January 16, 1998

TEL:805-498-2111 FAX:805-498-3804 WEB:http://www.semtech.com

AXIAL LEADED, HERMETICALLY SEALED, 500 WATT TRANSIENT VOLTAGE SUPPRESSORS

- Low dynamic impedance
- Hermetically sealed in Metoxilite fused metal oxide
- 500 Watt peak pulse power
- 1.5 Watt continuous
- Available in JAN, JANTX and JANTXV versions

QUICK REFERENCE DATA

- $V_{BR\ MIN}$ = 6.12 - 180V
- $I_{(BR)}$ = 5 - 175mA
- V_{RWM} = 5.2 - 152V
- $V_{C\ MAX}$ = 11 - 273V

ELECTRIAL SPECIFICATIONS (@ 25°C UNLESS OTHERWISE SPECIFIED)

Device Type	Minimum Breakdown Voltage $V_{(BR)}$ @ $I_{(BR)}$	Test Current $I_{(BR)}$	Working Pk. Reverse Voltage V_{RWM}	Max. Reverse Current I_R	Maximum Clamping Voltage V_C @ I_P	Maximum Pk. Pulse Current I_P t_P = 8.3mS	Temp. Coeff of $V_{(BR)}$ α_{VZ}	Maximum Reverse Current I_R @ 150°C
	Volts	mA	Volts	µA	Volts	Amps	%/°C	µA
1N6102	6.12	175	5.2	100	11.0	45.4	.05	4000
1N6103	6.75	175	5.7	50	11.8	42.4	.06	750
1N6104	7.38	150	6.2	20	12.7	39.4	.06	500
1N6105	8.19	150	6.9	20	14.0	35.7	.06	300
1N6106	9.00	125	7.6	20	15.2	32.9	.07	200
1N6107	9.90	125	8.4	20	16.3	30.7	.07	200
1N6108	10.8	100	9.1	20	17.7	28.2	.07	150
1N6109	11.7	100	9.9	20	19.0	26.3	.08	150
1N6110	13.5	75	11.4	20	21.9	22.8	.08	100
1N6111	14.4	75	12.2	20	23.4	21.4	.08	100
1N6112	16.2	65	13.7	1	26.3	19.0	.085	100
1N6113	18.0	65	15.2	1	29.0	17.2	.085	100
1N6114	19.8	50	16.7	1	31.9	15.7	.085	100
1N6115	21.6	50	18.2	1	34.8	14.4	.09	100
1N6116	24.3	50	20.6	1	39.2	12.8	.09	100
1N6117	27.0	40	22.8	1	43.6	11.5	.09	100
1N6118	29.7	40	25.1	1	47.9	10.4	.095	100
1N6119	32.4	30	27.4	1	52.3	9.6	.095	100
1N6120	35.1	30	29.7	1	56.2	8.9	.095	100
1N6121	38.7	30	32.7	1	62.0	8.1	.095	100
1N6122	42.3	25	35.8	1	67.7	7.4	.095	100
1N6123	45.9	25	38.8	1	73.5	6.8	.095	100
1N6124	50.4	20	42.6	1	80.7	6.2	.095	100
1N6125	55.8	20	47.1	1	89.3	5.6	.100	100
1N6126	61.2	20	51.7	1	98.0	5.1	.100	100
1N6127	67.5	20	56.0	1	108.1	4.6	.100	100
1N6128	73.8	15	62.2	1	118.2	4.2	.100	100
1N6129	81.9	15	69.2	1	131.1	3.8	.100	100
1N6130	90.0	12	76.0	1	144.1	3.5	.100	100
1N6131	99.0	12	83.6	1	158.5	3.2	.100	100
1N6132	108.0	10	91.2	1	172.9	2.9	.100	100
1N6133	117.0	10	98.8	1	187.3	2.7	.100	100
1N6134	135.0	8	114.0	1	216.2	2.3	.100	100
1N6135	144.0	8	121.6	1	228.8	2.2	.100	100
1N6136	162.0	5	136.8	1	257.4	1.9	.100	100
1N6137	180.0	5	152.0	1	286.0	1.7	.100	100

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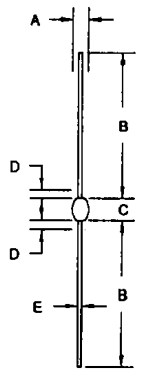
These parts are qualified to MIL-S-19500/516 and are preferred parts as listed in MIL-STD-701
They can be supplied fully released as JAN, JANTX and JANTXV versions.
* Parts listed are 10% tolerance. 5% tolerance can be ordered by placing an "A" suffix on part numbers, eg. 1N6110A



G95

DIMENSIONS					
DIM	MM		INCHES		NOTE
	MIN	MAX	MIN	MAX	
A	2.1	3.6	.085	.140	-
B	25.4	33.0	1.00	1.30	-
C	3.5	4.7	.140	.185	-
D	-	.80	-	.030	1
E	.66	.84	.026	.033	-

NOTES:

1. LEAD DIAMETER UNCONTROLLED OVER THIS REGION.

OPERATING TEMP -65°C to +175°C
STORAGE TEMP -65°C to +175°C

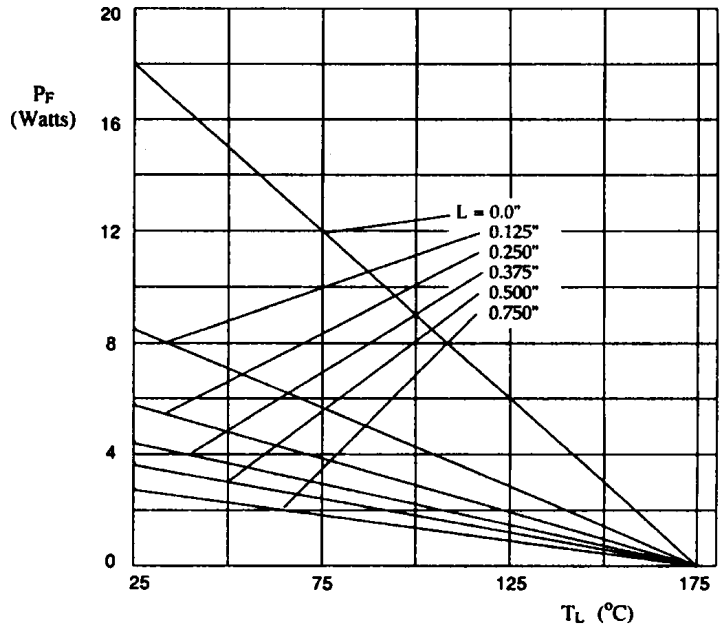


Figure 1. Maximum power versus lead temperature.

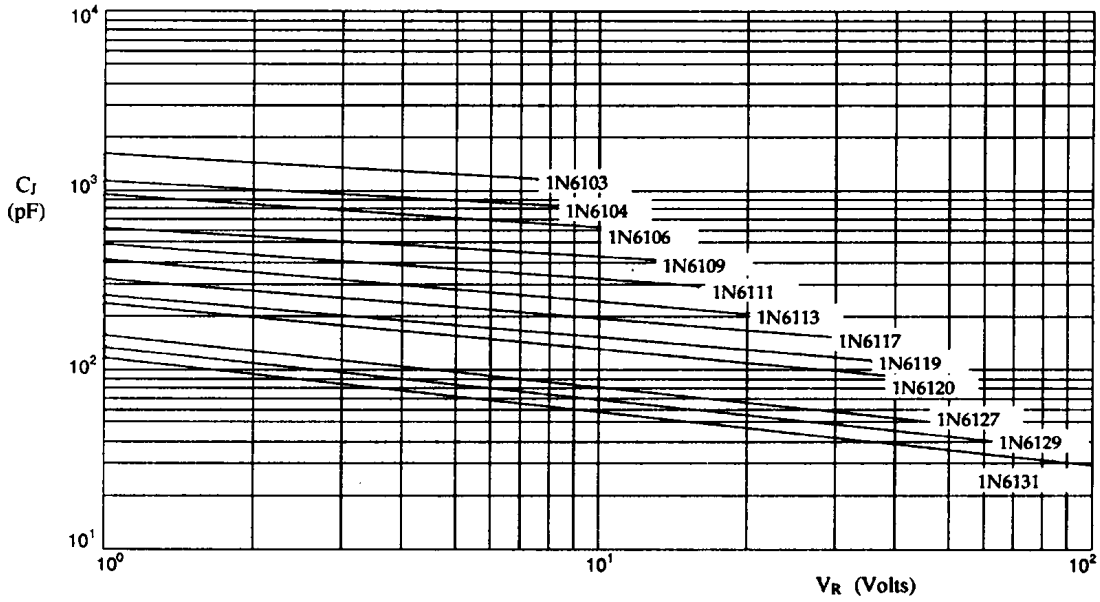


Fig 2. Typical junction capacitance versus reverse voltage.

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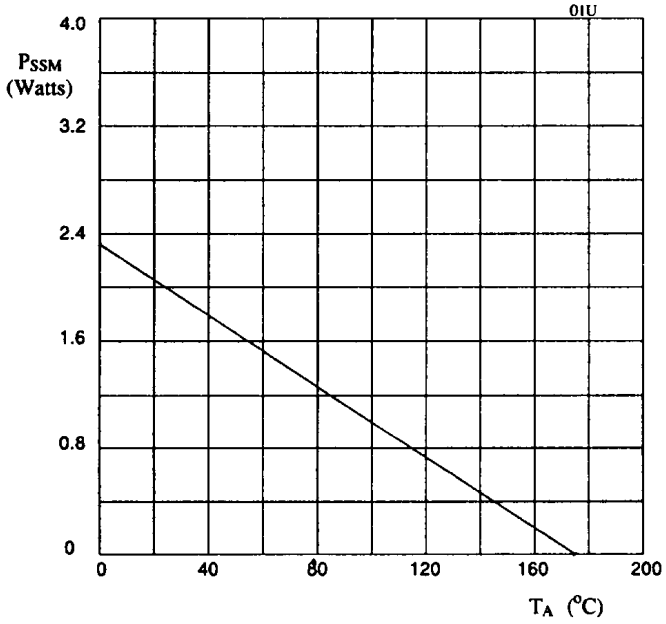

Fig 3. Steady state derating characteristic for free air mounting

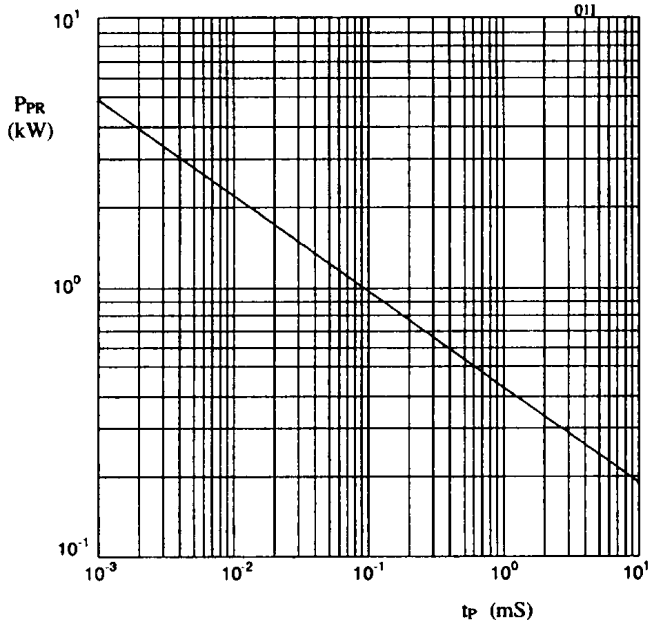

Fig 4. Peak pulse power versus pulse time.

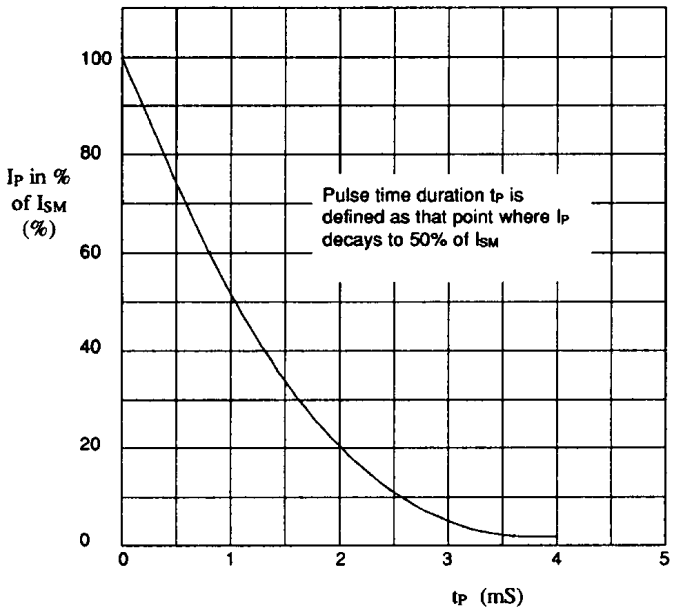

Fig 5. Pulse waveform

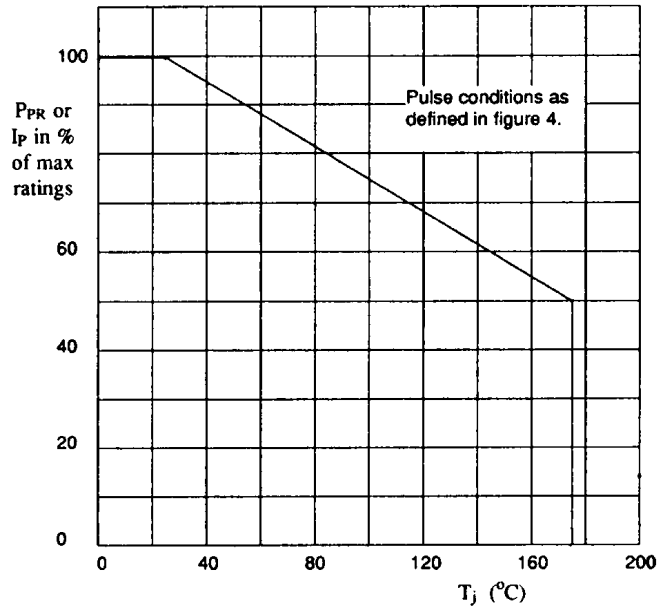

Fig 6. Pulse derating curve

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