



MAIDA STYLE NUMBER D65ZOV251HC

MAIDA ITEM NUMBER 01-1506

The HC Series, or High Current Series, is our specialized line of round and square, radial-leaded varistors. The HC Series is designed for pulse repetition and/or higher surge current environments including requirements by many safety agency standards, such as UL943. Most sizes are available in Tape and Reel and ammo pack.

The Maida Style Number is the typical means to identify our components when ordered. The style number identifies several parameters that are important for the characteristics of the device. An alternative ordering method, if known, is by our Item Number. The following example is the standard part numbering system when ordering our HC Series components by the Maida Style Number:

D 65 21 ZOV 131 HC T1N

Coating Designation

- D – Standard Epoxy Coating
- P – Phenolic Coating
- R/S – Square Disc Epoxy Coating
- PR/PS – Square Disc Phenolic Coating
- None – Denote no conformal coating.

Nominal Sizes

- 68 - 8mm R61 - 9mm Square
- 61 - 10mm R71 - 10mm Square
- 71 - 11mm R62 - 11mm Square
- 62 - 12mm R69 - 12mm Square
- 69 - 14mm R64 - 14mm Square
- 79 - 15mm R65 - 17mm Square
- 64 - 16mm R80 - 20mm Square
- 63 - 18mm S66 - 25mm Square
- 65 - 20mm
- 66 - 25mm

Lead Configuration

Material Identifier

Zinc Oxide Varistor

AC Voltage Rating

Two significant figures plus number of zeroes that follow, i.e. 131 is 130VAC

Special Instructions

HC is standard

Optional Taping Code

T - Tape and Reel or Tape and Ammo
Followed by two digit alphanumeric

Electrical Specifications

Continuous AC Voltage	250 VAC
Continuous DC Voltage	330 VDC
Maximum DC Leakage @ 330 VDC	200 uA
Low Varistor Voltage Limit	354 VDC
High Varistor Voltage Limit	432 VDC
Nominal Varistor Voltage	393 VDC
Current for Varistor Voltage	1 mA
Maximum Clamp Voltage	650 V
Maximum Clamp Voltage Test Current	100 A
Peak Current Rating (1 Pulse)	13000 A
Peak Current Rating (2 Pulse)	10000 A
Energy Rating (8X20us)	334 J
Typical Capacitance	1215 pF
Impulse Response Time	< 50 ns
Minimum Hipot of Coating	2500 VDC
Minimum I.R. of Coating	1000 MΩ
Current/Energy Derating Above 85°C	-2.5 %/°C

Special Notes:

Safety Agency Recognitions

UL 1449 File Number	E321173
- Tested to Type:	5-5kA
C-UL File Number	E321173
VDE File Number	
CSA File Number	
SEV File Number	

MAIDA DEVELOPMENT COMPANY

P.O. Box 3529

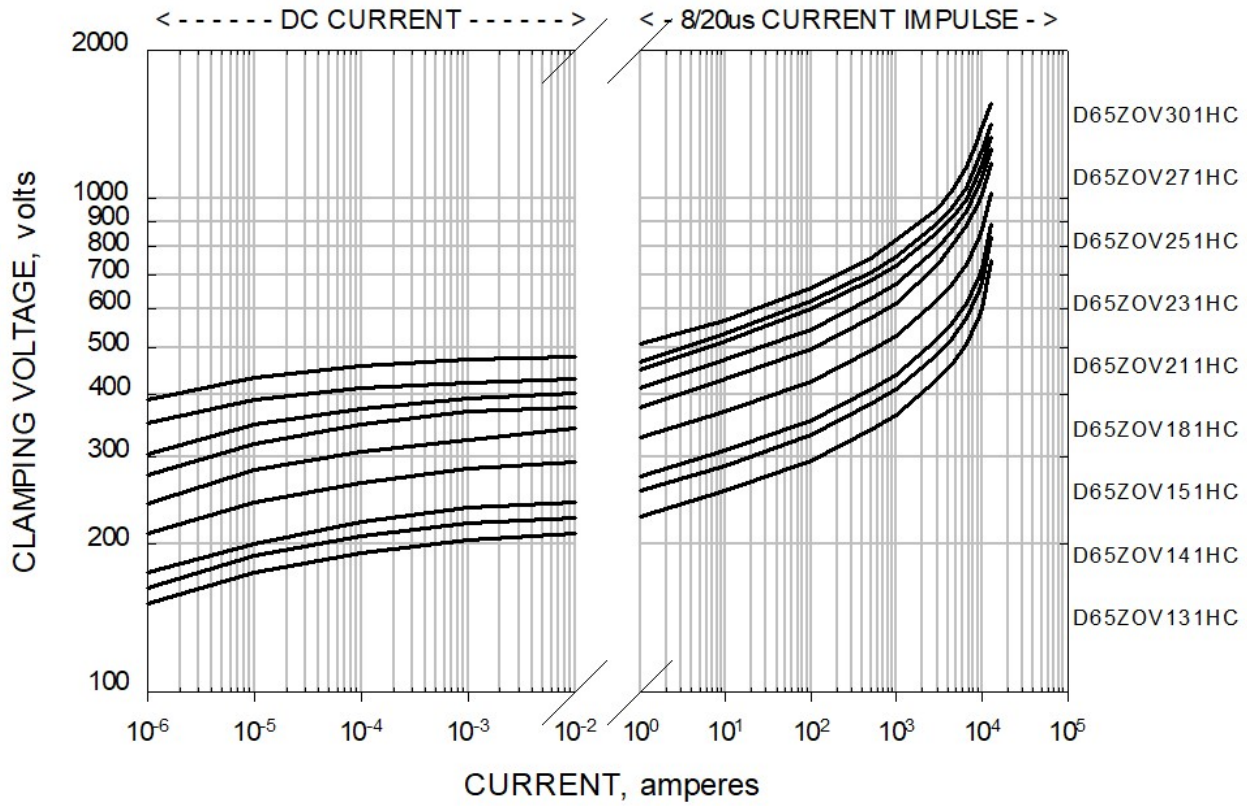
Hampton, Virginia 23663

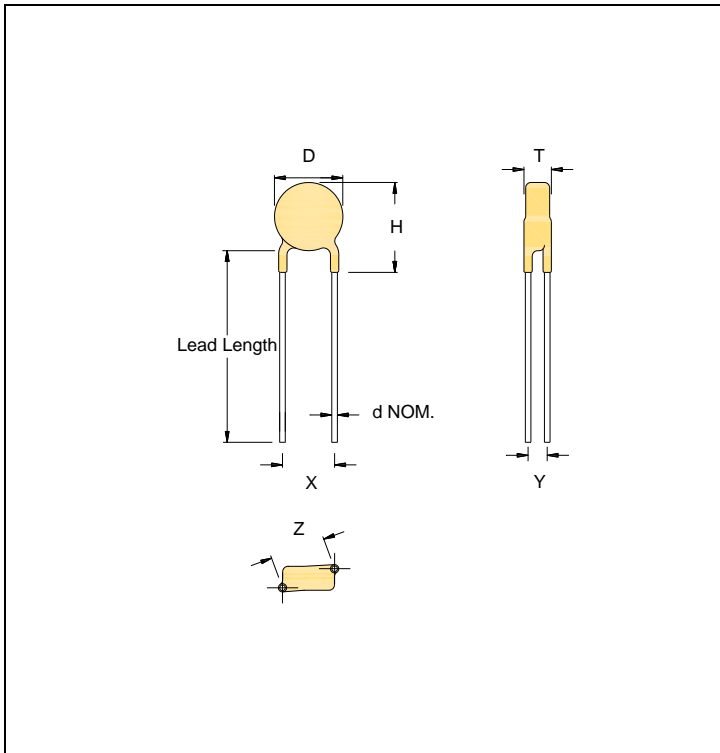
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Characteristic Graphs

D65 (20mm) SERIES





* Contact Maida for a more detailed configuration drawing.

Physical Specifications

Lead Style	082J1D
X Nominal	0.3 in.
X Tolerance	0.04 in.
Y Nominal	0.176 in.
Y Tolerance	0.03 in.
Z Nominal	0.348 in.
Z Tolerance	0.04 in.
Lead Length Nominal	1.0 in.
Lead Length Tolerance	min. in.
d Nominal	0.032 in.
Wire Gauge	20 AWG
Minimum Marking	HZ251-130UL
Nominal Disk Size	20 mm
D Maximum	0.905 in.
T Maximum	0.283 in.
H Maximum	1.03 in.
Coating Type	EPOXY

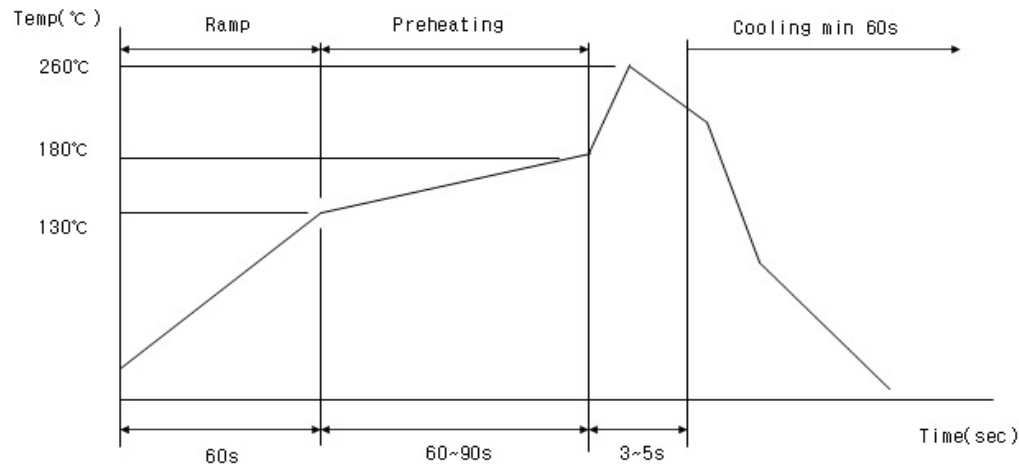
Thermal Specifications

Minimum Operating Temperature	-40 °C
Maximum Operating Temperature	85 °C
Varistor Voltage Temperature Coeff	-0.05 %/°C
Minimum Storage Temperature	-50 °C
Maximum Storage Temperature	125 °C
Recommended Solder Temperature	260 °C
Recommended Reflow Temperature	260 °C

Environmental Compliances



Recommended Soldering Profile



MOV Terminology

TECHNICAL TERM	DESCRIPTION
Operating Temperature	Operating Temperature Range without Derating.
Storage Temperature	Storage Temperature Range without Voltage Applied.
Curent / Energy Derating	Derating of maximum Values when Operated above +85°C
Varistor Voltage Temperature Coefficient	$\frac{V_v \text{ at } 85^\circ\text{C} - V_v \text{ at } 25^\circ\text{C}}{V_v \text{ at } 25^\circ\text{C}} \times \frac{1}{60} \times 100$ <p>Where Vv is varistor voltage at 1mADC</p>
Insulation Resistance	Minimum resistance between shorted terminals and varistor surface.
HiPot Encapsulation	Minimum voltage applied for one minute between shorted terminals and varistor surface.
Impulse Response Time	Time lag between application of surge and varistor's "turn-on" conduction state.
DC Leakage Current	Maximum current with specified DC voltage applied.
Applied Voltage - AC	Maximum continuous sinusoidal RMS voltage which may be applied (MCOV).
Applied Voltage - DC	Maximum continuous DC voltage which may be applied.
Transient Energy (Joules)	The maximum energy absorbed with a varistor voltage change of less than $\pm 10\%$ when one impulse of an 8x20us current waveform is applied.
Transient Peak Current	The maximum current with a varistor voltage change of less than $\pm 10\%$ when one impulse of an 8x20us current waveform is applied.
Varistor Voltage	Voltage across the varistor measured at 1mADC
Maximum Clamping Voltage	Peak voltage across the varistor with a specific peak impulse current applied (8x20us).
Capacitance	Typical value measured at 1Vrms and a test frequency of 1KHz.