

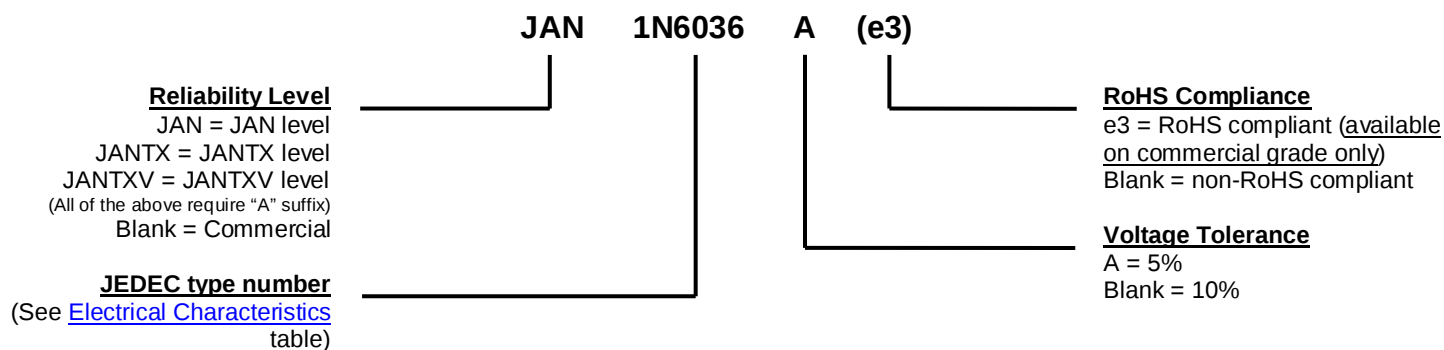
MAXIMUM RATINGS

Parameters/Test Conditions	Symbol	Value	Unit
Junction and Storage Temperature	T_J and T_{STG}	-55 to +175	°C
Peak Pulse Power @ $T_L = +25$ °C ⁽¹⁾	P_{PP}	1500	W
Rated Average Power Dissipation @ $T_L \leq +125$ °C ⁽²⁾	$P_{M(AV)}$	1	W
Solder Temperature @ 10 s	T_{SP}	260	°C

Notes: 1. At 10/1000 us with repetition rate of 0.01% or less (see [Figures 1, 2, & 4](#)).
2. At 10 mm from body (see derating in [Figure 3](#) and note below).

MECHANICAL and PACKAGING

- CASE: DO-13 (DO-202AA), welded, hermetically sealed metal and glass.
- TERMINALS: All external metal surfaces are tin-lead plated and solderable per MIL-STD-750 method 2026.
- MARKING: Part number.
- POLARITY: Not applicable for bidirectional TVS.
- TAPE & REEL option: Standard per EIA-296 (add "TR" suffix to part number). Consult factory for quantities.
- WEIGHT: Approx 1.4 grams.
- See [Package Dimensions](#) on last page.

PART NOMENCLATURE

SYMBOLS & DEFINITIONS

Symbol	Definition
V_{WM}	Standoff Voltage: Applied Reverse Voltage to assure a nonconductive condition.
$V_{(BR)}$	Breakdown Voltage: This is the Breakdown Voltage the device will exhibit at 25 °C.
V_C	Maximum Clamping Voltage: The maximum peak voltage appearing across the TVS when subjected to the peak pulse current in a one millisecond time interval. The peak pulse voltage is the combination of voltage rise due to both the series resistance and thermal rise and positive temperature coefficient ($\alpha_{V(BR)}$).
I_{PP}	Peak Pulse Current: The peak current during the impulse. (See Figure 2)
P_{PP}	Peak Pulse Power: The pulse power as determined by the product of V_C and I_{PP} .
I_D	Standby Current: The current at the standoff voltage (V_{WM}).
$I_{(BR)}$	Breakdown Current: The current used for measuring Breakdown Voltage ($V_{(BR)}$).

ELECTRICAL CHARACTERISTICS @ 25 °C (Test Both Polarities)

JEDEC Type No.	Rated Standoff Voltage V_{WM}	Breakdown Voltage $V_{(BR)}$			Maximum Clamping Voltage $V_C @ I_{PP}$	Maximum Standby Current $I_D @ V_{WM}$	Maximum Peak Pulse Current I_{PP} (See Fig. 2)	Maximum Temperature Coefficient of $V_{(BR)}$
	Volts	$V_{(BR)min}$ Volts	$V_{(BR)max}$ Volts	@ $I_{(BR)}$ mA	Volts	μA	Amps	$\alpha_{V(BR)}$ %/°C
1N6036	5.5	6.75	8.25	10	11.7	1000	128	.061
*1N6036A	6.0	7.13	7.88	10	11.3	1000	132	.061
1N6037	6.5	7.38	9.02	10	12.5	500	120	.065
*1N6037A	7.0	7.79	8.61	10	12.1	500	124	.065
1N6038	7.0	8.19	10.00	10	13.8	200	109	.068
*1N6038A	7.5	8.65	9.55	10	13.4	200	112	.068
1N6039	8.0	9.0	11.0	1	15.0	50	100	.073
*1N6039A	8.5	9.5	10.5	1	14.5	50	103	.073
1N6040	8.5	9.9	12.1	1	16.2	10	93	.075
*1N6040A	9.0	10.5	11.6	1	15.6	10	96	.075
1N6041	9.0	10.8	13.2	1	17.3	5	87	.078
*1N6041A	10.0	11.4	12.6	1	16.7	5	90	.078
1N6042	10.0	11.7	14.3	1	19.0	5	79	.081
*1N6042A	11.0	12.4	13.7	1	18.2	5	82	.081
1N6043	11.0	13.5	16.5	1	22.0	5	68	.084
*1N6043A	12.0	14.3	15.8	1	21.2	5	71	.084
1N6044	12.0	14.4	17.5	1	23.5	5	64	.086
*1N6044A	13.0	15.2	16.8	1	22.5	5	67	.086
1N6045	14.0	16.2	19.8	1	26.5	5	56.5	.088
*1N6045A	15.0	17.1	18.9	1	25.2	5	59.5	.088
1N6046	16.0	18.0	22.0	1	29.1	5	51.5	.090
*1N6046A	17.0	19.0	21.0	1	27.7	5	54	.090
1N6047	17.0	19.8	24.2	1	31.9	5	47	.092
*1N6047A	18.0	20.9	23.1	1	30.6	5	49	.092
1N6048	19.0	21.6	26.4	1	34.7	5	43	.094
*1N6048A	20.0	22.8	25.2	1	33.2	5	45	.094
1N6049	21.0	24.3	29.7	1	39.1	5	38.5	.095
*1N6049A	22.0	25.7	28.4	1	37.5	5	40	.096
1N6050	24.0	27.0	33.0	1	43.5	5	34.5	.097
*1N6050A	25.0	28.5	31.5	1	41.4	5	36	.097
1N6051	26.0	29.7	36.3	1	47.7	5	31.5	.098
*1N6051A	28.0	31.4	34.7	1	45.7	5	33	.098
1N6052	29.0	32.4	39.6	1	52.0	5	29	.099
*1N6052A	30.0	34.2	37.8	1	49.9	5	30	.099
1N6053	31.0	35.1	42.9	1	56.4	5	26.5	.100
*1N6053A	33.0	37.1	41.0	1	53.9	5	28	.100
1N6054	34.0	38.7	47.3	1	61.9	5	24	.101
*1N6054A	36.0	40.9	45.2	1	59.3	5	25.3	.101
1N6055	38.0	42.3	51.7	1	67.8	5	22.2	.101
*1N6055A	40.0	44.7	49.4	1	64.8	5	23.2	.101
1N6056	41.0	45.9	56.1	1	73.5	5	20.4	.102
*1N6056A	43.0	48.5	53.6	1	70.1	5	21.4	.102
1N6057	45.0	50.4	61.6	1	80.5	5	18.6	.103
*1N6057A	47.0	53.2	58.8	1	77.0	5	19.5	.103
1N6058	48.0	55.8	68.2	1	89.0	5	16.9	.104
*1N6058A	53.0	58.9	65.1	1	85.0	5	17.7	.104
1N6059	55.0	61.2	74.8	1	98.0	5	15.3	.104
*1N6059A	58.0	64.6	71.4	1	92.0	5	16.3	.104
1N6060	60.0	67.5	82.5	1	108.0	5	13.9	.105
*1N6060A	64.0	71.3	78.8	1	103.0	5	14.6	.105
1N6061	66.0	73.8	90.2	1	118.0	5	12.7	.105
*1N6061A	70.0	77.9	86.1	1	113.0	5	13.3	.105

ELECTRICAL CHARACTERISTICS @ 25 °C (Test Both Polarities)

JEDEC Type No.	Rated Standoff Voltage V_{WM}	Breakdown Voltage $V_{(BR)}$			Maximum Clamping Voltage $V_C @ I_{PP}$	Maximum Standby Current $I_D @ V_{WM}$	Maximum Peak Pulse Current I_{PP} (See Fig. 2)	Maximum Temperature Coefficient of $V_{(BR)}$
		$V_{(BR)min}$	$V_{(BR)max}$	@ $I_{(BR)}$				
	Volts	Volts	Volts	mA	Volts	μA	Amps	$\alpha_{V(BR)}$ %/°C
1N6062	73.0	81.9	100.0	1	131.0	5	11.4	.106
*1N6062A	75.0	86.5	95.5	1	125.0	5	12.0	.106
1N6063	81.0	90.0	110.0	1	144.0	5	10.4	.106
*1N6063A	82.0	95.0	105.0	1	137.0	5	11.0	.106
1N6064	90.0	99.0	121.0	1	158.0	5	9.5	.107
*1N6064A	94.0	105.0	116.0	1	152.0	5	9.9	.107
1N6065	95.0	108.0	132.0	1	176.0	5	8.5	.107
*1N6065A	100.0	114.0	126.0	1	168.0	5	8.9	.107
1N6066	105.0	117.0	143.0	1	191.0	5	7.8	.107
*1N6066A	110.0	124.0	137.0	1	182.0	5	8.2	.107
1N6067	121.0	135.0	165.0	1	223.0	5	6.7	.108
*1N6067A	128.0	143.0	158.0	1	213.0	5	7.0	.108
1N6068	137.0	153.0	187.0	1	258.0	5	5.8	.108
*1N6068A	145.0	162.0	179.0	1	245.0	5	6.1	.108
1N6069	145.0	162.0	198.0	1	274.0	5	5.5	.108
*1N6069A	150.0	171.0	189.0	1	261.0	5	5.7	.108
1N6070	155.0	171.0	210.0	1	292.0	5	5.1	.108
*1N6070A	160.0	181.0	200.0	1	278.0	5	5.4	.108
1N6071	165.0	180.0	220.0	1	308.0	5	4.9	.108
*1N6071A	170.0	190.0	210.0	1	294.0	5	5.1	.108
1N6072	175.0	198.0	242.0	1	344.0	5	4.3	.108
*1N6072A	185.0	209.0	231.0	1	328.0	5	4.6	.108

* Also available in military qualified types by adding the prefix JAN, JANTX or JANTXV per MIL-PRF-19500/507.

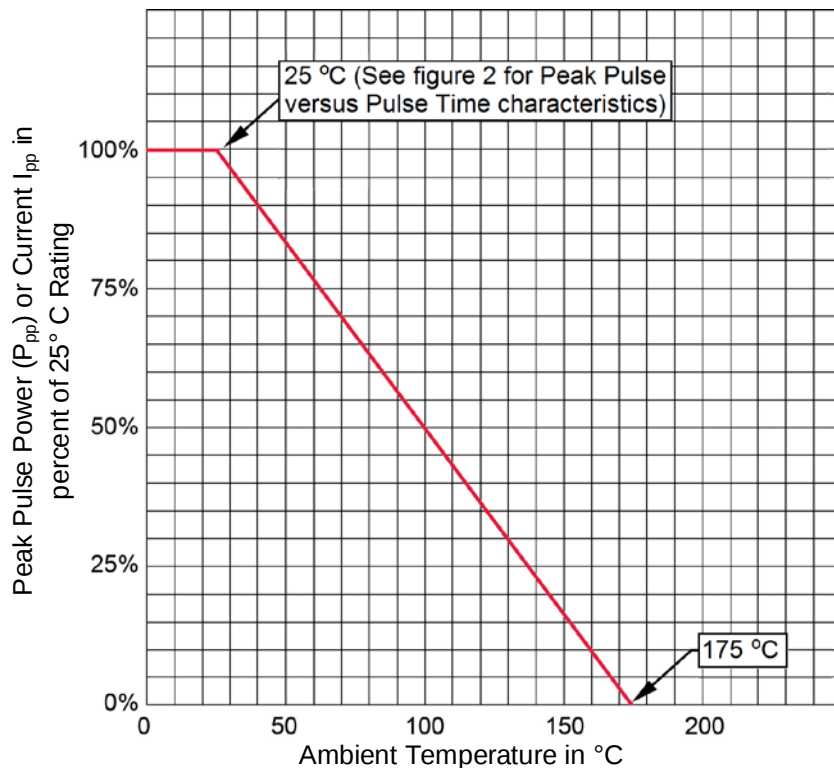
GRAPHS


FIGURE 1
Derating Curve

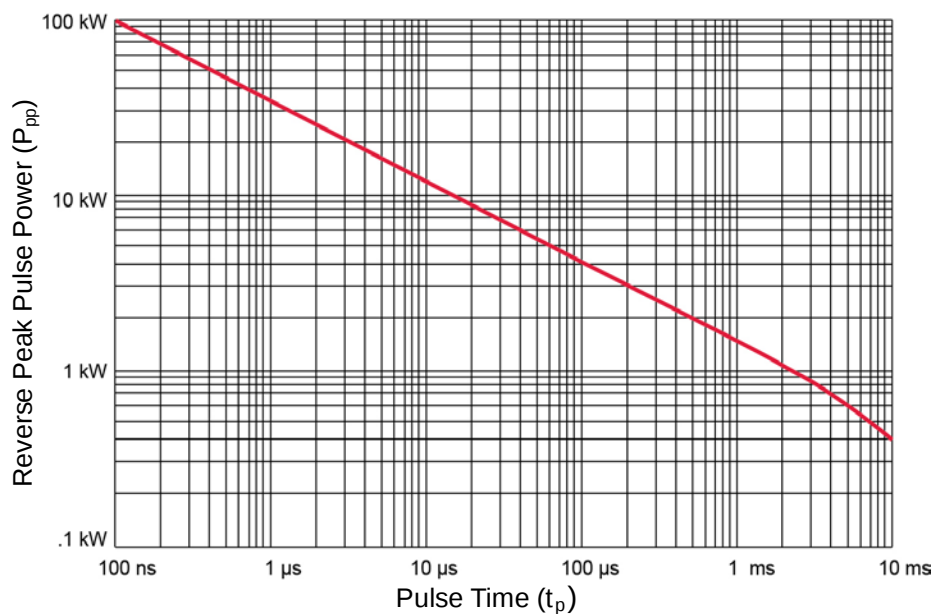


FIGURE 2
Peak Pulse Power versus Pulse Time

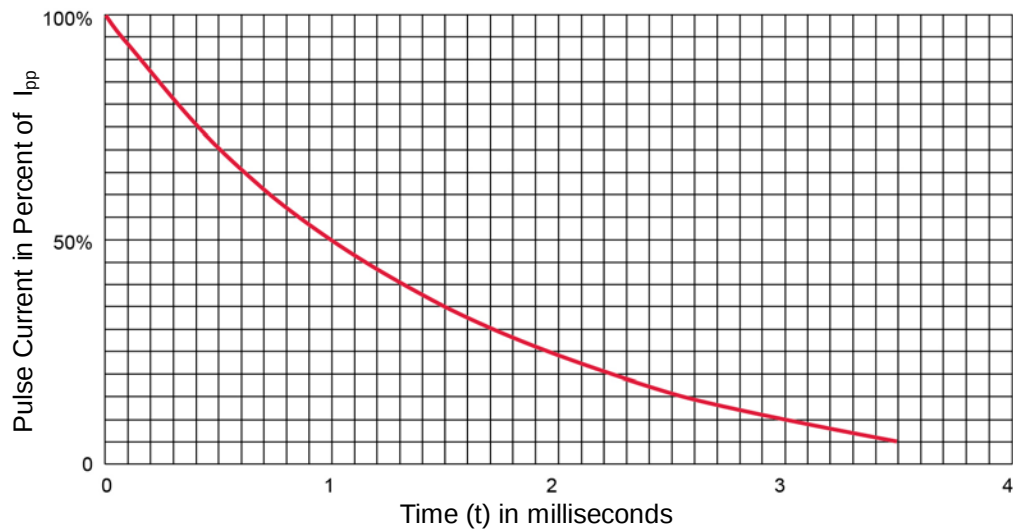
GRAPHS


FIGURE 3
Current impulse waveform ($I_{PP} = 10 \mu s$)

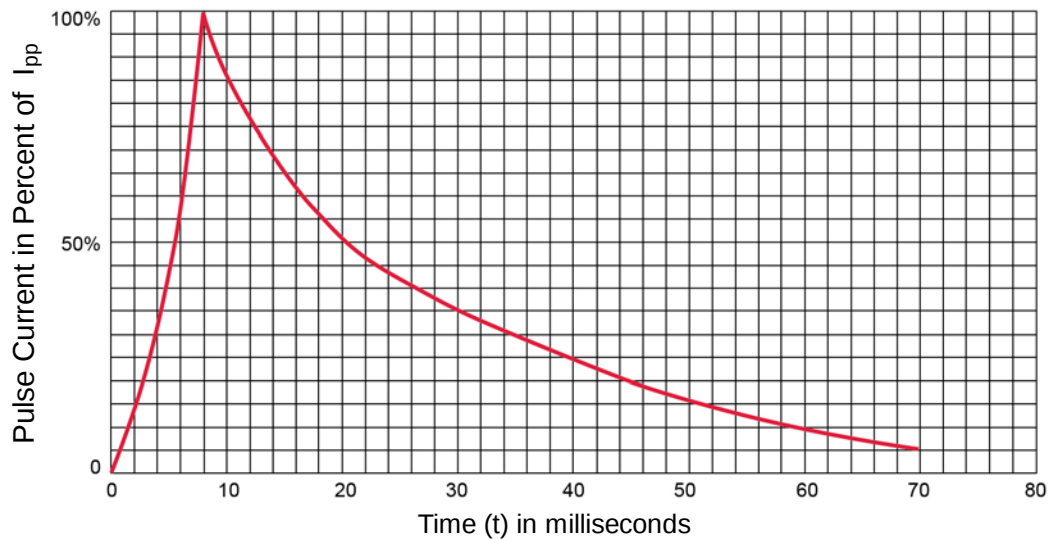
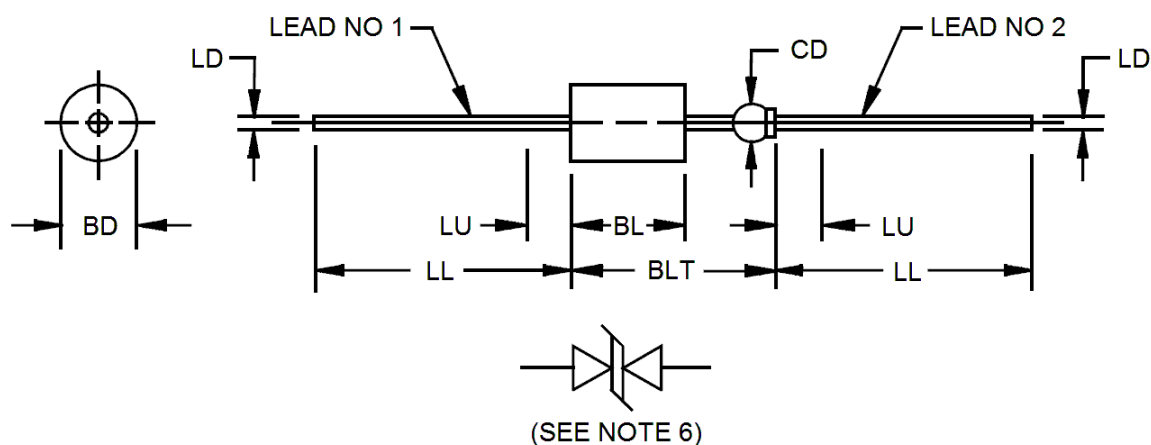


FIGURE 4
Current impulse waveform ($I_{PP} = 8 \mu s$)

PACKAGE DIMENSIONS

NOTES:

- 1 Dimensions are in inches.
- 2 Millimeter equivalents are given for general information only.
- 3 The major diameter is essentially constant along its length.
- 4 Within this zone, diameter may vary to allow for lead finishes and irregularities.
- 5 Dimension to allow for pinch or seal deformation anywhere along tubulation.
- 6 Symbol for bidirectional transient suppressor.
- 7 Lead 1 shall be electrically connected to the case.
- 8 In accordance with ASME Y14.5M, diameters are equivalent to Φ x symbology.

Symbol	Dimensions				Notes
	Inches		Millimeters		
	Min	Max	Min	Max	
BD	.215	.235	5.46	5.97	
BL	.293	.357	7.44	9.07	3
BLT		.570		14.48	
CD	.045	.100	1.14	2.54	5
LD	.025	.035	0.64	0.89	
LL	1.000	1.625	25.40	41.28	
LU		.188		4.78	4