Innovative Service Around the Globe YAGEO

DATA SHEET

SURFACE-MOUNT CERAMIC MULTILAYER CAPACITORS

General Purpose & High Capacitance

Class 2, X7R

6.3 V TO 250 V

100 pF to 47 µF

RoHS compliant & Halogen Free

YAGEO

Product Specification – February 13, 2023 V.23

CAPACITANCE RANGE & THICKNESS FOR X7R

Table 2 Sizes from 0201 to 0402

CAP.	0201					0402					
	6.3 V	10 V	16 V	25 V	50 V	6.3 V	10 V	16 V	25 V	50 V	100 V
100 pF	BA	BA	BA	BA	BA	CA	CA	CA	CA	CA	CA
150 pF	BA	BA	BA	BA	BA	CA	CA	CA	CA	CA	CA
220 pF	BA	BA	BA	BA	BA	CA	CA	CA	CA	CA	CA
330 pF	BA	BA	BA	BA	BA	CA	CA	CA	CA	CA	CA
470 pF	BA	BA	BA	BA	BA	CA	CA	CA	CA	CA	CA
680 pF	BA	BA	BA	BA	BA	CA	CA	CA	CA	CA	CA
1.0 nF	BA	BA	BA	BA	BA	CA	CA	CA	CA	CA	CA
1.5 nF	BA	BA	BA	BA		CA	CA	CA	CA	CA	CA
2.2 nF	BA	BA	BA	BA		CA	CA	CA	CA	CA	CA
3.3 nF	BA	BA	BA	BA		CA	CA	CA	CA	CA	CA
4.7 nF	BA	BA	BA	BA		CA	CA	CA	CA	CA	CA
6.8 nF	BA	BA	BA	BA		CA	CA	CA	CA	CA	CA
10 nF	BA	BA	BA	BA		CA	CA	CA	CA	CA	CA
15 nF						CA	CA	CA	CA	CA	
22 nF	BA					CA	CA	CA	CA	CA	
33 nF	BA					CA	CA	CA	CA	CA	
47 nF	BA					CA	CA	CA	CA	CA	
68 nF						CA	CA	CA	CA	CA	
100 nF	BA					CA	CA	CA	CA	CA	
150 nF								CA	CA		
220 nF						CA	CA	CA	CA		
330 nF											
470 nF						CA	CA				
680 nF											
1 µF						CA	CA				
2.2 µF						CD					

NOTE

1. Values in shaded cells indicate thickness class in mm
2. Capacitance value of non E-6 series is on request
3. For product with 5% tolerance, please contact local sales force before ordering

CASE SIZE	L (mm)	W (mm)	T (mm)	DIMENSION CODE
0201	0.6 s0.03	0.3 s0.03	0.3 s0.03	BA
0402	1.0 s0.05	0.5 s0.05	0.5 s0.05	CA
	1.0 s0.20	0.5 s0.20	0.5 s0.20	CD

CAPACITANCE RANGE & THICKNESS FOR X7R

Table 3 Sizes from 0603

CAP.	0603							
	6.3 V	10 V	16 V	25 V	50 V	100V	200V	250V
100 pF	DA	DA	DA	DA	DA	DA		
150 pF	DA	DA	DA	DA	DA	DA		
220 pF	DA	DA	DA	DA	DA	DA	DA	DA
330 pF	DA	DA	DA	DA	DA	DA	DA	DA
470 pF	DA	DA	DA	DA	DA	DA	DA	DA
680 pF	DA	DA	DA	DA	DA	DA	DA	DA
1.0 nF	DA	DA	DA	DA	DA	DA	DA	DA
1.5 nF	DA	DA	DA	DA	DA	DA	DA	DA
2.2 nF	DA	DA	DA	DA	DA	DA	DA	DA
3.3 nF	DA	DA	DA	DA	DA	DA	DA	DA
4.7 nF	DA	DA	DA	DA	DA	DA	DA	DA
6.8 nF	DA	DA	DA	DA	DA	DA	DA	DA
10 nF	DA	DA	DA	DA	DA	DA	DA	DA
15 nF	DA	DA	DA	DA	DA	DA	DA	DA
22 nF	DA	DA	DA	DA	DA	DA	DA	DA
33 nF	DA	DA	DA	DA	DA	DA		
47 nF	DA	DA	DA	DA	DA	DA		
68 nF	DA	DA	DA	DA	DA	DA		
100 nF	DA	DA	DA	DA	DA	DA		
150 nF	DA	DA	DA	DA	DA			
220 nF	DA	DA	DA	DA	DA			
330 nF	DA	DA	DA	DA				
470 nF	DA	DA	DA	DA	DA			
680 nF	DA	DA	DA	DA	DB			
1 µF	DA	DA	DA	DA	DB			
2.2 µF	DA	DA	DC					
4.7 µF	DC							

NOTE

1. Values in shaded cells indicate thickness class in mm
2. Capacitance value of non E-6 series is on request
3. For product with 5% tolerance, please contact local sales force before ordering

CASE SIZE	L (mm)	W (mm)	T (mm)	DIMENSION CODE
0603	1.6 s0.1	0.8 s0.1	0.8 s0.1	DA
	1.6 s0.15	0.8 s0.15	0.8 s0.15	DB
	1.6 s0.2	0.8 s0.2	0.8 s0.2	DC

CAPACITANCE RANGE & THICKNESS FOR X7R

Table 4 Sizes from 0805

CAP.	0805							
	6.3 V	10 V	16 V	25 V	50 V	100V	200V	250V
100 pF	E0	E0	E0	E0	E0	E0	EA	EA
150 pF	E0	E0	E0	E0	E0	E0	EA	EA
220 pF	E0	E0	E0	E0	E0	E0	EA	EA
330 pF	E0	E0	E0	E0	E0	E0	EA	EA
470 pF	E0	E0	E0	E0	E0	E0	EA	EA
680 pF	E0	E0	E0	E0	E0	E0	EA	EA
1.0 nF	E0	E0	E0	E0	E0	E0	EA	EA
1.5 nF	E0	E0	E0	E0	E0	E0	EA	EA
2.2 nF	E0	E0	E0	E0	E0	E0	EA	EA
3.3 nF	E0	E0	E0	E0	E0	E0	EB	EB
4.7 nF	E0	E0	E0	E0	E0	E0	EB	EB
6.8 nF	E0	E0	E0	E0	E0	E0	EB	EB
10 nF	E0	E0	E0	E0	E0	E0	EB	EB
15 nF	E0	E0	E0	E0	E0	EB	EB	EB
22 nF	E0	E0	E0	E0	E0	EB	EB	EB
33 nF	EA	EA	EA	EA	EA	EB	EB	EB
47 nF	EA	EA	EA	EA	EA	EB	EB	EB
68 nF	EA	EA	EA	EA	EA	EB		
100 nF	EA	EA	EA	EA	EA	EB		
150 nF	EA	EA	EA	EA	EA	EB		
220 nF	EA	EA	EA	EA	EB	EB		
330 nF	EB	EB	EB	EB	EB	EB		
470 nF	EB	EB	EB	EB	EB	EB		
680 nF	EB	EB	EB	EB	EB	EB		
1 µF	EB	EB	EB	EB	EB	EB		
2.2 µF	EB	EB	EB	EB	EB			
4.7 µF	EB	EB	EB	EB				
10 µF	EB	EB	EB					

NOTE

1. Values in shaded cells indicate thickness class in mm
2. Capacitance value of non E-6 series is on request
3. For product with 5% tolerance, please contact local sales force before ordering

CASE SIZE	L (mm)	W (mm)	T (mm)	DIMENSION CODE
0805	2.0 ±0.1	1.25 ±0.1	0.6 ±0.1	E0
	2.0 ±0.2	1.25 ±0.2	0.85 ±0.1	EA
	2.0 ±0.2	1.25 ±0.2	1.25 ±0.2	EB

CAPACITANCE RANGE & THICKNESS FOR X7R

Table 5 Size 1206

CAP.	1206							
	6.3 V	10 V	16 V	25 V	50 V	100V	200V	250V
220 pF	F0	F0	F0	F0	F0	F0	F0	F0
330 pF	F0	F0	F0	F0	F0	F0	F0	F0
470 pF	F0	F0	F0	F0	F0	F0	F0	F0
680 pF	F0	F0	F0	F0	F0	F0	F0	F0
1.0 nF	F0	F0	F0	F0	F0	F0	F0	F0
1.5 nF	F0	F0	F0	F0	F0	F0	F0	F0
2.2 nF	F0	F0	F0	F0	F0	F0	F0	F0
3.3 nF	F0	F0	F0	F0	F0	F0	F0	F0
4.7 nF	F0	F0	F0	F0	F0	F0	F0	F0
6.8 nF	F0	F0	F0	F0	F0	F0	F0	F0
10 nF	F0	F0	F0	F0	F0	F0	F0	F0
15 nF	F0	F0	F0	F0	F0	F0	F0	F0
22 nF	F0	F0	F0	F0	F0	F0	FB	FB
33 nF	F0	F0	F0	F0	F0	F0	FB	FB
47 nF	F0	F0	F0	F0	F0	F0	FB	FB
68 nF	F0	F0	F0	F0	F0	FB	FB	FB
100 nF	F0	F0	F0	F0	F0	FB	FC	FC
150 nF	F0	F0	F0	F0	FA	FB		
220 nF	F0	F0	F0	F0	FA	FB		
330 nF	F0	F0	F0	F0	F0	FC		
470 nF	F0	F0	F0	F0	F1	FC		
680 nF	FA	FA	FA	FA	FC	FC		
1 µF	FA	FA	FA	FA	FC	FC		
2.2 µF	FA	FA	FA	FA	FC	FC		
4.7 µF	FC	FC	FC	FC	FC			
10 µF	FC	FC	FC	FC				
22 µF	FC	FC	FD					

NOTE

1. Values in shaded cells indicate thickness class in mm
2. Capacitance value of non E-6 series is on request
3. For product with 5% tolerance, please contact local sales force before ordering
4. Please contact local sales force for special ordering code before ordering

CASE SIZE	L (mm)	W (mm)	T (mm)	DIMENSION CODE
1206	3.2 s0.15	1.6 s0.15	0.85 s0.1	F0
	3.2 s0.2	1.6 s0.2	1.0 s0.1	F1
	3.2 s0.2	1.6 s0.2	1.15 s0.1	FA
	3.2 s0.3	1.6 s0.2	1.25 s0.2	FB
	3.2 s0.3	1.6 s0.2	1.6 s0.2	FC
	3.2 s0.3	1.6 s0.3	1.6 s0.3	FD

CAPACITANCE RANGE & THICKNESS FOR X7R

Table 6 Sizes from 1210

CAP.	1210							
	6.3 V	10 V	16 V	25 V	50 V	100V	200V	250V
2.2 nF	G0	G0	G0	G0	G0	G0	G0	G0
3.3 nF	G0	G0	G0	G0	G0	G0	G0	G0
4.7 nF	G0	G0	G0	G0	G0	G0	G0	G0
6.8 nF	G0	G0	G0	G0	G0	G0	G0	G0
10 nF	G0	G0	G0	G0	G0	G0	G0	G0
15 nF	G0	G0	G0	G0	G0	G0	G0	G0
22 nF	G0	G0	G0	G0	G0	G0	GA	GA
33 nF	G0	G0	G0	G0	G0	G0	GA	GA
47 nF	G0	G0	G0	G0	G0	G0	GA	GA
68 nF	G0	G0	G0	G0	G0	G0	GA	GA
100 nF	G0	G0	G0	G0	G0	G0	GA	GA
150 nF	G0	G0	G0	G0	GA	GA	GA	GA
220 nF	G0	G0	G0	G0	GA	GA	GA	GA
330 nF	G0	G0	G0	G0	GA	GA		
470 nF	GA	GA	GA	GA	GA	GA		
680 nF	GA	GA	GA	GA	GA	G3		
1 µF	GA	GA	GA	GA	GA	G3		
2.2 µF	G3	G3	G3	G3	G3	G3		
4.7 µF	GB	GB	GB	GB	GD			
10 µF	GB	GB	GB	GB	GD			
22 µF	GC	GC	GC	GC				
47 µF	GC	GC						

NOTE

1. Values in shaded cells indicate thickness class in mm
2. Capacitance value of non E-6 series is on request
3. For product with 5% tolerance, please contact local sales force before ordering
4. Please contact local sales force for special ordering code before ordering

CASE SIZE	L (mm)	W (mm)	T (mm)	DIMENSION CODE
1210	3.2 s0.2	2.5 s0.2	0.85 s0.1	G0
	3.2 s0.4	2.5 s0.3	1.25 s0.2	GA
	3.2 s0.4	2.5 s0.3	1.6 s0.2	G2
	3.2 s0.4	2.5 s0.3	1.9 s0.2	GB
	3.2 s0.4	2.5 s0.3	2.0 s0.2	G3
	3.2 s0.4	2.5 s0.3	2.5 s0.2	GC
	3.2 s0.4	2.5 s0.3	2.5 s0.3	GD

Table 7 Sizes from 1812 to 2220

CAP.	1812				2220
	50 V	100V	200V	250V	50 V
4.7 nF	JA	JA	JA	JA	
6.8 nF	JA	JA	JA	JA	
10 nF	JA	JA	JA	JA	
15 nF	JA	JA	JA	JA	
22 nF	JA	JA	JA	JA	
33 nF	JA	JA	JA	JA	
47 nF	JA	JA	JB	JB	
68 nF	JA	JA	JB	JB	
100 nF	JB	JB	JB	JB	
150 nF	JB	JB	JB	JB	
220 nF	JB	JB	JC	JC	
330 nF	JB	JB	JC	JC	
470 nF	JB	JB	JC	JC	KA
680 nF	JC	JC			
1 µF	JC	JC			KA

NOTE

1. Values in shaded cells indicate thickness class in mm
2. Capacitance value of non E-6 series is on request
3. For product with 5% tolerance, please contact local sales force before ordering
4. Please contact local sales force for special ordering code before ordering

CASE SIZE	L (mm)	W (mm)	T (mm)	DIMENSION CODE
1812	4.5 s0.2	3.2 s0.2	0.85 s0.1	JA
	4.5 s0.2	3.2 s0.2	1.25 s0.2	JB
	4.5 s0.4	3.2 s0.4	1.6 s0.2	JC
2220	5.7s0.4	5.0s0.3	1.15s0.1	KA

THICKNESS CLASSES AND PACKING QUANTITY

Table 8

SIZE CODE	THICKNESS CLASSIFICATION	TAPE WIDTH QUANTITY PER REEL	Ø180 MM / 7 INCH		Ø330 MM / 13 INCH		QUANTITY PER BULK CASE
			Paper	Blister	Paper	Blister	
0201	0.3 ± 0.03 mm	8 mm	15,000	---	50,000	---	---
0402	0.5 ± 0.05 mm	8 mm	10,000	---	50,000	---	50,000
0603	0.8 ± 0.1 mm	8 mm	4,000	---	15,000	---	15,000
0805	0.6 ± 0.1 mm	8 mm	4,000	---	20,000	---	10,000
	0.85 ± 0.1 mm	8 mm	4,000	---	15,000	---	8,000
	1.25 ± 0.2 mm	8 mm	---	3,000	---	10,000	5,000
1206	0.6 ± 0.1 mm	8 mm	4,000	---	20,000	---	---
	0.85 ± 0.1 mm	8 mm	4,000	---	15,000	---	---
	1.00 / 1.15 ± 0.1 mm	8 mm	---	3,000	---	10,000	---
	1.25 ± 0.2 mm	8 mm	---	3,000	---	10,000	---
	1.6 ± 0.15 mm	8 mm	---	2,500	---	10,000	---
	1.6 ± 0.2 mm	8 mm	---	2,000	---	8,000	---
1210	0.6 / 0.7 ± 0.1 mm	8 mm	---	4,000	---	15,000	---
	0.85 ± 0.1 mm	8 mm	---	4,000	---	10,000	---
	1.15 ± 0.1 mm	8 mm	---	3,000	---	10,000	---
	1.15 ± 0.15 mm	8 mm	---	3,000	---	10,000	---
	1.25 ± 0.2 mm	8 mm	---	3,000	---	---	---
	1.5 ± 0.1 mm	8 mm	---	2,000	---	---	---
	1.6 / 1.9 ± 0.2 mm	8 mm	---	2,000	---	---	---
	2.0 ± 0.2 mm	8 mm	---	2,000 1,000	---	---	---
	2.5 ± 0.2 mm	8 mm	---	1,000 500	---	---	---
1808	1.15 ± 0.15 mm	12 mm	---	3,000	---	---	---
	1.25 ± 0.2 mm	12 mm	---	3,000	---	---	---
	1.35 ± 0.15 mm	12 mm	---	2,000	---	---	---
	1.5 ± 0.1 mm	12 mm	---	2,000	---	---	---
	1.6 ± 0.2 mm	12 mm	---	2,000	---	8,000	---
	2.0 ± 0.2 mm	12 mm	---	2,000	---	---	---
1812	0.6 / 0.85 ± 0.1 mm	12 mm	---	2,000	---	---	---
	1.15 ± 0.1 mm	12 mm	---	1,000	---	---	---
	1.25 ± 0.2 mm	12 mm	---	1,000	---	---	---
	1.5 ± 0.1 mm	12 mm	---	1,000	---	---	---
	1.6 ± 0.2 mm	12 mm	---	1,000	---	---	---
	2.0 ± 0.2 mm	12 mm	---	1,000	---	---	---
	2.5 ± 0.2 mm	12 mm	---	500	---	---	---
2220	1.15 ± 0.1 mm	12 mm	---	1,500	---	---	---

TEST	TEST METHOD	PROCEDURE	REQUIREMENTS
Solderability	IEC 60384-21/22 4.10	Preheated to a temperature of 80°C to 140°C and maintained for 30 seconds to 60 seconds. 1. Temperature: 235 ± 5°C / Dipping time: 2 ± 0.5 s 2. Temperature: 245 ± 5°C / Dipping time: 3 ± 0. (lead free) Depth of immersion: 10mm	The solder should cover over 95% of th critical area of each termination
Rapid Change of Temperature	4.11	Preconditioning; 150 +0/-10°C for 1 hour, then keep for 24 ± 1 hours at room temperature 5 cycles with following detail: 30 minutes at lower category temperature 30 minutes at upper category temperature Recovery time 24 ± 2 hours	No visual damage ¨C/C Class II: X7R: ± 15% D.F. meet initial specified value R_{ins} meet initial specified value
Damp Heat with U_r Load	IEC 60384-21/22 4.13	1. Preconditioning, Class II only: 150 +0/-10°C /1 hour, then keep for 24 ± 1 hour at room temp 2. Initial measure Spec: refer to initial spec C, D, IR 3. Damp heat test: 500 ± 12 hours at 40 ± 2 °C; 90 to 95% R.H. 1.0 U_r applied 4. Recovery: Class II 24 ± 2 hours 5. Final measure C, D, IR P.S. If the capacitance value is less than the m value permitted, then after the other measurem have been made the capacitor shall be preconditioned according to, (& and µ then the requirement shall be met. * **Note**	No visual damage after recovery <General Purpose series> ¨C/C Class II: X7R: ± 15% D.F. Class II: X7R: 1 ¿ 16V: ¿ 7% or 2 x initial value whichev is greater À 25V: ¿ 5% or 2 x initial value whichev is greater R_{ins} Class II: X7R: • 500 MΩ or R_{ins} x C_r • 25s whichever is less <High Capacitance series> ¨C/C Class II: X7R: ±20% D.F. Class II: X7R: 2 x initial value max R_{ins} Class II: X7R: 500 MΩ or R_{ins} x C_r • 5s whichever is less

* Note

X7R	0201	0402	0603	0805	1206	1210	1812	Product Type
¿6.3V	100pF to 10nF	100pF to 100nF	100pF to 470nF	220pF to 1µF	220pF to 1µF	2.2nF to 1µF		General Purpose
	100nF	220nF to 2.2µF	560nF to 4.7µF	2.2µF to 10µF	2.2µF to 22µF	2.2µF to 47µF		High Capacitance
10V	100pF to 10nF	100pF to 100nF	100pF to 470nF	220pF to 1µF	220pF to 1µF	2.2nF to 1µF		General Purpose
		220nF to 1µF	560nF to 4.7µF	2.2µF to 10µF	2.2µF to 22µF	2.2µF to 47µF		High Capacitance
16V	100pF to 10nF	100pF to 100nF	100pF to 470nF	220pF to 1µF	220pF to 1µF	2.2nF to 1µF		General Purpose
		220nF	560nF to 2.2µF	2.2µF to 10µF	2.2µF to 22µF	2.2µF to 22µF		High Capacitance
25V	100pF to 10nF	100pF to 100nF	100pF to 470nF	220pF to 1µF	220pF to 1µF	2.2nF to 1µF		General Purpose
			560nF to 1µF	2.2µF to 4.7µF	2.2µF to 10µF	2.2µF to 22µF		High Capacitance
50V	100pF to 1nF	100pF to 47nF	100pF to 220nF	220pF to 1µF	220pF to 1µF	2.2nF to 1µF	4.7nF to 1µF	General Purpose
		100nF	560nF to 1µF	2.2µF	2.2µF to 4.7µF	2.2µF to 10µF		High Capacitance
100V		100pF to 10nF	100pF to 100nF	220pF to 1µF	220pF to 1µF	2.2nF to 1µF	4.7nF to 470nF	General Purpose
					2.2µF	2.2µF		High Capacitance
250V			220pF to 22nF	220pF to 100nF	220pF to 100nF	2.2nF to 220nF	4.7nF to 470nF	General Purpose

TEST	TEST METHOD	PROCEDURE	REQUIREMENTS
Endurance	IEC 60384-21/22 4.14	1. Preconditioning, class 2 only: 150 +0/-10 °C /1 hour, then keep for 24 ± 1 hour at room temp 2. Initial measure Spec: refer to initial spec C, D, IR 3. Endurance test Temperature X7R: 125°C Specified stress voltage applied for 1000 hours: Applied 2.0 x U for general product* Applied 1.5 x U for high cap. Products* 4. Recovery time: 24 ± 2 hours 5. Final measure C, D, IR P.S. If the capacitance value is less than the mi value permitted, then after the other measureme have been made the capacitor shall be preconditioned according to ´ , (& and then the requirement shall be met. * Note	No visual damage <General Purpose series> ¨C/C Class II: X7R: ± 15% D.F. Class II: X7R: 1 " 16V: " 7% or 2 x initial value whichev is greater • 25V: " 5% or 2 x initial value whichev is greater R_{ins} Class II: X7R: • 1,000 MΩ or R_{ins} x C_r • 50s whichever is less <High Capacitance series> ¨C/C Class II: X7R: ± 20% D.F. Class II: X7R: 2 x initial value max R_{ins} Class II: X7R: 1,000 MΩ or R_{ins} x C_r • 10s whichever is less

* Note

X7R	0201	0402	0603	0805	1206	1210	1812	2220	Test voltage
"6.3V	100pF to 10nF	100pF to 100nF	100pF to 470nF	220pF to 1µF	220pF to 1µF	2.2nF to 1µF			200% x Rated volta
	100nF	220nF to 2.2µF	560nF to 4.7µF	2.2µF to 10µF	2.2µF to 22µF	2.2µF to 47µF			150% x Rated volta
10V	100pF to 10nF	100pF to 100nF	100pF to 470nF	220pF to 1µF	220pF to 1µF	2.2nF to 1µF			200% x Rated volta
		220nF to 1µF	560nF to 4.7µF	2.2µF to 10µF	2.2µF to 22µF	2.2µF to 47µF			150% x Rated volta
16V	100pF to 10nF	100pF to 100nF	100pF to 470nF	220pF to 1µF	220pF to 1µF	2.2nF to 1µF			200% x Rated volta
		220nF	560nF to 2.2µF	2.2µF to 10µF	2.2µF to 22µF	2.2µF to 22µF			150% x Rated volta
25V	100pF to 10nF	100pF to 100nF	100pF to 470nF	220pF to 1µF	220pF to 1µF	2.2nF to 1µF			200% x Rated volta
			560nF to 1µF	2.2µF to 4.7µF	2.2µF to 10µF	2.2µF to 22µF			150% x Rated volta
50V	100pF to 1nF	100pF to 47nF	100pF to 330nF	220pF to 1µF	220pF to 1µF	2.2nF to 1µF	4.7nF to 1µF	470nF to 1µF	200% x Rated volta
		100nF	470nF to 1µF	2.2µF	2.2µF to 4.7µF	2.2µF to 10µF			150% x Rated volta
100V		100pF to 10nF	100pF to 100nF	220pF to 680nF	220pF to 1µF	2.2nF to 1µF	4.7nF to 1µF		200% x Rated voltage
				1µF	2.2µF	2.2µF			150% x Rated volta
250V			220pF to 22nF	220pF to 100nF	220pF to 100nF	2.2nF to 220n	4.7nF to 470n		150% x Rated volta

Voltage Proof	IEC 60384-1	4.6	1. Specified stress voltage applied for 1~5 seconds 2. Ur ≤ 100 V: series applied 2.5 Ur 3. 100 V < Ur ≤ 200 V series applied (1.5 Ur + 100) 4. 200 V < Ur ≤ 500 V series applied (1.3 Ur + 100) Charge/Discharge current is less than 50 mA	No breakdown or flashover

REVISION HISTORY

REVISION	DATE	CHANGE NOTIFICATION	DESCRIPTION
Version 23	Feb 13, 2023	-	- 0805, 100V, 5.6nF to 10nF dimension updated
Version 22	Oct. 07, 2022	-	- 1206/4.7uF/6.3V to 16V I.R. updated
Version 21	Sep. 06, 2022	-	- Dissipation factor and I.R. spec updated
Version 20	Sep. 8, 2020	-	- 0402, 220nF to 470nF, 10V Insulation resistance after 1 minute (DC) updated
Version 19	Aug. 17, 2020	-	- Add 0402/220nF/25V
Version 18	May. 11th, 2017	-	- Add 1210/10uF/50V
Version 17	Mar. 7th, 2017	-	- 0805 L4 spec updated - Dimension updated
Version 16	Dec. 7th, 2016	-	- Dimension updated
Version 15	Oct. 3rd, 2016	-	- Dimension updated, Soldering recommendation updated
Version 14	May 31st, 2016	-	- Dimension updated
Version 13	Dec. 30, 2015	-	- Dimension on 0603 and 1206 case size updated
Version 12	May 26, 2015	-	- 1210, 25V dissipation factor updated
Version 11	Jan. 06, 2015	-	- 0402, 100nF, 50V Dissipation factor (D.F.) updated.
Version 10	Jul. 08, 2014	-	- Dimension updated
Version 9	Aug. 19, 2013	-	- Dimension updated
Version 8	Oct. 13, 2011	-	- Dimension updated - 50V Dissipation factor(D.F) updated
Version 7	Jan. 13, 2011	-	- Dimension updated
Version 6	Oct. 13, 2010	-	- Rated voltage of 0201 extend to 50 V - Capacitance range of 0201 X7R 6.3V to 16V extend to 100pF - Capacitance range of 0805 X7R 10V extend to 10uF - Capacitance range of 0805 X7R 50V extend to 1uF - Capacitance range of 1210 X7R 10V extend to 22uF - Figures of impedance ESR updated
Version 5	Jul 27, 2010	-	- Dimension on 0603 and 1206 case size updated - 16V to 25V Dissipation factor(D.F) updated
Version 4	Apr 21, 2010	-	- The statement of "Halogen Free" on the cover added - Dimension updated
Version 3	Oct 26, 2009	-	- Capacitance range 0402 X7R 25 V extend to 100 nF - 16V Dissipation factor updated
Version 2	May 11, 2009	-	- Product range updated
Version 1	Apr 24, 2009	-	- Ordering code updated

REVISION HISTORY

REVISION	DATE	CHANGE NOTIFICATION	DESCRIPTION
Version 0	Apr 15, 2009	-	- New datasheet for general purpose and high capacitance X7R series with RoHS compliant - Replace the "6.3V to 50V" part of pdf files: X7R_10V_9 to-100V_9, X7R_16V_9 to-500V_9, UPY-X5R_X7R_HighCaps_6to3-25V_11 and UY-X5R_X7R_HighCaps_6to3-25V_11 - Combine 0201 from pdf files: UPY-X5RX7RY5V_0201_6to3-50V_2 and UY-NPOX5RX7RY5V_0201_6to3-50V_2 - Define global part number - Description of "Halogen Free compliant" added - Test method and procedure updated

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