

DIGITRON SEMICONDUCTORS

1N6356-1N6372 1500W TRANSIENT VOLTAGE SUPPRESSOR

Available Non-RoHS (standard) or RoHS compliant (add PBF suffix).
Available as "HR" (high reliability) screened per MIL-PRF-19500, JANTX level. Add "HR" suffix to base part number.

1500 Watts for 10/1000µs with repetition rate of 0.01% or less at lead temperature $T_L = 25^\circ\text{C}$.

MAXIMUM RATINGS

Characteristics	Value
Thermal resistance	50°C/W junction to lead at 0.375" from body or 110°C/W junction to ambient when mounted on FR4 PC board with 4 mm ² copper pads and track width of 1mm, length 25mm
DC power dissipation	1 Watt at $T_L \leq 125^\circ\text{C}$ 3/8" or 10 mm from body
Forward surge current	200 Amps for 8.3ms half-sine wave at $T_A = 25^\circ\text{C}$ for unidirectional only (1N6356-1N6364)
Solder temperature	260°C for 10 sec maximum
Operating and storage temperature	-65° to 175°C

ELECTRICAL CHARACTERISTICS - UNIDIRECIONAL ($T_A = 25^\circ\text{C}$)

Part number	Standoff voltage ⁽¹⁾	Maximum reverse leakage @ V_{WM}	Minimum breakdown voltage @ 1.0mA	Maximum clamping voltage @ $I_{PP1} = 1\text{A}$	Maximum clamping voltage @ $I_{PP2} = 10\text{A}$	Maximum peak pulse current
	V_{WM}	I_D	$V_{(BR)}$	V_C	V_C	I_{PP3}
	Volts	µA	Volts	Volts	Volts	Amps
1N6356	5.0	300	6.0	7.1	7.5	160
1N6357	8.0	25	9.4	11.3	11.5	100
1N6358	10.0	2	11.7	13.7	14.1	90
1N6359	12.0	2	14.1	16.1	16.5	70
1N6360	15.0	2	17.6	20.1	20.6	60
1N6361	18.0	2	21.2	24.2	25.2	50
1N6362	22.0	2	25.9	29.8	32.0	40
1N6363	36.0	2	42.4	50.6	54.3	23
1N6364	45.0	2	52.9	63.3	70.0	19

VF at 100 amps peak is 3.5 volts maximum at 8.3 ms half-sine wave

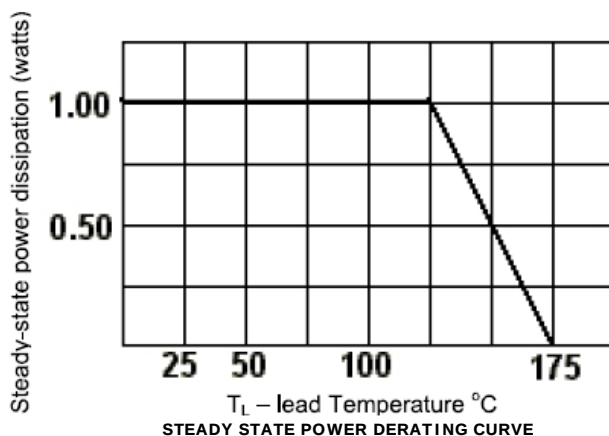
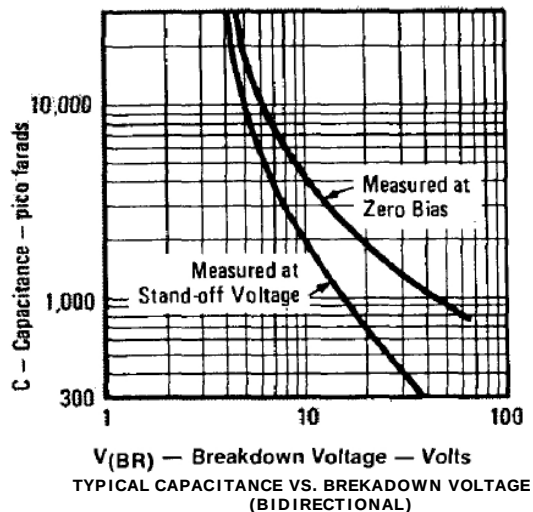
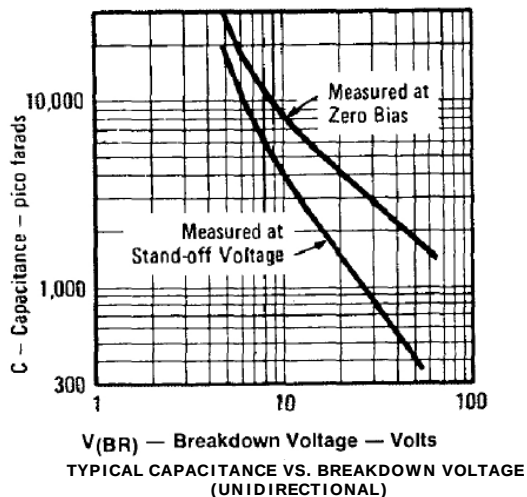
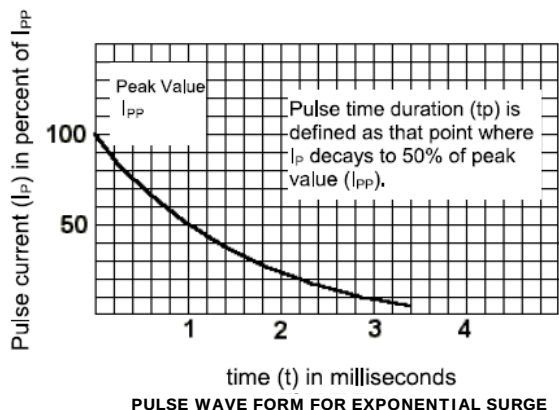
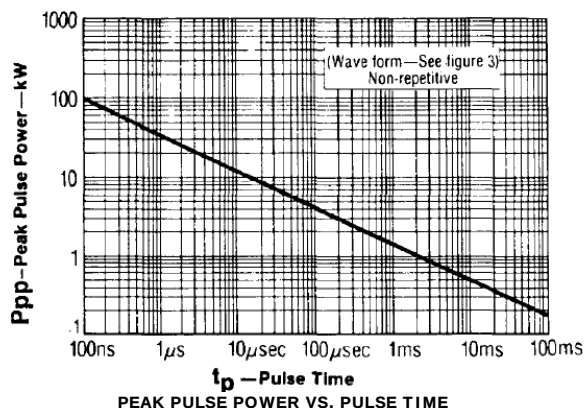
ELECTRICAL CHARACTERISTICS - BIDIRECIONAL ($T_A = 25^\circ\text{C}$)

Part number	Standoff voltage ⁽¹⁾	Maximum reverse leakage @ V_{WM}	Minimum breakdown voltage @ 1.0mA	Maximum clamping voltage @ $I_{PP1} = 1\text{A}$	Maximum clamping voltage @ $I_{PP2} = 10\text{A}$	Maximum peak pulse current
	V_{WM}	I_D	$V_{(BR)}$	V_C	V_C	I_{PP3}
	Volts	µA	Volts	Volts	Volts	Amps
1N6365	8.0	25	9.4	11.4	11.6	100
1N6366	10.0	2	11.7	14.1	14.5	90
1N6367	12.0	2	14.1	16.7	17.1	70
1N6368	15.0	2	17.6	20.8	21.4	60
1N6369	18.0	2	21.2	24.8	25.5	50
1N6370	22.0	2	25.9	30.8	32.0	40
1N6371	36.0	2	42.4	50.6	54.3	23
1N6372	45.0	2	52.9	63.3	70.0	19

Note 1: TVS devices are normally selected according to the reverse standoff voltage (V_{WM}) which should be equal to or greater than the DC or continuous peak operating voltage level.

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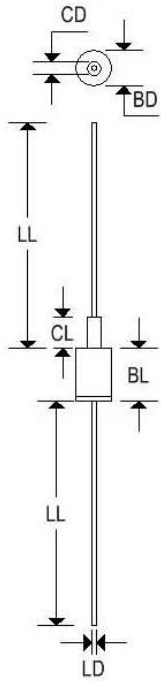
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MECHANICAL CHARACTERISTICS

Case	DO-13
Marking	Body-painted, alpha numeric
Polarity	Cathode band
Weight	1.4 grams (approx.)



	DO-13			
	Inches		Millimeters	
	Min	Max	Min	Max
BD	-	0.235	-	5.970
BL	0.315	0.350	8.001	8.890
LD	0.027	0.035	0.686	0.762
LL	1.250	-	31.750	-
CD	-	0.100	-	2.540
CL	0.315	0.350	8.000	8.900