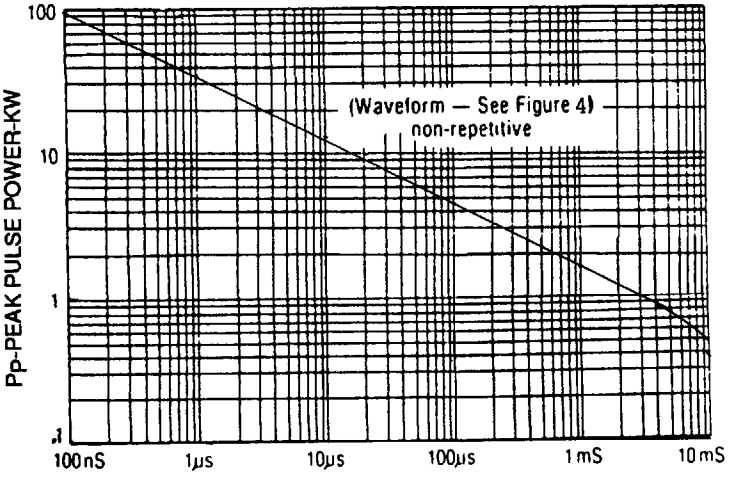
1500 WATT TRANSIENT VOLTAGE
1.5 SE-SERIES SUPPRESSOR DIODES
5V to 342V V_R
(C-4 CASE)

FEATURES:

- 1500 Watts Peak Power – 1 ms
- 5 Watt D.C. Power @ 75°C Lead Temp.
- Superfast Response ($1x10^{-12}$sec.) (Bi-Polar 5×10^{-9} sec.)
- High Temperature Operation
- Low Clamping Voltage
- Metallurgically Bonded

FIG 1



PEAK PULSE POWER VS PULSE TIME

DESCRIPTION

... a low cost commercial product for use in applications where large voltage transients can permanently damage voltage-sensitive components.
This series has a peak pulse power rating of 1500 watts for one millisecond. The response time of the clamping action of these devices is theoretically instantaneous (1×10^{-12} sec); therefore, they are designed to protect integrated Circuits, MOS devices, Hybrids, and other voltage-sensitive semiconductors and components. This series of devices can also be used in series or parallel to increase the peak power ratings.

MAXIMUM RATINGS: (See Notes)

Maximum Temperatures		
Ambient Storage and Operating Range	Tstg T_A	-65°C to+175°C
Lead Temperature (For soldering 1/16 inch from case for 10 sec.)		230°C
Maximum Power		
Peak Power Dissipation (1.0 msec pulse width, T_A=25°C, Fig. 4)	P_P	1500 Watts
DC Power Dissipation (T_L @ 3/8" from body = 75°C)	P_M	5.0 Watt
Maximum Currents		
Maximum Pulse Current	I_{PP}	See Table (Note 2)
Peak Forward One-Cycle Surge Current (1/2 60 Hz sine wave) T_A = 25°C	I_{FSM}	50.0 Amps (Note 3)
Maximum Forward Voltage T_A = 25°C @ 1.0 Amps DC	V_F	1.0 Volts

Notes:
(1) Exceeding these ratings may impair operation of the semiconductor device.
(2) The applied current pulse is as shown in the "Pulse Current vs. Time" plot. Maximum Rate of Applications is 2 pulses per minute. (Fig. 4)
(3) The applied current is 1/2 cycle of a 60 Hz waveform, with a maximum rate of application of 4 pulses per minute.

FIG 2

TEMPERATURE RATING CURVE

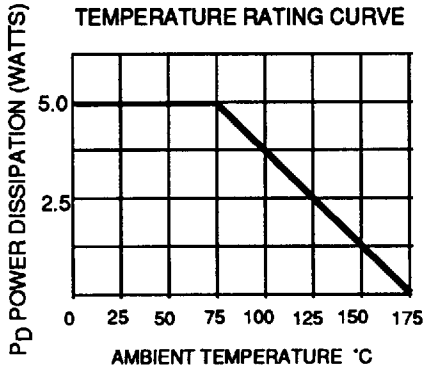


FIG 3

MAXIMUM ALLOWABLE PEAK PULSE CURRENT & POWER VS AMBIENT TEMPERATURE

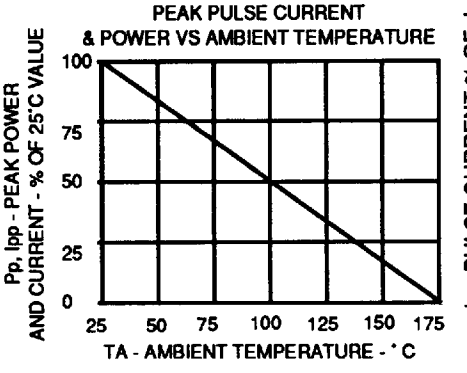
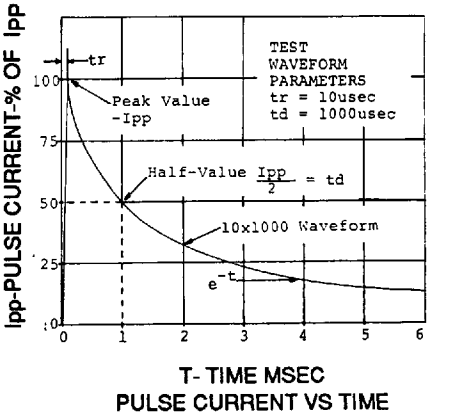


FIG 4



T- TIME MSEC
PULSE CURRENT VS TIME

TRANSIENT SUPPRESSORS
1.5 KW EPOXY MOLDED (C4 CASE)

CASE C-4	CASE C-4	REVERSE STAND-OFF VOLTAGE V_R VOLTS	BREAKDOWN VOLTAGE @ BV VOLTS	BREAKDOWN VOLTAGE @ I_T mA	Note 1 MAXIMUM CLAMPING VOLTAGE @ I_{PP} (1 msec) V_C VOLTS	MAXIMUM REVERSE LEAKAGE @V_R I_R µA	MAXIMUM PEAK PULSE CURRENT I_{PP} A	MAXIMUM TEMPERATURE COEFFICIENT OF BV %/°C
1.5SE6.8	1N6267	5.50	6.12 - 7.48	10	10.8	1000	139	.057
1.5SE6.8A	1N6267A	5.80	6.45 - 7.14	10	10.5	1000*	143	.057
1.5SE7.5	1N6268	6.05	6.75 - 8.25	10	11.7	500*	128	.061
1.5SE7.5A	1N6268A	6.40	7.13 - 7.88	10	11.3	500*	132	.061
1.5SE8.2	1N6269	6.63	7.38 - 9.02	10	12.5	200*	120	.065
1.5SE8.2A	1N6269A	7.02	7.79 - 8.61	10	12.1	200*	124	.065
1.5SE9.1	1N6270	7.37	8.19 - 10.0	1	13.8	50*	109	.068
1.5SE9.1A	1N6270A	7.78	8.65 - 9.55	1	13.4	50*	112	.068
1.5SE10	1N6271	8.10	9.00 - 11.0	1	15.0	50*	100	.073
1.5SE10A	1N6271A	8.55	9.5 - 10.5	1	14.5	10*	103	.073
1.5SE11	1N6272	8.92	9.9 - 12.1	1	16.2	5*	93	.075
1.5SE11A	1N6272A	9.40	10.5 - 11.6	1	15.6	5*	96	.075
1.5SE12	1N6273	9.72	10.8 - 13.2	1	17.3	5	87	.078
1.5SE12A	1N6273A	10.2	11.4 - 12.6	1	16.7	5	90	.078
1.5SE13	1N6274	10.5	11.7 - 14.3	1	19.0	5	79	.081
1.5SE13A	1N6274A	11.1	12.4 - 13.7	1	18.2	5	82	.081
1.5SE15	1N6275	12.1	13.5 - 16.5	1	22.0	5	68	.084
1.5SE15A	1N6275A	12.8	14.3 - 15.8	1	21.2	5	71	.084
1.5SE16	1N6276	12.9	14.4 - 17.6	1	23.5	5	64	.086
1.5SE16A	1N6276A	13.6	15.2 - 16.8	1	22.5	5	67	.086
1.5SE18	1N6277	14.5	16.2 - 19.8	1	26.5	5	56.5	.088
1.5SE18A	1N6277A	15.3	17.1 - 18.9	1	25.2	5	59.5	.088
1.5SE20	1N6278	16.2	18.0 - 22.0	1	29.1	5	51.5	.090
1.5SE20A	1N6278A	17.1	19.0 - 21.0	1	27.7	5	54	.090
1.5SE22	1N6279	17.8	19.8 - 24.2	1	31.9	5	47	.092
1.5SE22A	1N6279A	18.8	20.9 - 23.1	1	30.6	5	49	.092
1.5SE24	1N6280	19.4	21.6 - 26.4	1	34.7	5	43	.094
1.5SE24A	1N6280A	20.5	22.8 - 25.2	1	33.2	5	45	.094
1.5SE27	1N6281	21.8	24.3 - 29.7	1	39.1	5	38.5	.096
1.5SE27A	1N6281A	23.1	25.7 - 28.4	1	37.5	5	40	.096
1.5SE30	1N6282	24.3	27.0 - 33.0	1	43.5	5	34.5	.097
1.5SE30A	1N6282A	25.6	28.5 - 31.5	1	41.4	5	36	.097
1.5SE33	1N6283	26.8	29.7 - 36.3	1	47.7	5	31.5	.098
1.5SE33A	1N6283A	28.2	31.4 - 34.7	1	45.7	5	33	.098
1.5SE36	1N6284	29.1	32.4 - 39.6	1	52.0	5	29	.099
1.5SE36A	1N6284A	30.8	34.2 - 37.8	1	49.9	5	30	.099
1.5SE39	1N6285	31.6	35.1 - 42.9	1	56.4	5	26.5	.100
1.5SE39A	1N6285A	33.3	37.1 - 41.0	1	53.9	5	28	.100
1.5SE43	1N6286	34.8	38.7 - 47.3	1	61.9	5	24	.101
1.5SE43A	1N6286A	36.8	40.9 - 45.2	1	59.3	5	25.3	.101
1.5SE47	1N6287	38.1	42.3 - 51.7	1	67.8	5	22.2	.101
1.5SE47A	1N6287A	40.2	44.7 - 49.4	1	64.8	5	23.2	.101
1.5SE51	1N6288	41.3	45.9 - 56.1	1	73.5	5	20.4	.102
1.5SE51A	1N6288A	43.6	48.5 - 53.6	1	70.1	5	21.4	.102
1.5SE56	1N6289	45.4	50.4 - 61.6	1	80.5	5	18.6	.103
1.5SE56A	1N6289A	47.8	53.2 - 58.8	1	77.0	5	19.5	.103
1.5SE62	1N6290	50.2	55.8 - 68.2	1	89.0	5	16.9	.104
1.5SE62A	1N6290A	53.0	58.9 - 65.1	1	85.0	5	17.7	.104
1.5SE68	1N6291	55.1	61.2 - 74.8	1	98.0	5	15.3	.104
1.5SE68A	1N6291A	58.1	64.6 - 71.4	1	92.0	5	16.3	.104
1.5SE75	1N6292	60.7	67.5 - 82.5	1	108.0	5	13.9	.105
1.5SE75A	1N6292A	64.1	71.3 - 78.8	1	103.0	5	14.6	.105
1.5SE82	1N6293	66.4	73.8 - 90.2	1	118.0	5	12.7	.105
1.5SE82A	1N6293A	70.1	77.9 - 86.1	1	113.0	5	13.3	.105
1.5SE91	1N6294	73.7	81.9 - 100.0	1	131.0	5	11.4	.106
1.5SE91A	1N6294A	77.8	86.5 - 95.5	1	125.0	5	12.0	.106
1.5SE100	1N6295	81.0	90.0 - 110.0	1	144.0	5	10.4	.106
1.5SE100A	1N6295A	85.5	95.0 - 105.0	1	137.0	5	11.0	.106
1.5SE110	1N6296	89.2	99.0 - 121.0	1	158.0	5	9.5	.107
1.5SE110A	1N6296A	94.0	105.0 - 116.0	1	152.0	5	9.9	.107
1.5SE120	1N6297	97.2	108.0 - 132.0	1	173.0	5	8.7	.107
1.5SE120A	1N6297A	102.0	114.0 - 126.0	1	165.0	5	9.1	.107
1.5SE130	1N6298	105.0	117.0 - 143.0	1	187.0	5	8.0	.107
1.5SE130A	1N6298A	111.0	124.0 - 137.0	1	179.0	5	8.4	.107
1.5SE150	1N6299	121.0	135.0 - 165.0	1	215.0	5	7.0	.108
1.5SE150A	1N6299A	128.0	143.0 - 158.0	1	207.0	5	7.2	.108
1.5SE160	1N6300	130.0	144.0 - 176.0	1	230.0	5	6.5	.108
1.5SE160A	1N6300A	136.0	152.0 - 168.0	1	219.0	5	6.9	.108
1.5SE170	1N6301	138.0	153.0 - 187.0	1	244.0	5	6.2	.108
1.5SE170A	1N6301A	145.0	162.0 - 179.0	1	234.0	5	6.4	.108
1.5SE180	1N6302	146.0	162.0 - 198.0	1	258.0	5	5.8	.108
1.5SE180A	1N6302A	154.0	171.0 - 189.0	1	246.0	5	6.1	.108
1.5SE200	1N6303	162.0	180.0 - 220.0	1	287.0	5	5.2	.108
1.5SE200A	1N6303A	171.0	190.0 - 210.0	1	274.0	5	5.5	.108
1.5SE220		175.0	198.0 - 242.0	1	344.0	5	4.3	.110
1.5SE220A		185.0	209.0 - 231.0	1	328.0	5	4.6	.110
1.5SE250		202.0	225.0 - 275.0	1	360.0	5	5.0	.110
1.5SE250A		214.0	237.0 - 253.0	1	344.0	5	5.0	.110
1.5SE300		243.0	270.0 - 330.0	1	430.0	5	5.0	.110
1.5SE300A		256.0	285.0 - 315.0	1	414.0	5	5.0	.110
1.5SE350		284.0	315.0 - 385.0	1	504.0	5	4.0	.110
1.5SE350A		300.0	333.0 - 368.0	1	482.0	5	4.0	.110
1.5SE400		324.0	360.0 - 449.0	1	574.0	5	4.0	.110
1.5SE400A		342.0	380.0 - 420.0	1	548.0	5	4.0	.110
1N5908		5.0	6.0	1	8.6	300	165	.06

Note 1: Clamping Voltage = Approx. 1.3 x BV

* I_R Double for Bi Polar Types

Note 2: Add Suffix "C" to Part # for Bi Polar Types