

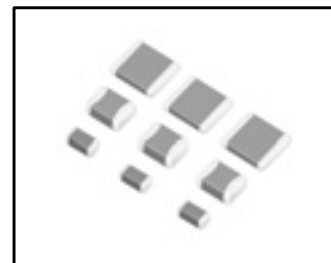
HIGH VOLTAGE · HIGH BIAS TYPE [VC Series]

■ Features

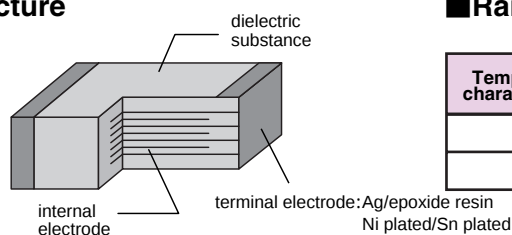
- Very little drop in capacitance values when a DC bias voltage is applied.
- High capacitance in small size.
- The piezo-electric characteristics are small.
- RoHS Compliant.

■ 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)

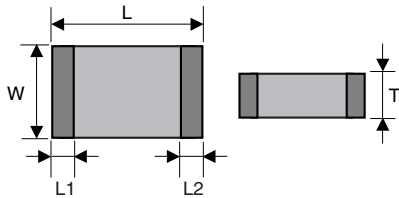
Type	rated voltage	VC30 (3.2 × 1.6)			VC40 (3.2 × 2.5)			VC70 (4.5 × 3.2)			VC80 (5.7 × 5.0)		
		100Vdc (2A)	250Vdc (2E)	630Vdc (2J)	100Vdc (2A)	250Vdc (2E)	630Vdc (2J)	100Vdc (2A)	250Vdc (2E)	630Vdc (2J)	100Vdc (2A)	250Vdc (2E)	630Vdc (2J)
101	100pF		1.00	1.00									
151	150pF		1.00	1.00									
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	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

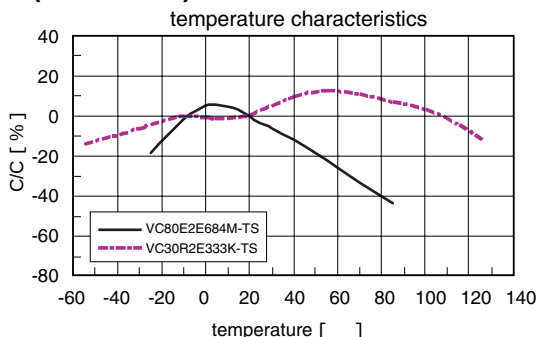
Part Number	Capacitance(μF)	Product height T (mm)
VC30E2A104M-TS	0.1	1.00+0/-0.25
VC30E2A154M-TS	0.15	1.00+0/-0.25
VC30E2A224M-TS	0.22	1.25+0/-0.30
VC30E2A334M-TS	0.33	1.80+0/-0.40
VC40E2A224M-TS	0.22	1.00+0/-0.25
VC40E2A334M-TS	0.33	1.25+0/-0.30
VC40E2A474M-TS	0.47	1.70+0/-0.40
VC40E2A684M-TS	0.68	2.20+0/-0.50
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)