MECHANICAL and PACKAGING

- CASE: Hermetically sealed voidless hard glass with tungsten slugs.
- TERMINALS: Axial-leads are tin/lead over copper. RoHS compliant matte-tin is available on commercial grade only.
- MARKING: Body paint and part number.
- POLARITY: No polarity marking for these bidirectional TVSs.
- TAPE & REEL option: Standard per EIA-296. Consult factory for quantities.
- WEIGHT: Approximately 750 milligrams.
- See Package Dimensions on last page.

PART NOMENCLATURE

Applicable to entire series:

JAN 1N6103 A (e3)

Reliability Level
JAN = JAN Level
JANTX = JANTX Level
JANTXV = JANTXV Level
Blank = commercial

JEDEC type number
See Electrical Characteristics table

RoHS Compliance
e3 = RoHS compliant (available on commercial grade only)
Blank = non-RoHS compliant

Voltage Tolerance
A = Standard
Blank =5% higher V_C, 5% lower min. $V_{(BR)}$ and 5% lower I_{PP}

Applicable to 1N6103(A) thru 1N6118(A) only:

JANS 1N6103 A

Reliability Level
JANS = JANS Level

JEDEC type number
See Electrical Characteristics table

Voltage Tolerance
A = Standard
Blank =5% higher V_C, 5% lower min. $V_{(BR)}$ and 5% lower I_{PP}

Applicable to 1N6119(A) thru 1N6137(A) only:

MSP 1N6119 A (e3)

Reliability Level
MSP (reference JANS)

JEDEC type number
See Electrical Characteristics table

RoHS Compliance
e3 = RoHS compliant
Blank = non-RoHS compliant

Voltage Tolerance
A = Standard
Blank =5% higher V_C, 5% lower min. $V_{(BR)}$ and 5% lower I_{PP}

SYMBOLS & DEFINITIONS	
Symbol	**Definition**
$V_{(BR)}$	Minimum Breakdown Voltage: The minimum voltage the device will exhibit at a specified current.
V_{WM}	Working Peak Voltage: The maximum peak voltage that can be applied over the operating temperature range. This is also referred to as standoff voltage.
I_D	Maximum Standoff Current: The maximum current that will flow at the specified voltage and temperature.
V_C	Maximum clamping voltage at specified I_{PP} (Peak Pulse Current) at the specified pulse conditions.
P_{PP}	Peak Pulse Power: The peak power dissipation resulting from the peak impulse current I_{PP}.

ELECTRICAL CHARACTERISTICS

INDUSTRY TYPE NUMBER (Note 1)	MINIMUM BREAKDOWN VOLTAGE (Note 1) $V_{(BR)}$ @ $I_{(BR)}$		RATED STANDOFF VOLTAGE V_{WM}	MAXIMUM STANDBY CURRENT I_D @ V_{WM}	MAXIMUM CLAMPING VOLTAGE (Note 1) V_C @ I_{PP}	MAXIMUM PEAK PULSE CURRENT (Note 1) I_{PP}	MAXIMUM TEMP. COEF. OF $V_{(BR)}$ $\alpha_{V(BR)}$
	Volts	mA	V	µA	Volts	Amps	%/°C
†1N6103A	7.13	175	5.7	50	11.2	44.6	.06
†1N6104A	7.79	150	6.2	20	12.1	41.3	.06
†1N6105A	8.65	150	6.9	20	13.4	37.3	.06
†1N6106A	9.50	125	7.6	20	14.5	34.5	.07
†1N6107A	10.45	125	8.4	20	15.6	32.0	.07
†1N6108A	11.40	100	9.1	20	16.9	29.6	.07
†1N6109A	12.35	100	9.9	20	18.2	27.5	.08
†1N6110A	14.25	75	11.4	20	21.0	23.8	.08
†1N6111A	15.20	75	12.2	20	22.3	22.4	.08
†1N6112A	17.10	65	13.7	1	25.1	19.9	.085
†1N6113A	19.0	65	15.2	1	27.7	18.0	.085
†1N6114A	20.9	50	16.7	1	30.5	16.4	.085
†1N6115A	22.8	50	18.2	1	33.3	15.0	.09
†1N6116A	25.7	50	20.6	1	37.4	13.4	.09
†1N6117A	28.5	40	22.8	1	41.6	12.0	.09
†1N6118A	31.4	40	25.1	1	45.7	10.9	.095
1N6119A	34.2	30	27.4	1	49.9	10.0	.095
1N6120A	37.1	30	29.7	1	53.6	9.3	.095
1N6121A	40.9	30	32.7	1	59.1	8.5	.095
1N6122A	44.7	25	35.8	1	64.6	7.7	.095
1N6123A	48.5	25	38.8	1	70.1	7.1	.095
1N6124A	53.2	20	42.6	1	77.0	6.5	.095
1N6125A	58.9	20	47.1	1	85.3	5.9	.100
1N6126A	64.6	20	51.7	1	97.1	5.1	.100
1N6127A	71.3	20	56.0	1	103.1	4.8	.100
1N6128A	77.9	15	62.2	1	112.8	4.4	.100
1N6129A	86.5	15	69.2	1	125.1	4.0	.100
1N6130A	95.0	12	76.0	1	137.6	3.6	.100
1N6131A	104.5	12	86.6	1	151.3	3.3	.100
1N6132A	114.0	10	91.2	1	165.1	3.0	.100
1N6133A	123.5	10	98.8	1	178.8	2.8	.105
1N6134A	142.5	8	114.0	1	206.3	2.4	.105
1N6135A	152.0	8	121.6	1	218.4	2.3	.105
1N6136A	171.0	5	136.8	1	245.7	2.0	.110
1N6137A	190.0	5	152.0	1	273.0	1.8	.110

† Also available in JANS qualification per MIL-PRF-19500/516.

Notes: 1. Part number without the A suffix has 5% higher V_C, 5% lower minimum $V_{(BR)}$, and 5% lower I_{PP}.

GRAPHS

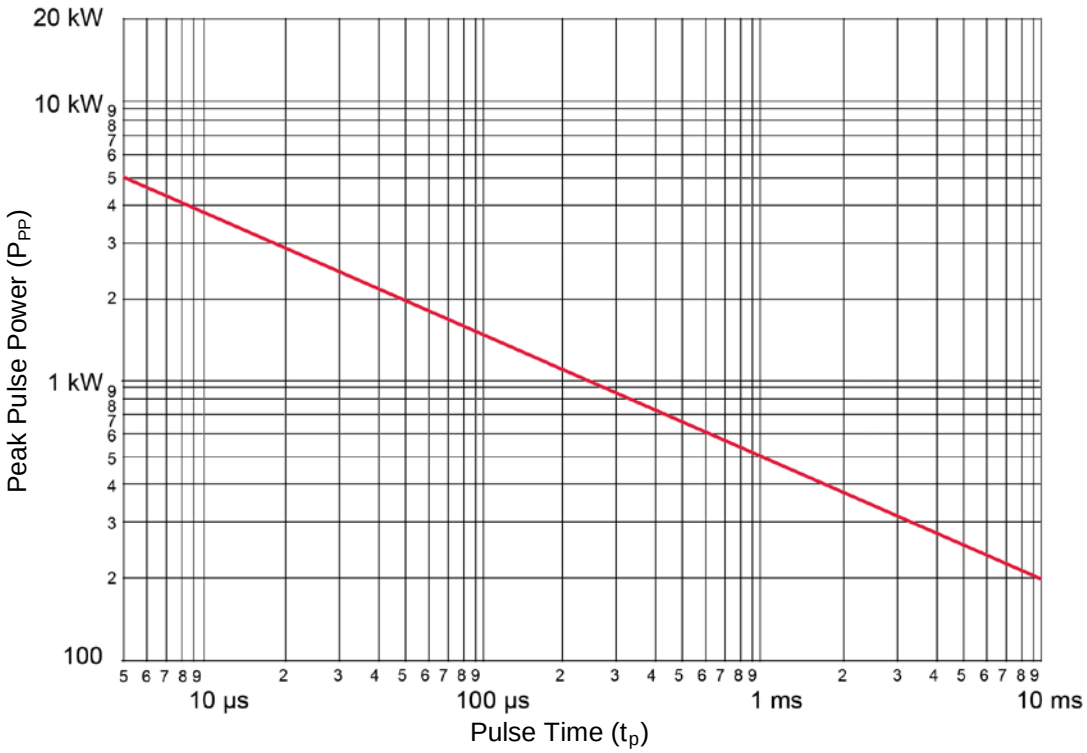


FIGURE 1
Peak Pulse Power vs. Pulse Time

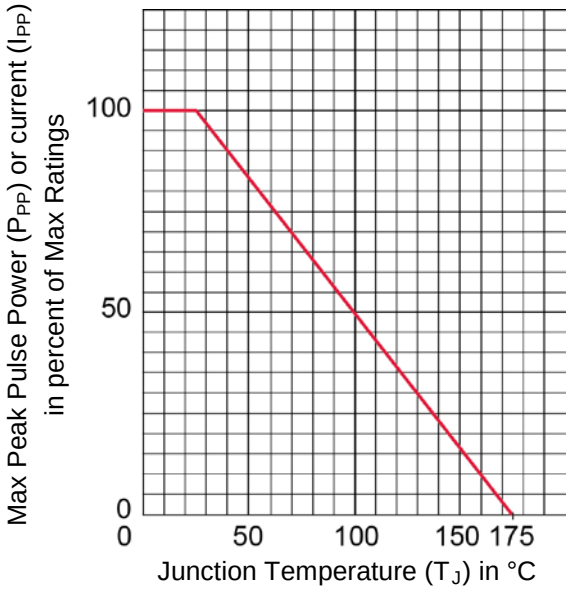


FIGURE 2
Peak Pulse Power vs T_J (prior to impulse)

GRAPHS

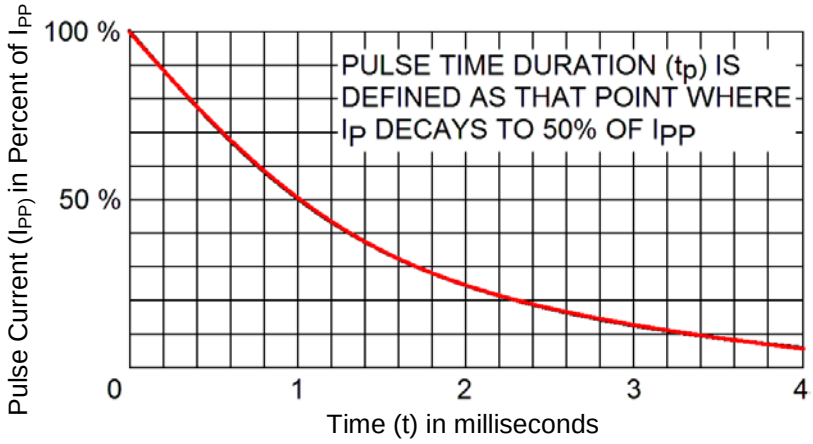


FIGURE 3
Pulse Wave Form

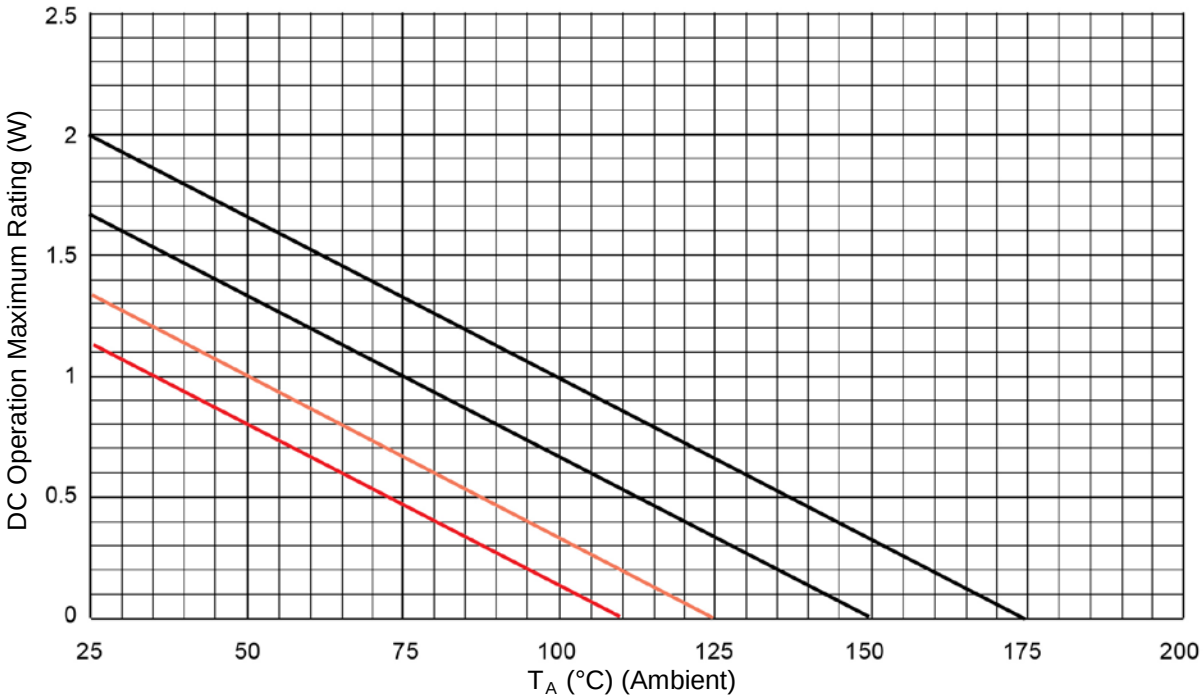
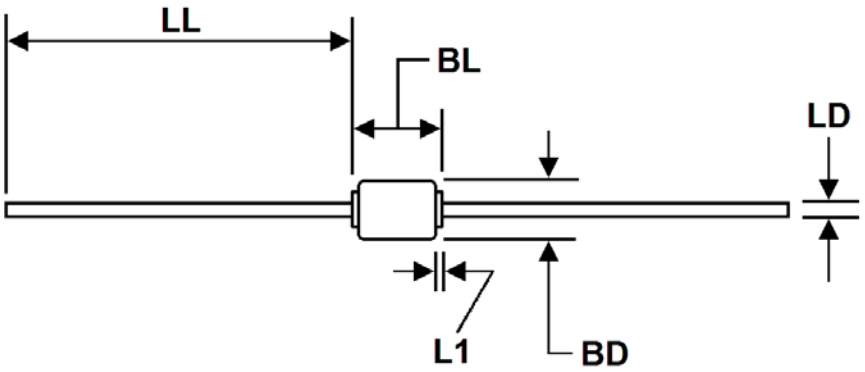


FIGURE 4
Temperature-Power Derating Curve

PACKAGE DIMENSIONS



Ltr	Dimensions				Notes
	Inches		Millimeters		
	Min	Max	Min	Max	
BD	0.085	0.140	2.16	3.56	3
BL	0.140	0.185	3.56	4.70	
LD	0.026	0.033	0.66	0.84	
LL	1.00	1.30	25.40	33.02	
L1	-	0.030	-	0.76	4

Schematic Symbol

NOTES:

1. Dimensions are in inches.
2. Millimeters are given for general information only.
3. Dimension BD shall be measured at the largest diameter.
4. Dimension L1 lead diameter uncontrolled in this area.
5. In accordance with ASME Y14.5M, diameters are equivalent to Φx symbology.