

MULTILAYER CERAMIC CHIP CAPACITORS

HV High Voltage Series

High-Voltage SMD MLCC Capacitors



KEY BENEFITS

- High breakdown voltage increases reliability against voltage spikes
- · Serial electrode design reduces risk of short circuit due to mechanical cracks

APPLICATIONS

- Input / output filtering in power supplies and analog and digital modems
- Snubber capacitor in power converters
- Buffer capacitor in voltage multipliers

RESOURCES

- Datasheet: HV High Voltage Series www.vishay.com/doc?45228
- For technical questions contact <u>MLCC@vishay.com</u>
- Material categorization: for definitions please see www.vishay.com/doc?99912













MULTILAYER CERAMIC CHIP CAPACITORS

HV High Voltage Series

Surface-Mount Multilayer Ceramic Chip Capacitor Solutions for High-Voltage Applications



ENVIRONMENTAL STATUS				
TERMINATION CODE	Х			
TERMINATION DESCRIPTION	Ni barrier 100 % tin plated matte finish			

Yes

Yes

ELECTRICAL SPECIFICATIONS

X7R

GENERAL SPECIFICATION

Note

Electrical characteristics at +25 °C unless otherwise specified

Operating Temperature: -55 °C to +125 °C

Capacitance Range: 180 pF to 15 nF

Voltage Range: 3000 V_{DC}, 4000 V_{DC}, 5000 V_{DC}

Temperature Coefficient of Capacitance (TCC): ± 15 % from -55 °C to +125 °C, with 0 V_{DC} applied

Dissipation Factor (DF):

2.5 % maximum at 1.0 \dot{V}_{RMS} and 1 kHz

Insulating Resistance:

at +25 °C 100 000 M Ω min. or 1000 Ω F whichever is less at +125 °C 10 000 M Ω min. or 100 Ω F whichever is less

Aging Rate: 1 % maximum per decade

Dielectric Strength Test:

performed per method 103 of EIA 198-2-E

Applied test voltages

3000 V_{DC} - / 4000 V_{DC} - / 5000 V_{DC} -rated: min. 120 % of rated voltage

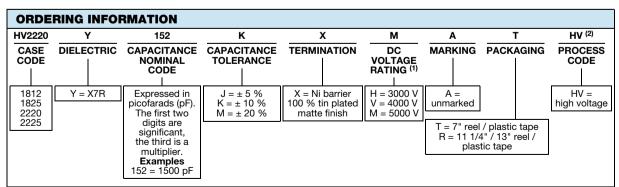
QUICK REFERENCE DATA					
DIELECTRIC	CASE	MAXIMUM VOLTAGE (V)	CAPACITANCE		
			MINIMUM	MAXIMUM	
X7R	1812	5000	180 pF	3.9 nF	
	1825	5000	330 pF	10 nF	
	2220	5000	390 pF	10 nF	
	2225	5000	470 pF	15 nF	

Note

RoHS COMPLIANT

VISHAY GREEN

· Detail ratings see "Selection Chart"



Notes

Revision 05-Aug-15

(1) DC voltage rating should not be exceeded in application. Other application factors may affect the MLCC performance. Consult for questions: mlcc@vishav.com

(2) Process code with 2 digits has to be added.