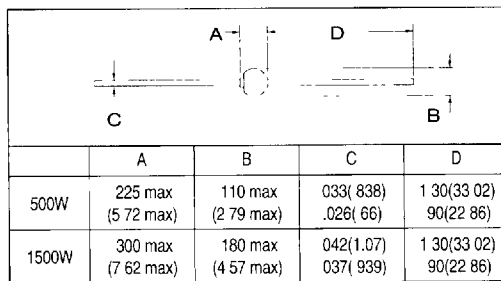


# BIDIRECTIONAL TRANSIENT VOLTAGE SUPPRESSORS

500W and 1500W Peak Pulse Power • 1N6102-1N6137A • 1N6138 -1N6173A

**VMI** transient voltage suppressors provide voltage surge protection for your critical circuits.

- Miniature hermetically sealed glass package.
- 5.0 to 152 volts.
- 500W or 1500W transient capability for 1ms.
- Operating Temperature: -65°C to +175°C
- Storage Temperature: -65°C to +200°C



## VOLTAGE MULTIPLIERS INC

### ELECTRICAL CHARACTERISTICS AND MAXIMUM RATINGS

JEDEC NUMBER		Reverse Stand-off Voltage VR Volts	Breakdown Voltage BV			Maximum Reverse Leakage @ VR		Maximum Clamping Voltage @ Ipp VC Volts	Maximum Peak Pulse Current Ipp Amps		Maximum Voltage Variation of BV %/°C
500W	1500W		Volts Min	Volts Max	I <sub>BR</sub> (mA)	IR(μA) 500W	1500W		500W	1500W	
1N6102	1N6138	5.2	6.12	7.48	175	100	500	11.0	45.4	136.4	.05
1N6102A	1N6138A	5.2	6.46	7.14	175	100	500	10.5	47.6	142.8	.05
1N6103	1N6139	5.7	6.75	8.25	175	50	300	11.8	42.4	127.1	.06
1N6103A	1N6139A	5.7	7.13	7.88	175	50	300	11.2	44.6	133.9	.06
1N6104	1N6140	6.2	7.38	9.02	150	20	100	12.7	39.4	118.1	.06
1N6104A	1N6140A	6.2	7.79	8.61	150	20	100	12.1	41.3	124.0	.06
1N6105	1N6141	6.9	8.19	10.01	150	20	100	14.0	35.7	107.1	.06
1N6105A	1N6141A	6.9	8.65	9.56	150	20	100	13.4	37.3	111.9	.06
1N6106	1N6142	7.6	9.00	11.00	125	20	100	15.2	32.9	98.7	.07
1N6106A	1N6142A	7.6	9.50	10.5	125	20	100	14.5	34.5	103.4	.07
1N6107	1N6143	8.4	9.90	12.10	125	20	20	16.3	30.7	92.0	.07
1N6107A	1N6143A	8.4	10.45	11.55	125	20	20	15.6	32.0	96.2	.07
1N6108	1N6144	9.1	10.80	13.20	100	20	20	17.7	28.2	84.7	.07
1N6108A	1N6144A	9.1	11.40	12.60	100	20	20	16.9	29.6	88.8	.07
1N6109	1N6145	9.9	11.70	14.30	100	20	20	19.0	26.3	78.9	.08
1N6109A	1N6145A	9.9	12.35	13.65	100	20	20	18.2	27.5	82.4	.08
1N6110	1N6146	11.4	13.50	14.50	75	20	20	21.9	22.8	68.5	.08
1N6110A	1N6146A	11.4	14.25	15.75	75	20	20	21.0	23.8	71.4	.08
1N6111	1N6147	12.2	14.40	17.6	75	20	20	23.4	21.4	64.1	.08
1N6111A	1N6147A	12.2	15.20	16.8	75	20	20	22.3	22.4	67.3	.08
1N6112	1N6148	13.7	16.20	19.8	65	1	10	26.3	19.0	57.0	.085
1N6112A	1N6148A	13.7	17.10	18.9	65	1	10	25.1	19.9	59.8	.085
1N6113	1N6149	15.2	18.0	22.0	65	1	5	29.0	17.2	51.7	.085
1N6113A	1N6149A	15.2	19.0	21.0	65	1	5	27.7	18.0	54.2	.085
1N6114	1N6150	16.7	19.8	24.2	50	1	5	31.9	15.7	47.0	.085
1N6114A	1N6150A	16.7	20.9	23.1	50	1	5	30.5	16.4	49.2	.085
1N6115	1N6151	18.2	21.6	26.4	50	1	5	34.8	14.4	43.1	.09
1N6115A	1N6151A	18.2	22.8	25.2	50	1	5	33.3	15.0	45.0	.09
1N6116	1N6152	20.6	24.3	29.7	50	1	5	39.2	12.8	38.3	.09
1N6116A	1N6152A	20.6	25.7	28.4	50	1	5	37.4	13.4	40.1	.09

All temperatures are ambient unless otherwise noted • Data subject to change without notice



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Visalia, CA., 93291

Tel. 209-651-1402  
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500W and 1500W Peak Pulse Power • 1N6102-1N6137A • 1N6138 -1N6173A

## VOLTAGE MULTIPLIERS INC

### ELECTRICAL CHARACTERISTICS AND MAXIMUM RATINGS

JEDEC NUMBER		Reverse Stand-off Voltage	Breakdown Voltage BV			Maximum Reverse Leakage @ VR		Maximum Clamping Voltage @ Ipp VC Volts	Maximum Peak Pulse Current Ipp Amps		Maximum Voltage Temperature Variation of BV %°C
			Volts Min.	Volts Max	I <sub>BR</sub> (mA)	500W	1500W		500W	1500W	
500W	1500W	VR Volts									
1N6117	1N6153	22.8	27.0	33.0	40	1	5	43.6	11.5	34.4	09
1N6117A	1N6153A	22.8	28.5	31.5	40	1	5	41.6	12.0	36.0	09
1N6118	1N6154	25.1	29.7	36.3	40	1	5	47.9	10.4	31.3	095
1N6118A	1N6154A	25.1	31.4	34.7	40	1	5	45.7	10.9	32.8	095
1N6119	1N6155	27.4	32.4	39.6	30	1	5	52.3	9.6	28.7	095
1N6119A	1N6155A	27.4	34.2	37.8	30	1	5	49.9	10.0	30.1	095
1N6120	1N6156	29.7	35.1	42.9	30	1	5	56.2	8.9	26.7	095
1N6120A	1N6156A	29.7	37.1	41.0	30	1	5	53.6	9.3	28.0	095
1N6121	1N6157	32.7	38.7	47.3	30	1	5	62.0	8.1	24.2	095
1N6121A	1N6157A	32.7	40.9	45.2	30	1	5	59.1	8.5	25.4	095
1N6122	1N6158	35.8	42.3	51.7	25	1	5	67.7	7.4	22.2	095
1N6122A	1N6158A	35.8	44.7	49.4	25	1	5	64.6	7.7	23.2	095
1N6123	1N6159	38.8	45.9	56.1	25	1	5	73.5	6.8	20.4	095
1N6123A	1N6159A	38.8	48.5	53.6	25	1	5	70.1	7.1	21.4	095
1N6124	1N6160	42.6	50.4	61.6	20	1	5	80.7	6.2	18.6	095
1N6124A	1N6160A	42.6	53.2	58.8	20	1	5	77.0	6.5	19.5	095
1N6125	1N6161	47.1	55.8	68.2	20	1	5	89.3	5.6	16.8	100
1N6125A	1N6161A	47.1	58.9	65.1	20	1	5	85.3	5.9	17.6	100
1N6126	1N6162	51.7	61.2	74.8	20	1	5	98.0	5.1	15.3	100
1N6126A	1N6162A	51.7	64.6	71.4	20	1	5	97.1	5.1	15.4	100
1N6127	1N6163	56.0	67.5	82.5	20	1	5	108.1	4.6	13.9	100
1N6127A	1N6163A	56.0	71.3	78.8	20	1	5	103.1	4.8	14.5	100
1N6128	1N6164	62.2	73.8	90.2	15	1	5	118.2	4.2	12.7	100
1N6128A	1N6164A	62.2	77.9	86.1	15	1	5	112.8	4.4	13.3	100
1N6129	1N6165	69.2	81.9	100.1	15	1	5	131.1	3.8	11.4	100
1N6129A	1N6165A	69.2	86.5	95.6	15	1	5	125.1	4.0	12.0	100
1N6130	1N6166	76.0	90.0	110.0	12	1	5	144.1	3.5	10.4	100
1N6130A	1N6166A	76.0	95.0	105.0	12	1	5	137.6	3.6	10.9	100
1N6131	1N6167	83.6	99.0	121.0	12	1	5	158.5	3.2	9.5	100
1N6131A	1N6167A	83.6	104.5	115.5	12	1	5	151.3	3.3	9.9	100
1N6132	1N6168	91.2	108.0	132.0	10	1	5	172.9	2.9	8.7	100
1N6132A	1N6168A	91.2	114.0	126.0	10	1	5	165.1	3.0	9.1	100
1N6133	1N6169	98.8	117.0	143.0	10	1	5	187.3	2.7	8.0	105
1N6133A	1N6169A	98.8	123.5	136.5	10	1	5	178.8	2.8	8.4	105
1N6134	1N6170	114.0	135.0	165.0	8	1	5	216.2	2.3	6.9	105
1N6134A	1N6170A	114.0	142.5	157.5	8	1	5	206.3	2.4	7.3	105
1N6135	1N6171	121.6	144.0	176.0	8	1	5	228.8	2.2	6.6	105
1N6135A	1N6171A	121.6	152.0	168.0	8	1	5	218.4	2.3	6.9	105
1N6136	1N6172	136.8	162.0	198.0	5	1	5	257.4	1.9	5.8	110
1N6136A	1N6172A	136.8	171.0	189.0	5	1	5	245.7	2.0	6.1	110
1N6137	1N6173	152.0	180.0	220.0	5	1	5	286.0	1.7	5.2	110
1N6137A	1N6173A	152.0	190.0	210.0	5	1	5	273.0	1.8	5.5	110

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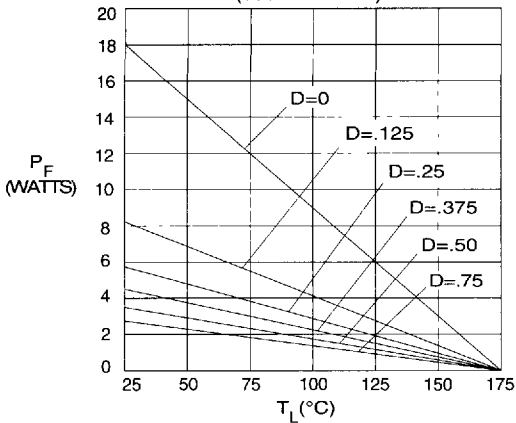
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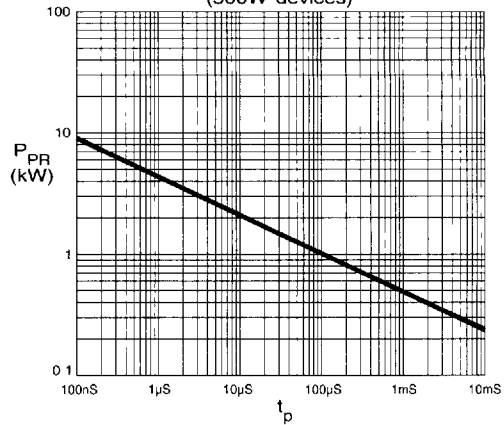
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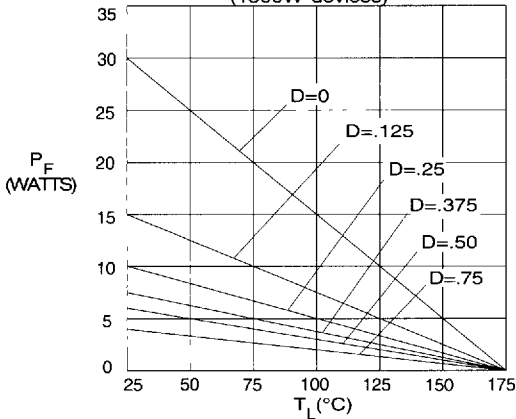
MAXIMUM POWER VS. LEAD TEMPERATURE  
(500W devices)



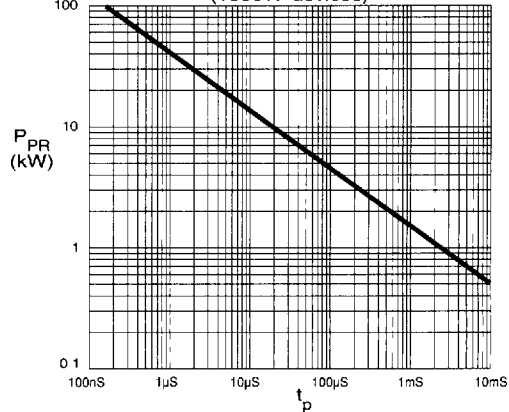
PEAK PULSE POWER VS. PULSE TIME  
(500W devices)



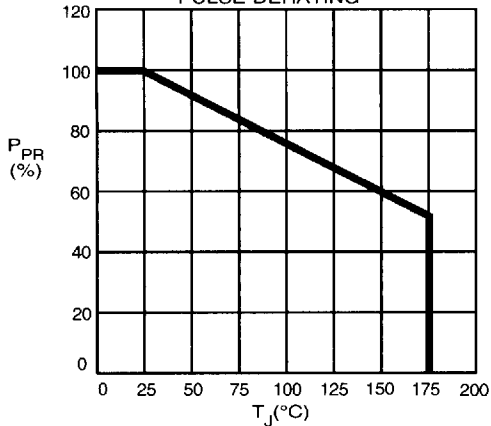
MAXIMUM POWER VS. LEAD TEMPERATURE  
(1500W devices)



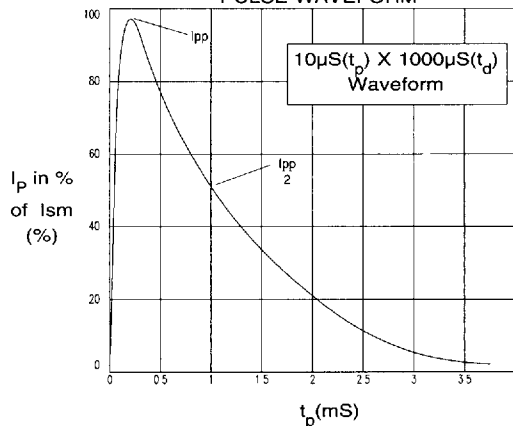
PEAK PULSE POWER VS. PULSE TIME  
(1500W devices)



PULSE DERATING



PULSE WAVEFORM



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