

VTR-F Chip/SMD Multilayer Ceramic Capacitor

How To Order:

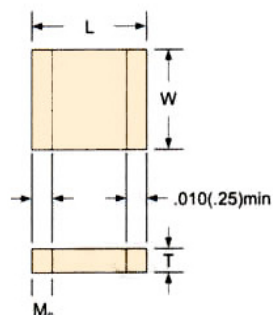
Type	Sub-Type	Capacitance			Voltage		Material	Tolerance	Package
VTR	B	1	0	2	1	H	2	K	A

Details part number, please refer to our P/N System.

Specifications:

Dielectris & Values	NPO X7R Y5V Z5U consult product pages of catalog for cap ranges and voltage rating
Terminations	Tin / Nickel
Voltage	16, 25, 50, 63 VDC
Packing	tape and reel (0402, 0603, 0805, 1206)
Capacitance	0.5pF ~ 10uF
Tolerance	±0.1pF ~ +80-20%
Operating Temperature Range	NPO: -55 ~ +125℃; X7R: -55 ~ +125℃; Y5V: -30 ~ +85℃
Types of Capacitor and Dielectric Material	NPO : The capacitor of this kind dielectric material is considered as Class I capacitor, including general capacitor and high frequency NPO capacitor。 The electrical properties of NPO capacitor are the most stable oneand have little change with temperature, voltage and time. They are suited for applications where low-losses and high-stability are required, such as filters, oscillators, and timing circuits.
	X7R、X5R: X7R、X5R material is a kind of material has high dielectric constant. The capacitor made of this kind material is considered as Class II capacitor whose capacitance is higher than that of class I . These capacitors are classified as having a semi-stable temperature characteristic and used over a wide temperature range, such in these kinds of circuits, DC-blocking, decoupling, bypassing, frequency discriminating.
	Y5V: The capacitor made of this kind of material is the highest dielectric constant of all ceramic capacitors. They are used over a moderate temperature range in application where high capacitance is required because of its unstable temperature coefficient, but where moderate losses and capacitance changes can be tolerated. Its capacitance and dissipation factors are sensible to measuring conditions, such as temperature and voltage, etc

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Items		Size code								
		0603	0805	1206	1210	1808	1812	2225	3012	3035
Size (mm)	L	1.6±0.1	2.00±0.20	3.20±0.30	3.20±0.30	5.70±0.20	4.50±0.40	5.70±0.50	7.06±0.50	7.06± 0.50
	W	0.8±0.1	1.25±0.20	1.6±0.20	2.00±0.20	4.50±0.20	3.20±0.10	6.4±0.50	3.20±0.10	9.00± 0.50
	T	0.8±0.1	1.25±0.15	1.25(0,-0.2)	1.6(+0.05,-0.10)	2.5	2.5	2.5	2.5	3
	M	0.3±0.10	0.5±0.25	0.5±0.25	0.75±0.25	0.75±0.25	0.75±0.25	1.00±0.25	1.00±0.25	1.00±0.25

Material	Specification capacitance PF									
	Rated voltage	0603	0805	1206	1210	1808	1812	2225	3012	3035
COG (NPO)	25V	OR5~102	OR5~332	OR5~472	561~103	561~103	102~103	102~473	102~473	102~104
	50V	OR5~102	OR5~222	OR5~392	561~562	561~562	102~103	102~223	100~183	102~473
	100V	OR5~821	OR5~102	OR5~302	100~472	100~472	100~103	100~273	100~183	102~333
	200V	OR5~331	OR5~821	OR5~202	100~332	100~272	100~562	100~123	100~822	100~103
	500V		OR5~561	OR5~102	100~202	100~182	100~392	100~682	100~472	100~822
	1000V			OR5~681	100~821	100~821	100~122	100~222	100~162	100~472
	2000V			OR5~101	100~471	100~221	100~391	100~102	100~681	100~222
	3000V					100~151	100~271	100~681	100~471	100~681
	4000V					100~101	100~221	100~561	100~331	100~471
X7R	25V	101~473	221~105	102~105	102~334	561~335	103~474	103~105	102~155	103~225
	50V	101~273	221~105	102~105	102~224	561~205	103~334	103~105	151~105	103~225
	100V	101~103	151~333	102~683	151~224	151~224	103~224	151~105	151~684	103~105
	200V	101~682	151~223	151~473	151~104	151~104	151~154	151~474	151~394	100~105
	500V		151~103	151~223	151~333	151~393	151~104	151~334	151~274	100~684
	1000V			151~562	151~103	151~103	151~273	151~563	151~393	100~474
	2000V			151~152	151~682	151~682	151~103	151~273	151~223	102~104
	3000V					151~152	151~222	151~392	151~332	151~103
	4000V					151~102	151~152	151~332	151~272	151~822
Y5V (Z5U)	25V	222~334	103~105	103~125	104~155	104~155	154~225	684~475	684~335	105~106
	50V	222~104	103~684	103~105	104~155	104~155	154~225	684~335	684~155	105~685
	100V	222~683	103~104	103~334	104~824	103~824	104~155	103~205	103~155	103~335
	200V		103~563	103~154	104~391	103~394	103~474	103~684	103~564	103~824
	250V		103~563	103~154	103~391	103~394	103~474	103~684	103~564	103~684

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	CC41 (NPO)		CT41 (X7R)			CT41 (Y5V, Z5U)				
Capacitance Range	OR5 to 104		331 to 104			103 to 106				
Temperature Coefficient	0±30PPm/℃	(-55 to +125)	±15% (-55 to 125)℃			+30%~80% (-25 to 85)				
	0±60PPm/℃					+22%~56% (+10 to 85)				
Insulation Resistance	C ≤10nF R ≥ 10000MΩ		C ≤25nF R ≥ 4000MΩ							
	C > 10nF C. R ≥ 100S		C > 25nF C. R ≥ 100S							
With Standing Voltage	2.5 × W V D C									
Dissipation factor	0.15%max		2.5%max			5.0%max				
	(20, 1MHZ,1VDC)		(20, 1kHz, 1VDC)			(20, 1kHz, 0.3VDC)				
Rated Voltage	25, 50, 63, 100VDC					25, 50, 63VDC				
Capacitance Tolerance	B=±0.1PF	C=±0.1PF	C≤25nF			IR≥4000MΩ				
	D=±1PF	F=±1PF	K=±10%		M=±20%	M=±20%				
	G=±2%	J=±5%	S=	+50 -20		%	Z=	+80 -20	%	S=+50-20%
	K=±10%	M=±20%								
Life Test (1000hours)	200% Rated Voltage at +1251000h					150% Rated Voltage at +85℃ 1000h				
Soderability	SJ/10211-91 4.11		SJ/10211-91 4.11							
Resistance to Soldering Heat	SJ/T10211-91 4.10		SJ/T10211-91 4.10							
Mechanical Test	SJ/T10211-91 4.9		SJ/T10211-91 4.9							
Temperature Cycling	SJ/T10211-91 4.12		SJ/T10211-91 4.12							
Moisture Resistance	SJ/T10211-91 4.14		SJ/T10211-91 4.14							
Termination adhesion strength	SJ/T10211-91 4.9		SJ/T10211-91 4.9							
Environment Testing	SJ/T10211-91 4.13		SJ/T10211-91 4.13							

Note: Specification are subjected to change without notice. You could please visit our website, for more details.