

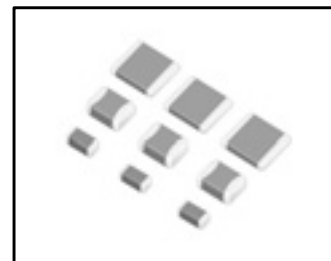
HIGH VOLTAGE · HIGH BIAS TYPE [VC Series]

■ Features

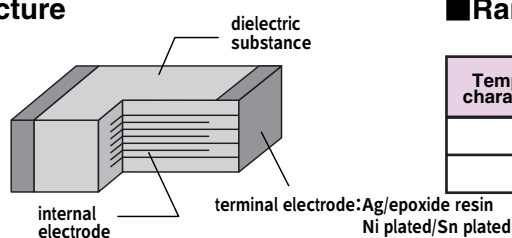
- Very little drop in capacitance values when a DC bias voltage is applied.
- High capacitance in small size.
- The piezo-electric characteristics are small.
- RoHS Compliant.

■ Applications

- Snubber circuit of switching power supply, DC/DC converter, modem, and PDP.



■ Structure



■ Range of Use

Temperature characteristics	EIA symbol	Capacitance change	Temperature range	Capacitance tolerance
R	X7R	±15%	-55~+125°C	K (±10%)
E	Y5U (Z5U)	-20~+55%	-25~+85°C	M (±20%)

■ Capacitance Map (X7R Characteristics)

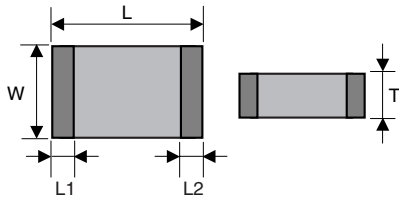
Type rated voltage capacitance	VC30 (3.2×1.6)			VC40 (3.2×2.5)			VC70 (4.5×3.2)			VC80 (5.7×5.0)		
	100Vdc (2A)	250Vdc (2E)	630Vdc (2J)	100Vdc (2A)	250Vdc (2E)	630Vdc (2J)	100Vdc (2A)	250Vdc (2E)	630Vdc (2J)	100Vdc (2A)	250Vdc (2E)	630Vdc (2J)
101 100pF		1.00	1.00									
151 150pF		1.00	1.00									
221 220pF		1.00	1.00									
331 330pF		1.00	1.00									
471 470pF		1.00	1.00									
681 680pF		1.00	1.00									
102 1000pF		1.00	1.00									
152 1500pF		1.00	1.00									
222 2200pF		1.00	1.00									
332 3300pF		1.00	1.00									
472 4700pF		1.00	1.00									
682 6800pF		1.00	1.25			1.00						
103 10nF		1.00	1.80			1.25						
153 15nF		1.25				1.70			1.00			
223 22nF		1.80			1.25	1.70			1.25			
273 27nF		1.80										
333 33nF		1.80			1.25				1.70			
473 47nF					1.70			1.25	1.70			1.25
683 68nF								1.70				1.70
104 0.1 μF								1.70				2.20

■ Capacitance Map (Y5U Characteristics)

Type rated voltage capacitance	VC30 (3.2×1.6)			VC40 (3.2×2.5)			VC70 (4.5×3.2)			VC80 (5.7×5.0)		
	100Vdc (2A)	250Vdc (2E)	630Vdc (2J)	100Vdc (2A)	250Vdc (2E)	630Vdc (2J)	100Vdc (2A)	250Vdc (2E)	630Vdc (2J)	100Vdc (2A)	250Vdc (2E)	630Vdc (2J)
104 0.1 μF	1.00											
154 0.15 μF	1.00											
224 0.22 μF	1.25			1.00				1.70				
334 0.33 μF	1.80			1.25				2.20				
474 0.47 μF				1.70			1.00	2.50			1.70	
684 0.68 μF				2.20			1.25				2.20	
105 1 μF				2.20			2.20					
155 1.5 μF							2.20			1.25		
225 2.2 μF							2.50			1.70		
335 3.3 μF										2.50		

HIGH VOLTAGE · HIGH BIAS TYPE [VC Series]

■ Dimensions



Unit : mm

Type	EIA symbol	L	W	T	L1, L2
VC30	1206	3.2±0.2	1.6±0.2	1.80 max.	0.2~
VC40	1210	3.2±0.3	2.5±0.2	2.20 max.	0.3~
VC70	1812	4.5±0.4	3.2±0.3	2.50 max.	0.4~
VC80	2220	5.7±0.4	5.0±0.4	2.50 max.	0.4~

■ List of products in VC Series

X7R Characteristics

Rated Voltage : 630Vdc

Part Number	Capacitance(pF)	Product height T (mm)
VC30R2J101K-TS	100	1.00+0/-0.25
VC30R2J151K-TS	150	1.00+0/-0.25
VC30R2J221K-TS	220	1.00+0/-0.25
VC30R2J331K-TS	330	1.00+0/-0.25
VC30R2J471K-TS	470	1.00+0/-0.25
VC30R2J681K-TS	680	1.00+0/-0.25
VC30R2J102K-TS	1,000	1.00+0/-0.25
VC30R2J152K-TS	1,500	1.00+0/-0.25
VC30R2J222K-TS	2,200	1.00+0/-0.25
VC30R2J332K-TS	3,300	1.00+0/-0.25
VC30R2J472K-TS	4,700	1.00+0/-0.25
VC30R2J682K-TS	6,800	1.25+0/-0.30
VC30R2J103K-TS	10,000	1.80+0/-0.40
VC40R2J682K-TS	6,800	1.00+0/-0.25
VC40R2J103K-TS	10,000	1.25+0/-0.30
VC40R2J153K-TS	15,000	1.70+0/-0.40
VC40R2J223K-TS	22,000	1.70+0/-0.40
VC70R2J153K-TS	15,000	1.00+0/-0.25
VC70R2J223K-TS	22,000	1.25+0/-0.30
VC70R2J333K-TS	33,000	1.70+0/-0.40
VC70R2J473K-TS	47,000	1.70+0/-0.40
VC80R2J473K-TS	47,000	1.25+0/-0.30
VC80R2J683K-TS	68,000	1.70+0/-0.40
VC80R2J104K-TS	100,000	2.20+0/-0.50

Rated Voltage : 250Vdc

Part Number	Capacitance(pF)	Product height T (mm)
VC30R2E101K-TS	100	1.00+0/-0.25
VC30R2E151K-TS	150	1.00+0/-0.25
VC30R2E221K-TS	220	1.00+0/-0.25
VC30R2E331K-TS	330	1.00+0/-0.25
VC30R2E471K-TS	470	1.00+0/-0.25
VC30R2E681K-TS	680	1.00+0/-0.25
VC30R2E102K-TS	1,000	1.00+0/-0.25
VC30R2E152K-TS	1,500	1.00+0/-0.25
VC30R2E222K-TS	2,200	1.00+0/-0.25
VC30R2E332K-TS	3,300	1.00+0/-0.25
VC30R2E472K-TS	4,700	1.00+0/-0.25
VC30R2E682K-TS	6,800	1.00+0/-0.25
VC30R2E103K-TS	10,000	1.00+0/-0.25
VC30R2E153K-TS	15,000	1.25+0/-0.30
VC30R2E223K-TS	22,000	1.80+0/-0.40
VC30R2E273K-TS	27,000	1.80+0/-0.40
VC30R2E333K-TS	33,000	1.80+0/-0.40
VC40R2E223K-TS	22,000	1.25+0/-0.30
VC40R2E333K-TS	33,000	1.25+0/-0.30
VC40R2E473K-TS	47,000	1.70+0/-0.40
VC70R2E473K-TS	47,000	1.25+0/-0.30
VC70R2E683K-TS	68,000	1.70+0/-0.40
VC70R2E104K-TS	100,000	1.70+0/-0.40

Y5U Characteristics

Rated Voltage : 250Vdc

Part Number	Capacitance(pF)	Product height T (mm)
VC70E2E224M-TS	220,000	1.70+0/-0.40
VC70E2E334M-TS	330,000	2.20+0/-0.50
VC70E2E474M-TS	470,000	2.50+0/-0.60
VC80E2E474M-TS	470,000	1.70+0/-0.40
VC80E2E684M-TS	680,000	2.20+0/-0.50

Rated Voltage : 100Vdc

Part Number	Capacitance(μF)	Product height T (mm)
VC30E2A104M-TS	0.1	1.00+0/-0.25
VC30E2A154M-TS	0.15	1.00+0/-0.25
VC30E2A224M-TS	0.22	1.25+0/-0.30
VC30E2A334M-TS	0.33	1.80+0/-0.40
VC40E2A224M-TS	0.22	1.00+0/-0.25
VC40E2A334M-TS	0.33	1.25+0/-0.30
VC40E2A474M-TS	0.47	1.70+0/-0.40
VC40E2A684M-TS	0.68	2.20+0/-0.50
VC40E2A105M-TS	1	2.20+0/-0.50
VC70E2A474M-TS	0.47	1.00+0/-0.25
VC70E2A684M-TS	0.68	1.25+0/-0.30
VC70E2A105M-TS	1	2.20+0/-0.50
VC70E2A155M-TS	1.5	2.20+0/-0.50
VC70E2A225M-TS	2.2	2.50+0/-0.60
VC80E2A155M-TS	1.5	1.25+0/-0.30
VC80E2A225M-TS	2.2	1.70+0/-0.40
VC80E2A335M-TS	3.3	2.50+0/-0.60

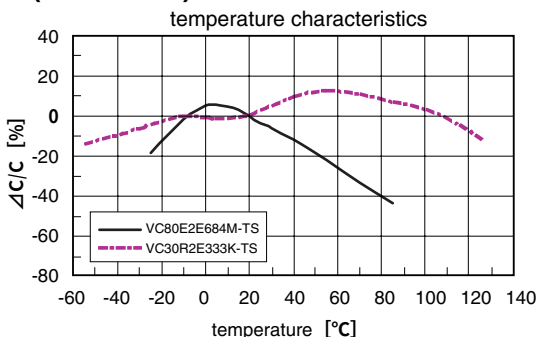
* Please contact us for the details of bulk packing.

* Highly reliable Ni-barrier terminations show excellent flexion and temperature cycling.

* VC40, VC70, VC80 types are available for reflow soldering only.

* Please consult us regarding non-surface discharge parts.

■ Capacitance-Temperature characteristics (Reference)



■ DC bias characteristics (Reference)

