in the bending position
	Δ C/C	≤±5%或±0.5pF,取两者之中较大者 。 ≤±5%或±0.5pF, whichever is larger.	± 10%	
	DF	同初始标准 Same to initial value.		
	IR	同初始标准 Same to initial value.		
	外观: 无损伤 Visual Appearance: No visible damage.			



◆包装

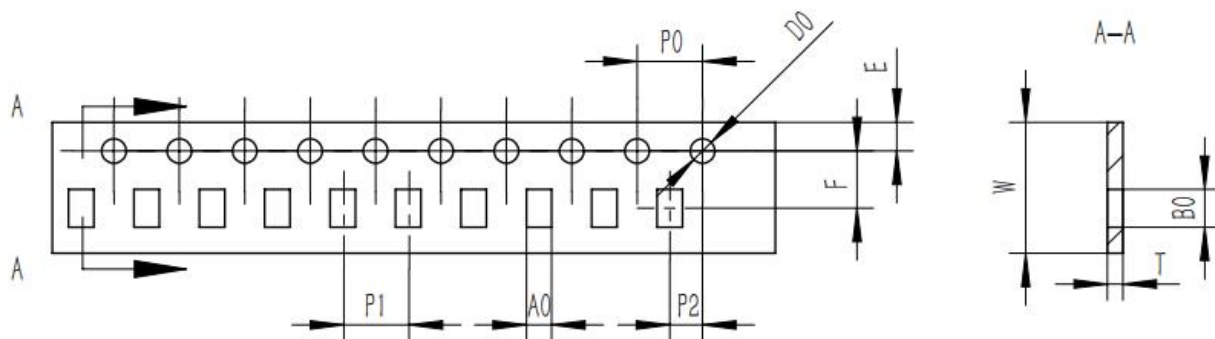
Package

- * 纸带卷盘结构
Paper Taping



※ 适合 ‘IM01, IM02’ 纸带编带尺寸大小

Dimensions of paper taping for IM01, IM02 type

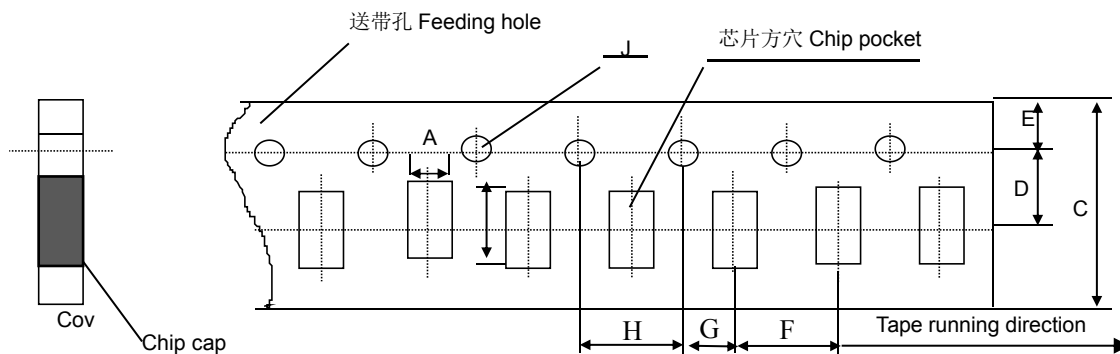


Unit: mm

代号 Code 纸带规格 Paper size	A0	B0	W	F	E	P1	P2	P0	D0	T
IM01	0.37± 0.10	0.67± 0.10	8.00± 0.10	3.50± 0.05	1.75± 0.10	2.00± 0.05	2.00± 0.05	4.00± 0.10	1.50 -0/+0.10	0.80 Below
IM02	0.65± 0.10	1.15± 0.10	8.00± 0.10	3.50± 0.05	1.75± 0.10	2.00± 0.05	2.00± 0.05	4.00±0. 10	1.50 -0/+0.10	0.80 Below

※ 适合 ‘IM03, IM05, IM06’ 常规尺寸产品的纸带尺寸

Dimensions of paper taping for IM03, IM05, IM06 types.



Unit: mm

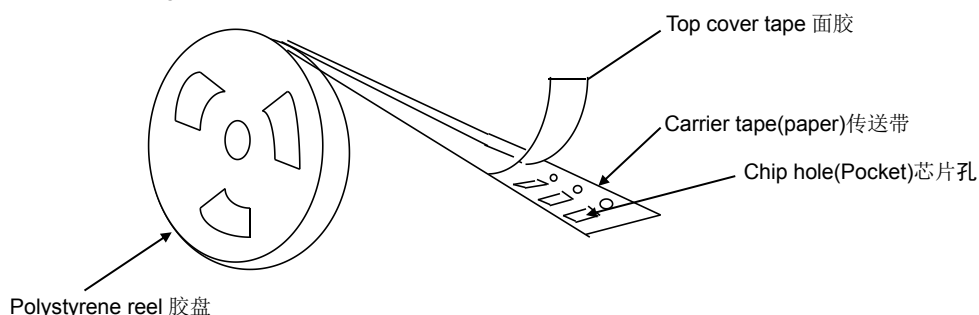
代号 Code 纸带规格 Paper size	I	B	C	D*	E	F	G*	H	J	T
IM03	1.10 ± 0.10	1.90 ± 0.10	8.00 ± 0.10	3.50 ± 0.05	1.75 ± 0.10	4.00 ± 0.10	2.00 ± 0.10	4.00 ± 0.10	1.50 -0/+0.10	1.10 Max
IM05	1.45 ± 0.15	2.30 ± 0.15	8.0 ± 0.15	3.50 ± 0.05	1.75 ± 0.10	4.00 ± 0.10	2.00 ± 0.10	4.00 ± 0.10	1.50 -0/+0.10	1.10 Max
IM06	1.80 ± 0.20	3.40 ± 0.20	8.00 ± 0.20	3.50 ± 0.05	1.75 ± 0.10	4.00 ± 0.10	2.00 ± 0.10	4.00 ± 0.10	1.50 -0/+0.10	1.10 Max

注意：*表示此处对尺寸的要求非常精确。

Note: The place with “*” means where needs exactly dimensions.

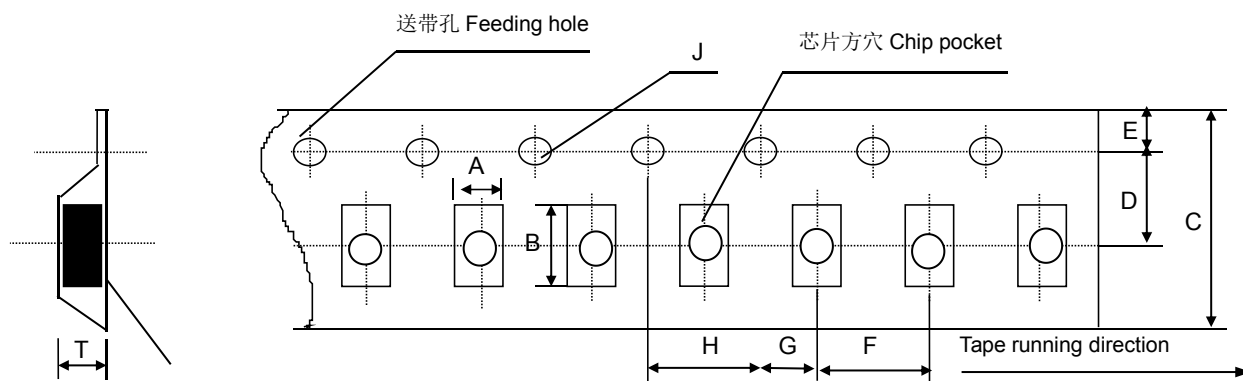
* 塑胶卷盘结构

Embossed Taping



※ 塑胶带尺寸结构 (适合 ‘IM05~IM20’ 型产品)

Dimensions of embossed taping for IM05~IM20 type



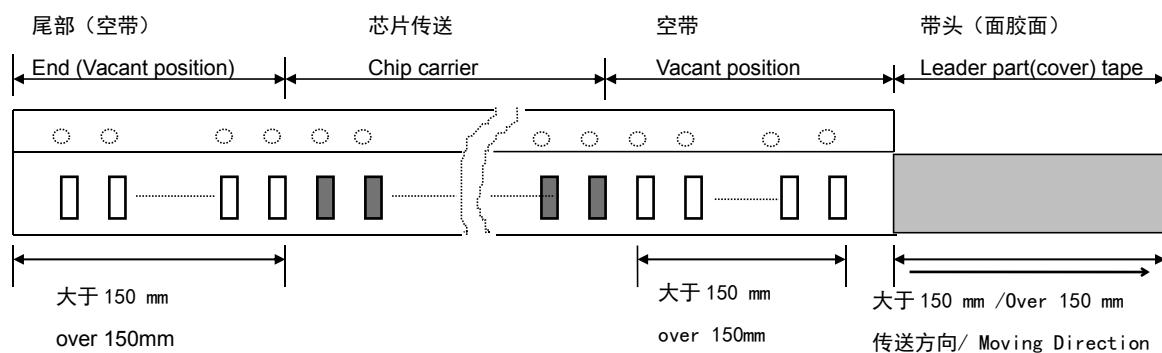
Unit: mm

代号 Code 规格 Tape size	I	B	C	D*	E	F	G*	H	J	T
IM05	1.55 ± 0.20	2.35 ± 0.20	8.00 ± 0.20	3.50 ± 0.05	1.75 ± 0.10	4.00 ± 0.10	2.00 ± 0.10	4.00 ± 0.10	1.50 -0/+0.10	1.50 Max
IM06	1.95 ± 0.20	3.60 ± 0.20	8.00 ± 0.20	3.50 ± 0.05	1.75 ± 0.10	4.00 ± 0.10	2.00 ± 0.10	4.00 ± 0.1	1.50 -0/+0.10	1.85 Max
IM10	2.70 ± 0.10	3.42 ± 0.10	8.00 ± 0.10	3.50 ± 0.05	1.75 ± 0.10	4.00 ± 0.10	2.00 ± 0.05	4.00 ± 0.10	1.55 -0/+0.10	3.2 Max
IM08	2.20 ± 0.10	4.95 ± 0.10	12.00 ± 0.10	5.50 ± 0.05	1.75 ± 0.10	4.00 ± 0.10	2.00 ± 0.05	4.00 ± 0.10	1.50 -0/+0.10	3.0 Max
IM12	3.66 ± 0.10	4.95 ± 0.10	12.00 ± 0.10	5.50 ± 0.05	1.75 ± 0.10	8.00 ± 0.10	2.00 ± 0.05	4.00 ± 0.10	1.55 -0/+0.10	4.0 Max
IM20	6.20 ± 0.10	6.70 ± 0.10	12.00 ± 0.10	5.50 ± 0.05	1.75 ± 0.10	8.00 ± 0.10	2.00 ± 0.05	4.00 ± 0.10	1.55 -0/+0.10	2.40 ± 0.10

备注：*表示此处对尺寸的要求非常精确。Note: The place with “*” means where needs exactly dimensions.

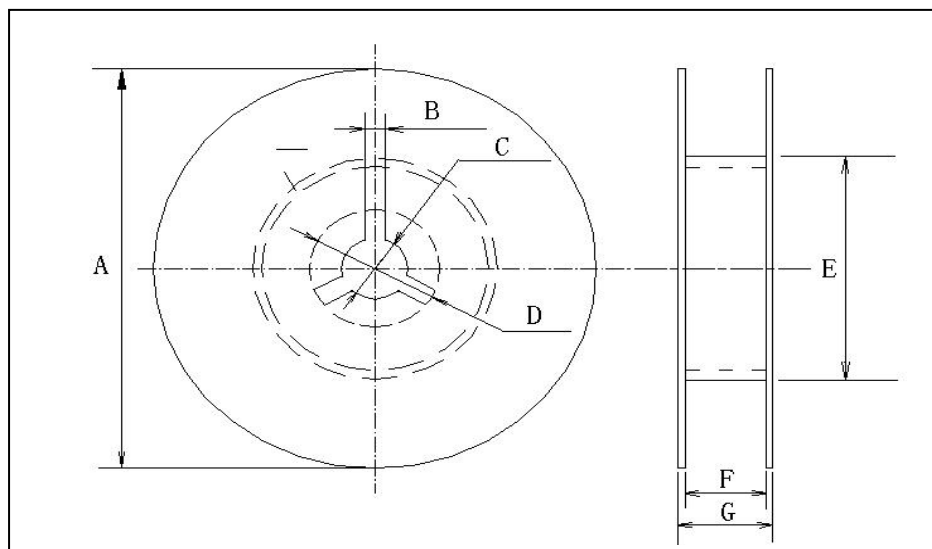
* 传送带的前后结构

Structure of leader part and end part of the carrier paper



* 卷盘尺寸

Reel Dimensions (unit: mm)



* 尺寸代码

Code

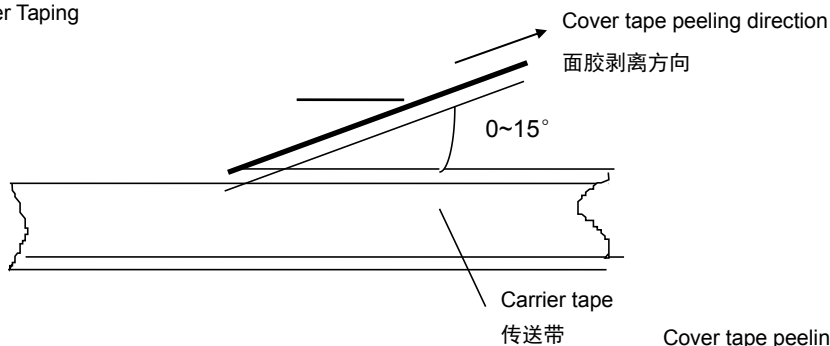
卷盘型号 Reel Code	I	B	C	D	E	F	G
7REEL	$\Phi 178 \pm 20$	3.0	$\Phi 13 \pm 0.5$	$\Phi 21 \pm 0.8$	$\Phi 50$ 或更大 $\Phi 50$ or more	100 ± 1.5	12max
13REEL	$\Phi 330 \pm 20$	3.0	$\Phi 13 \pm 0.5$	$\Phi 21 \pm 0.8$	$\Phi 50$ 或更大	100 ± 1.5	12max

* 关于卷带的说明

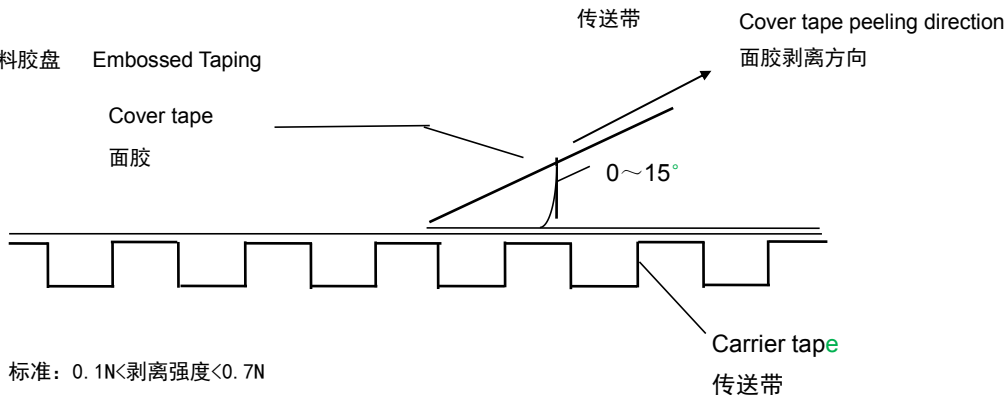
Taping specification

※ 面胶剥离强度 Top tape peeling strength

(I) 纸带 Paper Taping



(II) 塑料胶盘 Embossed Taping


标准: $0.1\text{N} < \text{剥离强度} < 0.7\text{N}$

在剥离时, 纸带不能有纸碎, 也不能粘在底、面胶上。

Standard: $0.1\text{N} < \text{peeling strength} < 0.7\text{N}$

No paper dirty remains on the scotch when peeling and sticks to top and bottom tape.

※塑料盒散包装 Bulk Case Package

单位 (unit) :mm

Symbol	I	B	T	C	D	E
Dimension	6.80 ± 0.10	8.80 ± 1.00	12.00 ± 0.10	$15.00 + 0.10 / - 0$	$2.00 + 0 / - 0.10$	4.70 ± 0.10
Symbol	F	W	G	H	L	I
Dimension	$31.50 + 0.20 / - 0$	$36.00 + 0 / - 0.20$	19.00 ± 0.35	7.00 ± 0.35	110.00 ± 0.70	5.00 ± 0.35

※包装数量 Packing Quantity

尺寸代码 Size Code	厚度 (T) Thickness	7 寸纸带卷盘 (PT)	7 寸胶带卷盘 (ET)	13 寸纸带卷盘 (PT)	13 寸胶带卷盘 (ET)
IM01	BA	15000	---	70000	---
	BB	15000	---	70000	---
	BC	15000	---	70000	---
IM02	CA	10000	---	50000	---
	CB	10000	---	50000	---
	CC	10000	---	50000	---
IM03	DA	4000	---	15000	---
	DB	4000	---	15000	---
IM05	EA	4000	---	15000	---
	EB	---	3000	---	10000
IM06	FA	4000	---	15000	---
	FB	---	3000	---	10000
	FC	---	2000	---	8000
IM10	GA	---	2000	---	8000
	GB	---	2000	---	8000
	GD	---	1000	---	8000
IM08	HA	---	2000	---	8000
	HB	---	2000	---	8000
IM12	IB	---	1000	---	3000

	IC	—	500	—	3000
IM20	LA	—	500	—	
	LB	—	500	—	

注意：包装的形式和数量可根据客户的要求来定。

Note: We can choose packing style and quantity can be according to the customer's requirement.

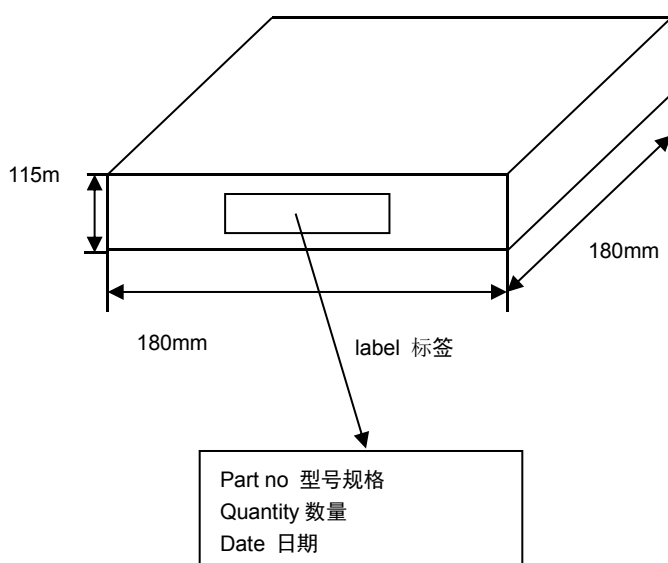
* 外包装

Outer packing

小包装 The first package

Quantity: 10 reels

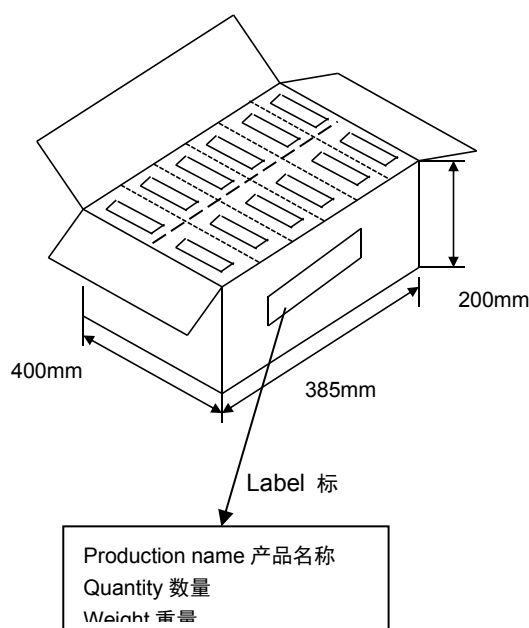
数量：10 卷



大包装 The second package

Quantity: 6 cases

数量：6 盒



◆储存方法 Storage Methods

*MLCC 的储存条件：相对湿度为 20~70%，储存温度为 5~40℃，建议温度低于 30℃。

*MLCC 的性能可能会受到储存条件的影响，交货后请立即使用。高温高湿条件、长期储存可能会导致包装材料变质、产品端头电极氧化。如自交付后已超过六个月，使用前检查包装、外观等。如果交付后超过一年，在使用前要检查可焊性。

* 不要将电容器存放在含有腐蚀性气体(例如硫化氢、二氧化硫、氯气、氨气等)的环境中。

* 不要在阳光直射下或高湿度条件下储存电容器。

Storage Conditions for MLCC: Relative humidity: 20~70%, storage temperature: 5~40 °C , recommended temperature is below 30°C.

The performance of MLCCs may be affected by storage conditions. Please use immediately after delivery. High temperature and high humidity conditions, or long-term storage, may lead to packaging material deterioration and oxidation of the product's end electrodes. If it has been over six months since delivery, check the packaging and appearance before use. If it has been over a year, check the solderability before use.

Do not store capacitors in environments containing corrosive gases (e.g., hydrogen sulfide, sulfur dioxide, chlorine, ammonia, etc.).

Do not store capacitors under direct sunlight or in high humidity conditions.

◆使用前的注意事项

Precautions For Use

*安装前的信息 Pre-installation Information:

- 1、不要重复使用从设备上拆下的电容器。
- 2、确认额定容量、额定电压等电气特性。
- 3、确认施加电压下的电容特性。
- 4、确认使用下的机械应力。
- 5、确认长期存放的电容器的可焊性。
- 6、在测量电容之前，对长期存放的电容器进行热处理。

- 1.Do not reuse capacitors removed from equipment.
- 2.Confirm electrical characteristics such as rated capacitance and rated Voltage.
- 3.Confirm the capacitor characteristics under applied Voltage.
- 4.Confirm the mechanical stress under use conditions.
- 5.Confirm the solderability of capacitors stored for long periods.
- 6.Perform heat treatment on capacitors that have been stored for a long time before measuring capacitance.

* 应用限制 Application Restrictions

1、我们的产品旨在用于工业级电子自动化设备、网络核心设备及其相关电子产品，产品的设计基于正常操作和使用条件下的通用应用和标准用途。

2、除工业设备及工业设备相关电子产品外，在将我们的产品用于以下高可靠性应用场景之前，请联系我们：航天设备、医疗设备、航空设备、原子能设备、灾难预防设备、犯罪预防设备、电加热设备、燃烧设备、军事设备、安全设备、车载设备、交通信号设备、运输设备和海底设备，或用于风华产品故障可能导致人身伤害、死亡或严重财产损失的任何其他应用或使用。

3、除非您事先获得风华的书面同意，否则风华不对您或第三方因将我们的产品用于第 2 点设备而产生的任何损害承担任何责任。

1.Our products are designed for use in industrial-grade electronic automation equipment, network core equipment, and their related electronic products, based on general applications and standard uses under normal operating and usage conditions.

2.Before using our products in the following high-reliability application scenarios other than industrial equipment and related industrial electronic products, please contact us: aerospace equipment, medical devices, aviation equipment, atomic energy equipment, disaster prevention equipment, crime prevention equipment, electric heating equipment, combustion equipment, military equipment, safety equipment, vehicle-mounted devices, traffic signal equipment, transportation equipment, and underwater equipment, or in any application where product failure may cause personal injury, death, or severe property loss.

3.Unless you have prior written consent from Fenghua, Fenghua is not liable for any damages caused to you or third parties by using our products in the devices mentioned in point

* 焊接的条件与相关图表

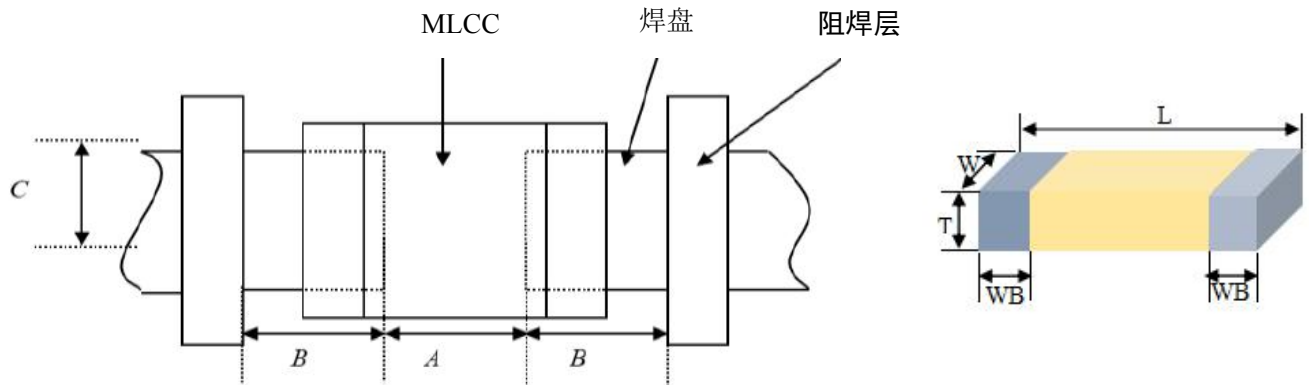
Soldering Condition and Profile

为避免因温度的突然变化而引起的芯片开裂或局部爆炸的现象发生, 请按有关温度曲线图表来进行。(请参考附页中的图表)

To avoid the crack problem by sudden temperature change, follow the temperature profile in the adjacent graph (refer to the graph in the enclosure page).

* 推荐焊盘设计

Recommended pad design



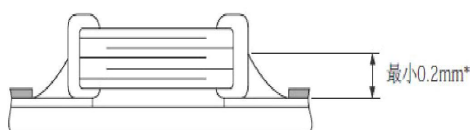
电容产品尺寸			焊盘尺寸		
规格代码 SizeCode	L	W	A	B	C
AM01	0.60±0.03	0.30±0.03	0.20~0.25	0.20~0.30	0.20~0.35
	0.60±0.09	0.30±0.09	0.23~0.30	0.25~0.35	0.30~0.40
AM02	1.00±0.05	0.50±0.05	0.30~0.50	0.35~0.45	0.40~0.60
	1.00±0.15	0.50±0.15	0.40~0.60	0.40~0.50	0.50~0.70
	1.00±0.20	0.50±0.20			
AM03	1.60±0.10	0.80±0.10	0.60~0.80	0.60~0.70	0.60~0.80
	1.60±0.20	0.80±0.20	0.70~0.90	0.70~0.80	0.80~1.00
AM05	2.00±0.20	1.25±0.20	1.00~1.40	0.60~0.80	1.20~1.40
AM06	3.20±0.30	1.60±0.30	1.90~2.10	1.00~1.30	1.60~1.90
AM10	3.20±0.30	2.50±0.30	2.00~2.40	1.00~1.30	2.50~2.80
AM08	4.50±0.40	2.00±0.20	2.50~3.50	1.00~1.80	2.30~3.50
AM12	4.50±0.40	3.20±0.30	2.50~3.50	1.00~1.80	2.30~3.50

* 推荐焊料用量

Recommended Soldering Amounts

回流焊接的最佳焊料用量

The optimal solder fillet amounts
for re-flow soldering

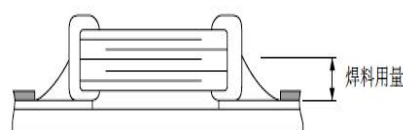


元件最小厚度的1/3。

剖面图

使用烙铁返修时的最佳焊料量

The optimal solder fillet amounts
for reworking by using soldering



剖面图

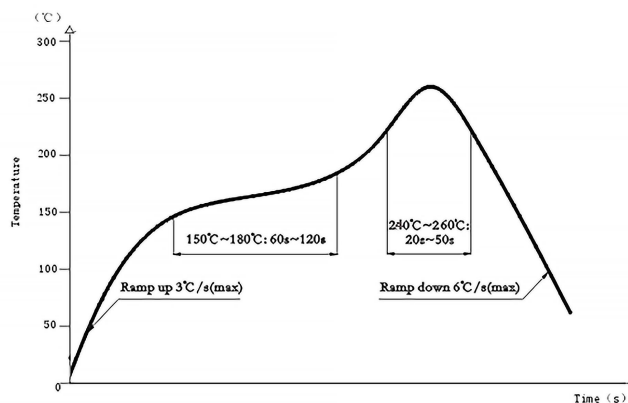
◆推荐焊接方式
Recommended Soldering Method

规格尺寸 Size	温度特性 Temperature Characteristics	额定电压 Rated Voltage	容量范围 Capacitance	焊接方式 Soldering Method
IM01	C0G	/	/	R
	X7R/X5R/X7S/X6S/X6T/X7T	/	/	R
IM02	NPO	/	/	R
	X7R/X5R/X7S/X6S/X6T/X7T	/	/	R
IM03	NPO	/	/	R
	X7R/X5R/X7S/X6S/X6T/X7T	/	$C \geq 1 \mu F$	R
			$C < 1 \mu F$	R
IM05	NPO	/	/	R
	X7R/X5R/X7S/X6S/X6T/X7T	/	$C \geq 4.7 \mu F$	R
			$C < 4.7 \mu F$	R
IM06	NPO	/	/	R
	X7R/X5R/X7S/X6S/X6T/X7T	/	$C \geq 10 \mu F$	R
			$C < 10 \mu F$	R
$\geq IM10$	NPO	/	/	R
	X7R/X5R/X7S/X6S/X6T/X7T	/	/	R

焊接方式 Soldering method: R—回流焊 Reflow Soldering

◆推荐焊接温度曲线图
The temperature profile for soldering

* 回流焊接 Re-flow soldering



	Pb-Sn 焊接 Pb-Sn soldering	无铅焊接 Lead-free soldering
尖峰温度 Peak temperature	230°C ~ 250°C	240°C ~ 260°C

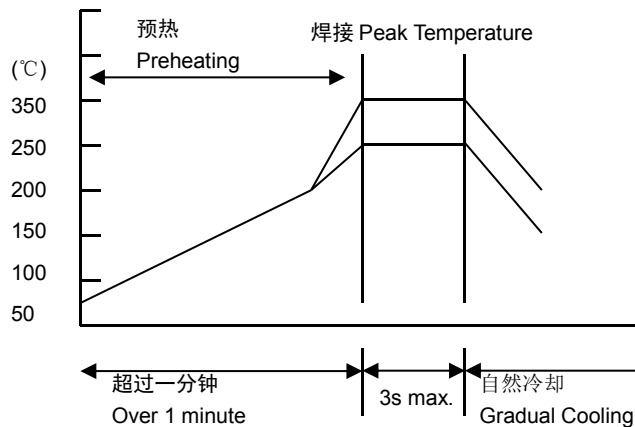
在预热时, 请将焊接温度与芯片表面温度之间的温差维持在 $T \leq 150^\circ\text{C}$ 。

While in preheating, please keep the temperature difference between soldering temperature and surface temperature of chips as: $T \leq 150^\circ\text{C}$.

* 手工焊接

Hand soldering

温度 Temperature



项目 (Item)	建议 (Suggestions)
预热 Preheating	$\Delta \leq 130^{\circ}\text{C}$
烙铁头温度 Temperature of soldering iron head	最高 350°C Highest temperature: 350°C
烙铁功率 Power of soldering iron	最大 20W 20W at the highest
烙铁头直径 Diameter of soldering iron head	建议 1mm 1mm recommended
焊接时间 Soldering time	最长 3s 3s at the longest
锡膏量 Solder paste amount	$\leq 1/2$ 芯片厚度 $\leq 1/2$ chip thickness
限制条件 Restricted conditions	请勿使用烙铁头直接接触陶瓷元件 Please avoid the direct contact between soldering iron head and ceramic components

* 备注：产品规格书仅供设计选型参考用，不作为交货依据。

Note: The product specification is for design and selection reference only and shall not serve as a basis for delivery.