

# XT Series

## Features

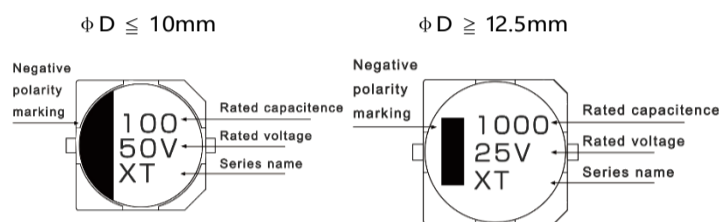
- Endurance : 105°C 2000H
- Designed for reflow soldering
- Designed for surface mounting on high-density PCB
- RoHS 2.0 compliant
- 219 SVHC & REACH compliant



Marking color : Black

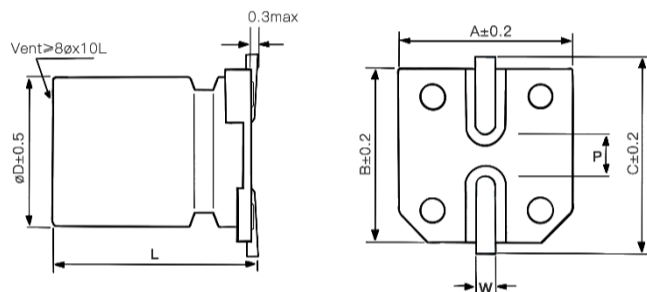
Specifications										
Category temp. range	-55°C to +105°C									
Capacitance tolerance	±20% (120 Hz / +20 °C)									
Leakage current	I ≤ 0.01 CV or 3 μA whichever is greater (after 2 minutes)									
Tan δ	Please see the attached characteristics list									
Characteristics at low temperature	Rated voltage ( V )	6.3	10	16	25	35	50	63	100	Impedance ratio at 120 Hz
	Z (-25 °C) / Z (+20 °C)	4	4	3	2	2	2	2	3	
	Z (-55 °C) / Z (+20 °C)	12	8	6	4	3	3	3	4	
Endurance	After applying rated working voltage for 2000 hours at +105 °C ± 2 °C, and then being stabilized at +20 °C, capacitors shall meet the following limits.									
	Capacitance change	φ D ≤ 6.3mm : Within ±25% of the initial value φ D ≥ 8mm : Within ±20% of the initial value								
	Dissipation factor (tan δ)	φ D ≤ 6.3mm : Less than 300% of the initial value φ D ≥ 8mm : Less than 200% of the initial value								
	Leakage current	Within the initial limit								
Shelf life	After storage for 1000 h at +105 °C ± 2 °C with no voltage applied and then being stabilized at +20 °C, capacitors shall meet the limits specified in endurance.									
Resistance to soldering heat	After reflow soldering and then being stabilized at +20 °C, capacitors shall meet the following limits.									
	Capacitance change	Within ±10% of the initial value								
	Dissipation factor (tan δ)	Within the initial limit								
	Leakage current	Within the initial limit								
Frequency correction factor for ripple current	Frequency	50Hz	120Hz	1kHz	10kHz≤					
	C ≤ 1000μF	0.7	1.0	1.2	1.3					
	C > 1000μF	0.8	1.0	1.1	1.2					

## Marking :



Dimensions						Unit : mm
φ D	L	A	B	C	W	P±0.2
4	5.7±0.3	4.3	4.3	5.1	0.5~0.8	1.0
5	5.7±0.3	5.3	5.3	6.1	0.5~0.8	1.3
6.3	5.7±0.3	6.6	6.6	7.3	0.5~0.8	2.2
6.3	7.7±0.3	6.6	6.6	7.3	0.5~0.8	2.2
8	6.5±0.5	8.3	8.3	9.2	0.7~1.2	3.1
8	10.5±0.5	8.3	8.3	9.2	0.7~1.2	3.1
10	7.7±0.3	10.3	10.3	11.2	0.7~1.2	4.4
10	10.5±0.5	10.3	10.3	11.2	0.7~1.2	4.4
10	13±0.5	10.3	10.3	11.2	0.7~1.2	4.4
12.5	13.5±0.5	13.0	13.0	14.0	1.0~1.4	4.4
12.5	16±0.5	13.0	13.0	14.0	1.0~1.4	4.4

## Dimensions :



## Part Number System :

XT series      16V      220μF      ±20 %      6.3 φ X7.7L

**XT**      **1C**      **221**      **M**      **0607**

Series name | Rated voltage | Capacitance | Capacitance tolerance | Case Size

Characteristics list							
Rated voltage ( V )	Capacitance ( ±20% ) ( μF )	Case size		Specification		Part Number③	Taping&Reel
		φD ( mm )	L ( mm )	Rated ripple current① ( mA rms )	tan δ②		MPQ ( pcs/reel )
6.3	22	4	5.7	22	0.35	XT0J220M0406	2000
	33	5	5.7	34	0.35	XT0J330M0506	1000
	47	5	5.7	38	0.35	XT0J470M0506	1000
	100	5	5.7	45	0.35	XT0J101M0506	1000
		6.3	5.7	69	0.35	XT0J101M0606	1000
	220	6.3	5.7	95	0.35	XT0J221M0606	1000
		6.3	7.7	120	0.35	XT0J221M0607	1000
	330	6.3	7.7	105	0.35	XT0J331M0607	1000
		8	6.5	120	0.35	XT0J331M0806	1000
	8	10.5	230	0.35	XT0J331M0810	500	
470	6.3	7.7	120	0.35	XT0J471M0607	1000	
	8	10.5	230	0.35	XT0J471M0810	500	
1000	10	10.5	315	0.37	XT0J102M1010	500	
2200	12.5	13.5	620	0.42	XT0J222M1313	200	
10	22	4	5.7	23	0.24	XT1A220M0406	2000
	33	4	5.7	25	0.24	XT1A330M0406	2000
		5	5.7	35	0.24	XT1A330M0506	1000
	47	5	5.7	38	0.24	XT1A470M0506	1000
	100	5	5.7	45	0.24	XT1A101M0506	1000
		6.3	5.7	69	0.24	XT1A101M0606	1000
	150	6.3	5.7	80	0.24	XT1A151M0606	1000
		6.3	5.7	80	0.24	XT1A221M0606	1000
	220	6.3	7.7	120	0.24	XT1A221M0607	1000
		8	6.5	120	0.24	XT1A221M0806	1000
	330	6.3	7.7	125	0.24	XT1A331M0607	1000
		8	10.5	290	0.24	XT1A331M0810	500
	470	8	10.5	290	0.24	XT1A471M0810	500
		10	7.7	290	0.24	XT1A471M1007	500
1000	10	10.5	400	0.26	XT1A102M1010	500	
2200	12.5	13.5	680	0.38	XT1A222M1313	200	
16	10	4	5.7	20	0.20	XT1C100M0406	2000
	22	4	5.7	22	0.20	XT1C220M0406	2000
		5	5.7	30	0.20	XT1C220M0506	1000
	33	5	5.7	35	0.20	XT1C330M0506	1000
		6.3	5.7	45	0.20	XT1C330M0606	1000
	47	5	5.7	39	0.20	XT1C470M0506	1000
		6.3	5.7	55	0.20	XT1C470M0606	1000
	100	6.3	5.7	70	0.20	XT1C101M0606	1000
		8	6.5	120	0.20	XT1C101M0806	1000
	220	6.3	7.7	120	0.20	XT1C221M0607	1000
		8	6.5	120	0.20	XT1C221M0806	1000
	8	10.5	220	0.20	XT1C221M0810	500	
	330	8	10.5	220	0.20	XT1C331M0810	500
		10	7.7	200	0.20	XT1C331M1007	500
	470	8	10.5	250	0.20	XT1C471M0810	500
		10	10.5	340	0.20	XT1C471M1010	500
	1000	10	10.5	340	0.22	XT1C102M1010	500
		10	13	390	0.22	XT1C102M1013	400
		12.5	13.5	500	0.32	XT1C102M1313	200

① Rated ripple current (120Hz / +105°C)    ② tan δ (120Hz / +20°C)    ③ For plastic reel packaging, the Part Number is appended with "PR" at the end.

※ Please refer to the page of reflow conditions for reflow profile.

**Characteristics list**

Rated voltage (V)	Capacitance (±20%) (μF)	Case size		Specification		Part Number <sup>③</sup>	Taping&Reel
		øD (mm)	L (mm)	Rated ripple current <sup>①</sup> (mA rms)	tan δ <sup>②</sup>		MPQ (pcs/reel)
25	4.7	4	5.7	17	0.18	XT1E4R7M0406	2000
	10	4	5.7	20	0.18	XT1E100M0406	2000
		5	5.7	27	0.18	XT1E100M0506	1000
	22	5	5.7	30	0.18	XT1E220M0506	1000
		6.3	5.7	44	0.18	XT1E220M0606	1000
	33	5	5.7	35	0.18	XT1E330M0506	1000
		6.3	5.7	46	0.18	XT1E330M0606	1000
	47	6.3	5.7	48	0.18	XT1E470M0606	1000
		8	6.5	79	0.18	XT1E470M0806	1000
	100	6.3	7.7	100	0.18	XT1E101M0607	1000
		8	6.5	100	0.18	XT1E101M0806	1000
		8	10.5	150	0.18	XT1E101M0810	500
	220	8	10.5	200	0.18	XT1E221M0810	500
		10	7.7	190	0.18	XT1E221M1007	500
330	8	10.5	220	0.18	XT1E331M0810	500	
	10	10.5	240	0.18	XT1E331M1010	500	
470	10	10.5	280	0.18	XT1E471M1010	500	
1000	12.5	13.5	580	0.30	XT1E102M1313	200	
35	4.7	4	5.7	17	0.16	XT1V4R7M0406	2000
	10	4	5.7	17	0.16	XT1V100M0406	2000
		5	5.7	25	0.16	XT1V100M0506	1000
	22	5	5.7	30	0.16	XT1V220M0506	1000
		6.3	5.7	44	0.16	XT1V220M0606	1000
	33	6.3	5.7	46	0.16	XT1V330M0606	1000
		8	6.5	76	0.16	XT1V330M0806	1000
	47	6.3	5.7	50	0.16	XT1V470M0606	1000
		6.3	7.7	80	0.16	XT1V470M0607	1000
		8	6.5	80	0.16	XT1V470M0806	1000
	100	6.3	7.7	85	0.16	XT1V101M0607	1000
		8	10.5	150	0.16	XT1V101M0810	500
		10	7.7	160	0.16	XT1V101M1007	500
	150	8	10.5	185	0.16	XT1V151M0810	500
	220	8	10.5	220	0.16	XT1V221M0810	500
		10	10.5	250	0.16	XT1V221M1010	500
330	10	10.5	300	0.16	XT1V331M1010	500	
	10	13	330	0.16	XT1V331M1013	400	
470	10	10.5	310	0.16	XT1V471M1010	500	
	10	13	375	0.16	XT1V471M1013	400	
	12.5	13.5	520	0.22	XT1V471M1313	200	
50	1	4	5.7	8	0.14	XT1H010M0406	2000
	2.2	4	5.7	12	0.14	XT1H2R2M0406	2000
	3.3	4	5.7	14	0.14	XT1H3R3M0406	2000
	4.7	4	5.7	14	0.14	XT1H4R7M0406	2000
		5	5.7	20	0.14	XT1H4R7M0506	1000
	10	5	5.7	20	0.14	XT1H100M0506	1000
		6.3	5.7	32	0.14	XT1H100M0606	1000
	22	6.3	5.7	38	0.14	XT1H220M0606	1000
		6.3	7.7	50	0.14	XT1H220M0607	1000
		8	6.5	70	0.14	XT1H220M0806	1000
	33	6.3	7.7	60	0.14	XT1H330M0607	1000
		8	6.5	70	0.14	XT1H330M0806	1000
	47	6.3	7.7	63	0.14	XT1H470M0607	1000
		8	6.5	85	0.14	XT1H470M0806	1000
		8	10.5	100	0.14	XT1H470M0810	500
	100	8	10.5	160	0.14	XT1H101M0810	500
10		7.7	180	0.14	XT1H101M1007	500	
10		10.5	160	0.14	XT1H101M1010	500	
220	10	10.5	230	0.14	XT1H221M1010	500	
	10	13	300	0.14	XT1H221M1013	400	
330	12.5	13.5	420	0.18	XT1H331M1313	200	
63	1	4	5.7	8	0.14	XT1J010M0406	2000
	2.2	4	5.7	11	0.14	XT1J2R2M0406	2000
	3.3	5	5.7	14	0.14	XT1J3R3M0506	1000
		6.3	5.7	30	0.14	XT1J3R3M0606	1000
	4.7	6.3	5.7	25	0.14	XT1J4R7M0606	1000
	10	6.3	5.7	24	0.14	XT1J100M0606	1000
		8	6.5	25	0.14	XT1J100M0806	1000
	22	6.3	7.7	49	0.14	XT1J220M0607	1000
		8	6.5	55	0.14	XT1J220M0806	1000
		8	10.5	98	0.14	XT1J220M0810	500
	33	8	10.5	112	0.14	XT1J330M0810	500
	47	8	10.5	119	0.14	XT1J470M0810	500
		10	10.5	160	0.14	XT1J470M1010	500
	100	10	10.5	196	0.14	XT1J101M1010	500
10		13	210	0.14	XT1J101M1013	400	
12.5		13.5	270	0.16	XT1J101M1313	200	
220	12.5	13.5	470	0.16	XT1J221M1313	200	
100	4.7	5	5.7	15	0.14	XT2A4R7M0506	1000
		6.3	5.7	21	0.14	XT2A4R7M0606	1000
		6.3	7.7	35	0.14	XT2A4R7M0607	1000
	10	6.3	7.7	35	0.14	XT2A100M0607	1000
		8	10.5	80	0.14	XT2A100M0810	500
	22	8	10.5	90	0.14	XT2A220M0810	500
		10	10.5	130	0.14	XT2A220M1010	500
	33	10	10.5	130	0.14	XT2A330M1010	500
	47	10	10.5	140	0.14	XT2A470M1010	500
		10	13	160	0.14	XT2A470M1013	400
12.5		13.5	250	0.16	XT2A470M1313	200	
100	12.5	13.5	380	0.16	XT2A101M1313	200	

① Rated ripple current (120Hz / +105°C)    ② tan δ (120Hz / +20°C)    ③ For plastic reel packaging , the Part Number is appended with "PR" at the end.

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