

Surface Mount Type

Series: **CX**

Features

- High voltage (35 V.DC max.)
- Low profile (Height 1.0 mm max.)
- High ripple current (5600 mAr.m.s. max.)
- RoHS compliance, Halogen free

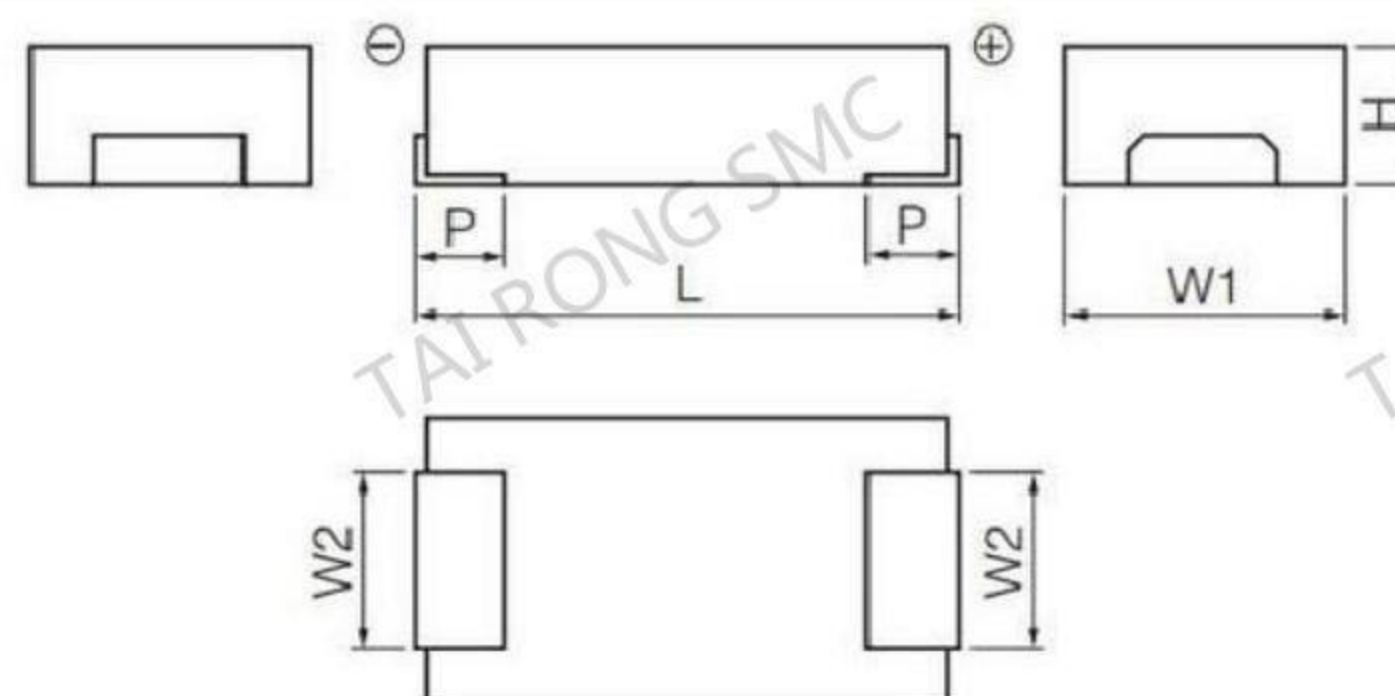
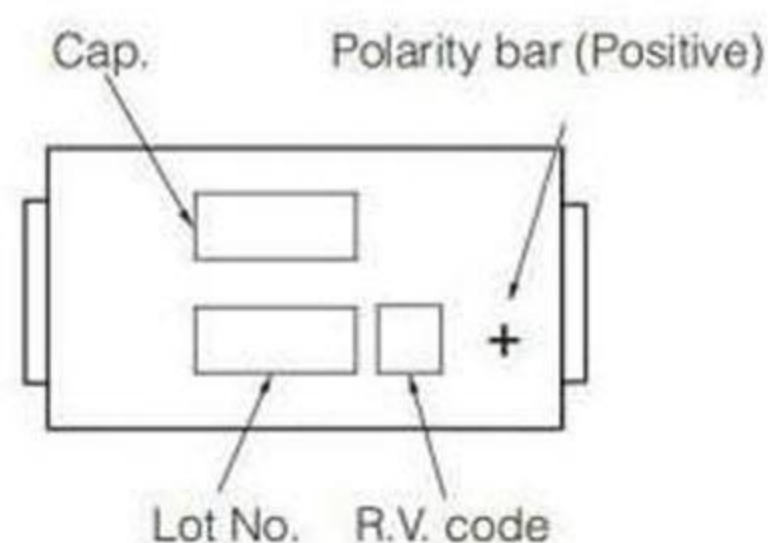


Specifications

Series	CS	CT	CX	
Category temp.range	-55°C to+105 °C			
Rated voltage range	4 V.DC to 35 V.DC		2 V.DC to 35 V.DC	
Nominal cap.range	10 μF to 120 μF	15 μF to 180 μF	15 μF to 560 μF	
Capacitance tolerance	±20% (120 Hz/+20C)			
DC leakage current	I ≤ 0.1 CV (μA) [2 V.DC to 6.3 V.DC, 2 minutes], I ≤ 0.3 CV (μA) [10 V.DC to 35 V.DC, 2 minutes]			
Dissipation factor (tan δ)	≤ 0.06 (120 Hz/+20°C)			
Surge voltage (V.DC)	Rated voltage × 1.25 [2 V.DC to 16 V.DC], × 1.15 [20 V.DC to 35 V.DC] (15°C to 35°C)			
Endurance	+105°C, 2000 h, rated voltage applied			
	Capacitance change	Within ±20% of the initial value		
	tan δ	≤ 2 times of the initial limit		
	DC leakage current	2 V.DC to 6.3 VDC : ≤ 3 times of the initial limit 10 V.DC to 35 V.DC : Within the initial limit		
Damp (Steady heat state)	+60°C, 90%, 500 h, No-applied voltage			
	Capacitance change of initial measurd value	2 V.DC to 2.5 V.DC	4 V.DC, 10 V.DC to 35V.DC	6.3 V.DC
		+70%, -20%	+60%, -20%	+50%, -20%
	tan δ	≤ 2 times of the initial limit		
DC leakage current	2 V.DC to 6.3 V.DC : Within the initial limit 10 V.DC to 35V DC : ≤ 3 times of the initial limit			

Marking

Dimensions(not to scale)



						Unit:mm					
Rated voltage mark						Series	L ± 0.2	W1 ± 0.2	W2 ± 0.1	H ± 0.1	P ± 0.3
d	2 V.DC	j	6.3 V.DC	D	20 V.DC	CS	7.3	4.3	2.4	1.1	1.3
e	2.5 V.DC	A	10 V.DC	E	25 V.DC	CT	7.3	4.3	2.4	1.4	1.3
g	4 V.DC	C	16 V.DC	V	35 V.DC	CX	7.3	4.3	2.4	1.9	1.3

*Externals offfigure are the reference.

Design and specifications are each subject to change without notice. Ask factory for the curent technical specifications before purchase and/or use

Should a safety concern arise regarding this product, please be sure to contact us immediately.

07 Nov.2023

Characteristics list

Reflow*3 <Standard>

Series	Rated voltage (V. DC)	Capacitance ($\pm 20\%$) (μF)	Case size (mm)			Specification		Part number	Min. *4 Packaging Q' ty (pcs)
			L	W	H	*1 Ripple current (mAr. m. s.)	*2 ESR (mQ max.)		
CX	2	220	7.3	4.3	1.9	5100	15	EEFCX0D221R	3500
		270	7.3	4.3	1.9	5600	12	EEFCX0D271XR	3500
		330	7.3	4.3	1.9	5100	15	EEFCX0D331R	3500
			7.3	4.3	1.9	5600	12	EEFCX0D331XR	3500
		390	7.3	4.3	1.9	5100	15	EEFCX0D391R	3500
		470	7.3	4.3	1.9	5100	15	EEFCX0D471R	3500
		560	7.3	4.3	1.9	5100	15	EEFCX0D561R	3500
	2.5	220	7.3	4.3	1.9	5100	15	EEFCX0E221R	3500
		330	7.3	4.3	1.9	5100	15	EEFCX0E331R	3500
		390	7.3	4.3	1.9	5100	15	EEFCX0E391R	3500
		470	7.3	4.3	1.9	5100	15	EEFCX0E471R	3500
	4	150	7.3	4.3	1.9	5100	15	EEFCX0G151R	3500
		180	7.3	4.3	1.9	5100	15	EEFCX0G181R	3500
			7.3	4.3	1.9	5600	12	EEFCX0G181XR	3500
		220	7.3	4.3	1.9	5100	15	EEFCX0G221R	3500
			7.3	4.3	1.9	5600	12	EEFCX0G221XR	3500
		270	7.3	4.3	1.9	5100	15	EEFCX0G271R	3500
		330	7.3	4.3	1.9	5100	15	EEFCX0G331R	3500
	6.3	100	7.3	4.3	1.9	5100	15	EEFCX0J101R	3500
		120	7.3	4.3	1.9	5100	15	EEFCX0J121R	3500
		150	7.3	4.3	1.9	5100	15	EEFCX0J151R	3500
			7.3	4.3	1.9	5600	12	EEFCX0J151XR	3500
		180	7.3	4.3	1.9	5100	15	EEFCX0J181R	3500
		220	7.3	4.3	1.9	5100	15	EEFCX0J221R	3500
	10	47	7.3	4.3	1.9	3200	40	EEFCX1A470R	3500
		68	7.3	4.3	1.9	3200	40	EEFCX1A680R	3500
		100	7.3	4.3	1.9	3200	40	EEFCX1A101R	3500
	16	15	7.3	4.3	1.9	3200	40	EEFCX1C150R	3500
		22	7.3	4.3	1.9	3200	40	EEFCX1C220R	3500
		33	7.3	4.3	1.9	3200	40	EEFCX1C330R	3500
		47	7.3	4.3	1.9	3200	40	EEFCX1C470R	3500
		68	7.3	4.3	1.9	3200	40	EEFCX1C680R	3500
	20	22	7.3	4.3	1.9	3200	40	EEFCX1D220R	3500
		33	7.3	4.3	1.9	3200	40	EEFCX1D330R	3500
		47	7.3	4.3	1.9	3200	40	EEFCX1D470R	3500
		56	7.3	4.3	1.9	3200	40	EEFCX1D560R	3500
	25	15	7.3	4.3	1.9	3200	40	EEFCX1E150R	3500
		22	7.3	4.3	1.9	3200	40	EEFCX1E220R	3500
		33	7.3	4.3	1.9	3200	40	EEFCX1E330R	3500
	35	15	7.3	4.3	1.9	3200	40	EEFCX1V150R	3500
		22	7.3	4.3	1.9	3200	40	EEFCX1V220R	3500

*1:Ripple current(100 kHz/+45°C),*2:ESR(100kHz/+20°C)

*3:Please refer to the page of "Mounting Specifications".

*4:Please contact us when 500 pcs packingis necessary.

Temperature compensation multipliers for ripple current

	Temp.	T $\leq 45^{\circ}C$	45 $^{\circ}C < T \leq 85^{\circ}C$	85 $^{\circ}C < T \leq 105^{\circ}C$
2 V. DC to 6.3 V. DC	Coefficient	1.0	0.7	0.25
10 V. DC to 35 V. DC		1.0	0.8	0.5

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