STANDARD SERIES

MAIDA STYLE NUMBER D63ZOV251RA90 **MAIDA ITEM NUMBER** 01-3447

The Standard Series is our broadest and most comprehensive line of radial-leaded varistors. These components consist of wire leads and have nominal disk diameters from 5mm to 25mm. They are available with maximum continuous operating voltages (MCOV) ranging from 11VAC to 1000VAC (up to 1500VAC upon request). The Standard Series is designed to handle most low and medium power applications requiring through-hole components. 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 Standard Series components by the Maida Style Number:

D 65 21 ZOV 131 RA 20 T1N

Coating Designation

D – Standard Epoxy Coating
P – Phenolic Coating
None – Denote no conformal coating.

Nominal Sizes

58 - 5mm	69 - 14mm
73 - 7mm	64 - 16mm
68 - 8mm	63 - 18mm
61 - 10mm	65 - 20mm
71 - 11mm	66 - 25mm
62 - 12mm	

Lead Configuration

Material Identifier

Zinc Oxide Varistor (ZOV

AC Voltage Rating

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

Special Instructions

RA is standard (RB, RD, RX optional)

Rating Code

Up to four numbers

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	75	A
Peak Current Rating (1 Pulse)	7500	A
Peak Current Rating (2 Pulse)	6000	A
Energy Rating (8X20us)	240	J
Typical Capacitance	840	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:	5-3kA
C-UL File Number	E321173
VDE File Number	
CSA File Number	
SEV File Number	

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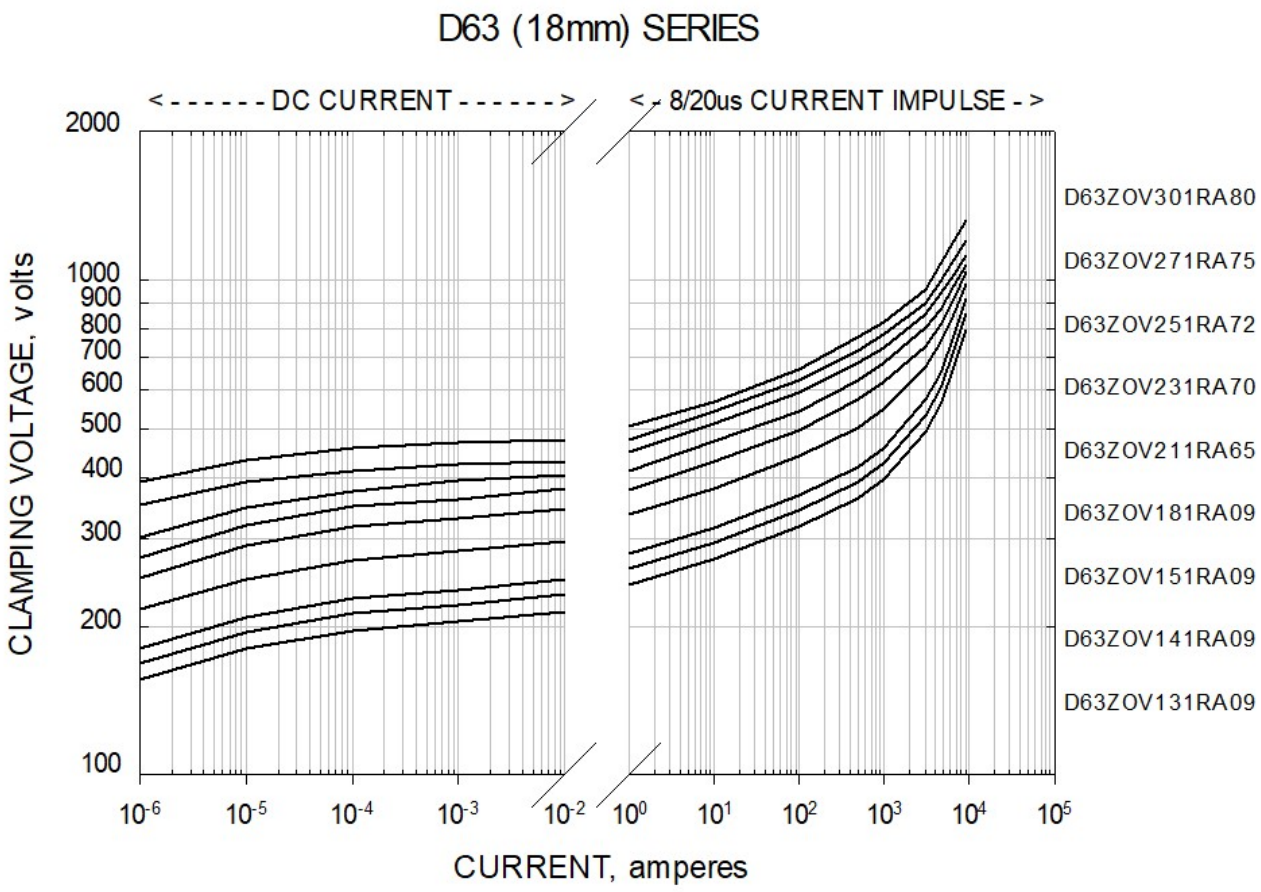
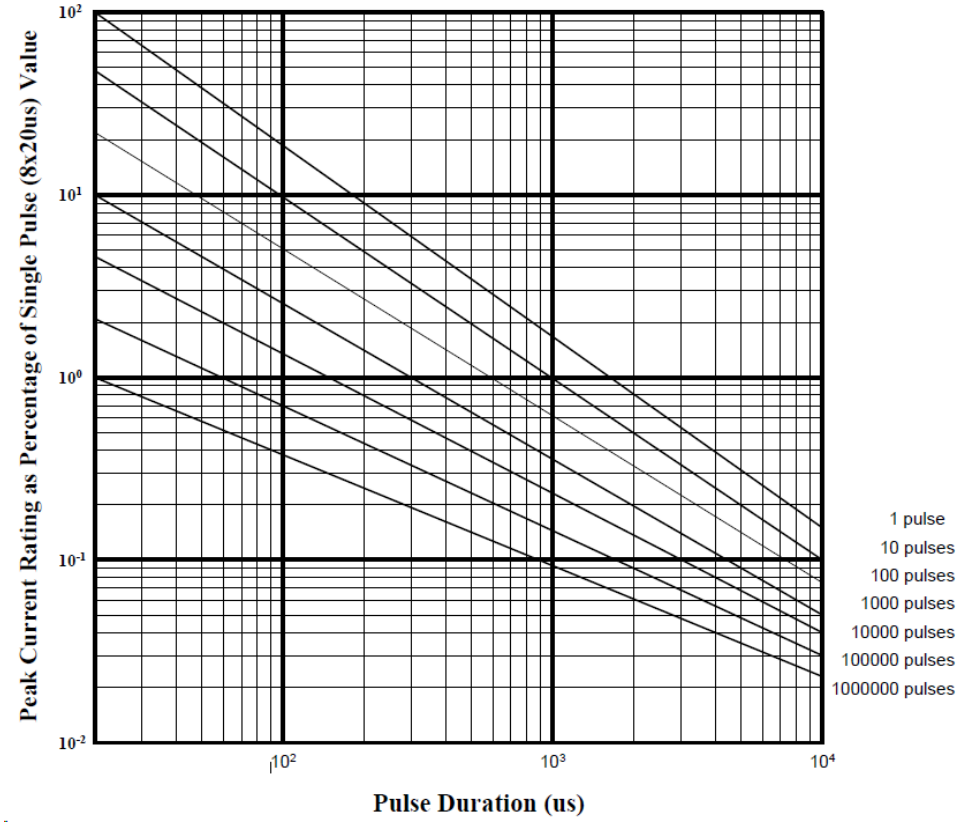
Characteristic Graphs





Date 12/25/2020

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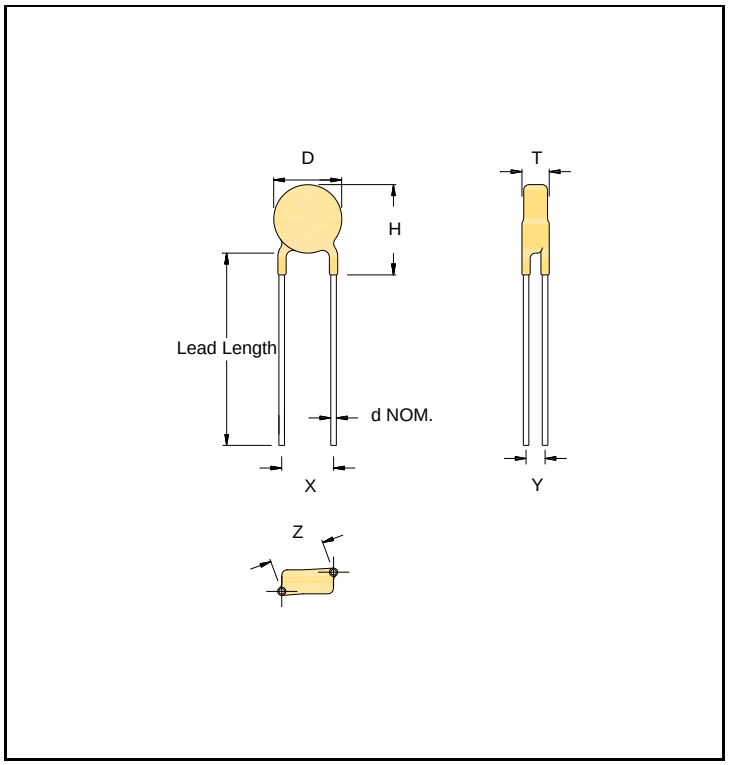


* Contact Maida for a more detailed configuration drawing.

Physical Specifications

Lead Style	082J1	
X Nominal	0.3	in.
X Tolerance	0.04	in.
Y Nominal	0.133	in.
Y Tolerance	0.03	in.
Z Nominal	0.328	in.
Z Tolerance	0.04	in.
Lead Length Nominal	1.00	in.
Lead Length Tolerance	min.	in.
d Nominal	0.032	in.
Wire Gauge	20	AWG
Minimum Marking	Z251-90UL	
Nominal Disk Size	18	mm
D Maximum	0.812	in.
T Maximum	0.249	in.
H Maximum	0.937	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

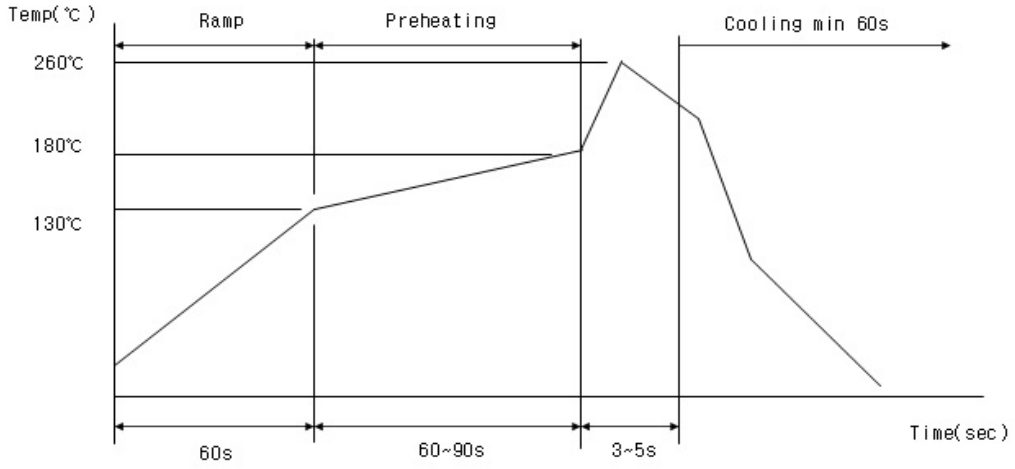
RoHS COMPLIANT

Conflict Minerals

Prop 65

REACH COMPLIANT

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	$\frac{Vv \text{ at } 85°C - Vv \text{ at } 25°C}{Vv \text{ at } 25°C} \times \frac{1}{60°C} \times 100$ Where Vv is varistor voltage at 1mADC
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 ± 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 ± 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.