

1 N 6 0 3 6 - 1 N 6 0 7 2 A series

IN60 SERIES (1500 WATT) METAL AXIAL TRANSIENT VOLTAGE SUPPRESSORS (hermetically sealed package for harsh industrial environments)

FEATURES

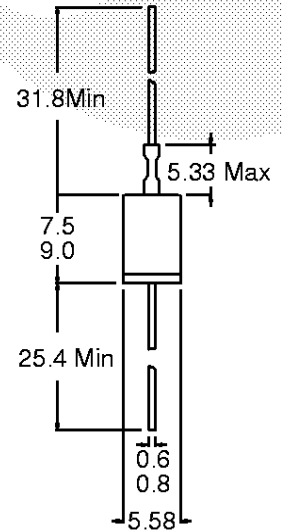
- ✦ Stand-off voltage range 6.8 - 200 Volts
- ✦ Glass Passivated Junction
- ✦ Excellent clamping capability
- ✦ Low zener impedance
- ✦ 100% Surge tested
- ✦ -65°C to + 175°C
- ✦ Hermetically sealed
- ✦ Bi-directional

MAXIMUM RATING

- ✦ Peak Pulse Power (Ppk): 1500 Watts (10 X 1000µs)
(see diagram on page 6 for wave form)
- ✦ 1 Watt Steady State
- ✦ Response time: 1×10^{-12} seconds (theoretical)
- ✦ Operating & storage temperature: -55°C to + 175°C

MECHANICAL CHARACTERISTICS

- ✦ CASE: Metal hermetically sealed DO-13 package
- ✦ Terminals: Axial leads, solderable per MIL-STD-202 Method 208
- ✦ Weight: 1.5 grammes (approx)



All dimensions in mm

Figure 1 - Peak Power Derating Curve
Peak pulse power in percent of 25°C rating

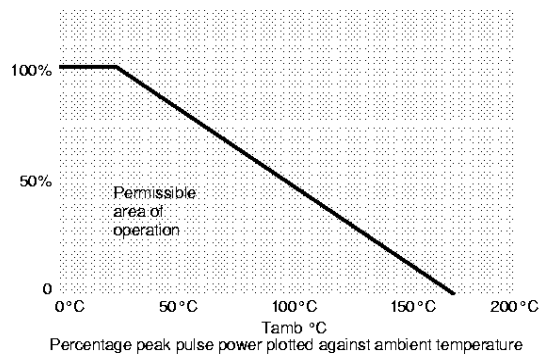
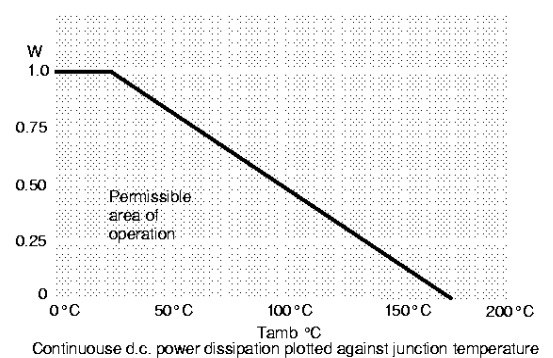


Figure 2 - Continuous D.C. Power Derating Curve
Continuous d.c. power dissipation



ORDERING INFORMATION

1N60 [X][X] [A] []

Voltage Reference.....

5% Voltage Tolerance.....

Packaging Option.....

B = Bulk (500 pcs)

T = Tape & reeled (1000 pcs)



ELECTRICAL SPECIFICATIONS @ 25 °C

PART NUMBER	REVERSE STANDOFF VOLTAGE V_R (Volts)	BREAKDOWN VOLTAGE V_{BR} (Volts) @ I_T			MAXIMUM REVERSE LEAKAGE I_R @ V_R (μA)	MAXIMUM CLAMPING VOLTAGE V_C @ I_{PP} (Volts)	MAXIMUM PEAK PULSE CURRENT I_{PP} (A)	MAX VOLTAGE TEMPERATURE VARIATION OF V_{BR} (mV/°C)
		MIN	MAX	mA				
*1N6036	5.5	6.75	8.25	10	1000.0	11.7	128.0	5.0
*1N6036A	6.0	7.13	7.88	10	1000.0	11.3	132.0	5.0
*1N6037	6.5	7.38	9.02	10	500.0	12.5	120.0	5.0
*1N6037A	7.0	7.79	8.61	10	500.0	12.1	124.0	5.0
1N6038	7.0	8.19	10.0	1.0	200.0	13.8	109.0	7.0
1N6038A	7.5	8.65	9.55	1.0	200.0	13.4	112.0	7.0
1N6039	8.0	9.0	11.0	1.0	50.0	15.0	100.0	7.0
1N6039A	8.5	9.5	10.5	1.0	50.0	14.5	103.0	7.0
1N6040	8.5	9.9	12.1	1.0	10.0	16.2	93.0	8.0
1N6040A	9.0	10.5	11.6	1.0	10.0	15.6	96.0	8.0
*1N6041	9.0	10.8	13.2	1.0	5.0	17.3	87.0	9.0
*1N6041A	10.0	11.4	12.6	1.0	5.0	16.7	90.0	9.0
1N6042	10.0	11.7	14.3	1.0	5.0	19.0	79.0	10.0
1N6042A	11.0	12.4	13.7	1.0	5.0	18.2	82.0	10.0
1N6043	11.0	13.5	16.5	1.0	5.0	22.0	68.0	11.0
1N6043A	12.0	14.3	15.8	1.0	5.0	21.2	71.0	12.0
1N6044	12.0	14.4	17.6	1.0	5.0	23.5	64.0	12.0
1N6044A	13.0	15.2	16.8	1.0	5.0	22.5	67.0	13.0
*1N6045	14.0	16.2	19.8	1.0	5.0	26.5	56.5	14.0
*1N6045A	15.0	17.1	18.9	1.0	5.0	25.2	59.5	15.0
1N6046	16.0	18.0	22.0	1.0	5.0	29.1	51.5	17.0
1N6046A	17.0	19.0	21.0	1.0	5.0	27.7	54.0	18.0
1N6047	17.0	19.8	24.2	1.0	5.0	31.9	47.0	19.0
1N6047A	18.0	20.9	23.1	1.0	5.0	30.6	49.0	20.0
1N6048	19.0	21.6	26.4	1.0	5.0	34.7	43.0	24.0
1N6048A	20.0	22.8	25.2	1.0	5.0	33.2	45.0	24.0
*1N6049	21.0	24.3	29.7	1.0	5.0	39.1	38.5	27.0
*1N6049A	22.0	25.7	28.4	1.0	5.0	37.5	40.0	28.0
1N6050	24.0	27.0	33.0	1.0	5.0	43.5	34.5	36.0
1N6050A	25.0	28.5	31.5	1.0	5.0	41.4	36.0	31.0
*1N6051	26.0	29.7	36.3	1.0	5.0	47.7	31.5	32.0
*1N6051A	28.0	31.4	34.7	1.0	5.0	45.7	33.0	34.0
1N6052	29.0	32.4	39.6	1.0	5.0	52.0	29.0	36.0
1N6052A	30.0	34.2	37.8	1.0	5.0	49.9	30.0	37.0
1N6053	31.0	35.1	42.9	1.0	5.0	56.4	26.5	39.0
1N6053A	33.0	37.1	41	1.0	5.0	53.9	28.0	40.0
*1N6054	34.0	38.7	47.3	1.0	5.0	61.9	24.0	44.0
*1N6054A	36.0	40.9	45.2	1.0	5.0	59.3	25.3	43.0
*1N6055	38.0	42.3	51.7	1.0	5.0	67.8	22.2	49.0
*1N6055A	40.0	44.7	49.4	1.0	5.0	64.8	23.2	47.0
*1N6056	41.0	45.9	56.1	1.0	5.0	73.5	20.4	53.0
*1N6056A	43.0	48.5	53.6	1.0	5.0	70.1	21.4	51.0

*Represents Preferred Voltages

Suffix 'A' denotes a 5% tolerance device, no suffix denotes a 10% tolerance device.



ELECTRICAL SPECIFICATIONS @ 25°C

PART NUMBER	REVERSE STANDOFF VOLTAGE V_R (Volts)	BREAKDOWN VOLTAGE V_{BR} (Volts) @ I_T			MAXIMUM REVERSE LEAKAGE I_R @ V_R (μA)	MAXIMUM CLAMPING VOLTAGE V_C @ I_{PP} (Volts)	MAXIMUM PEAK PULSE CURRENT I_{PP} (A)	MAX VOLTAGE TEMPERATURE VARIATION OF V_{BR} (mV/°C)
		MIN	MAX	mA				
1N6057	45.0	50.4	61.6	1.0	5.0	80.5	18.6	58.0
1N6057A	47.0	53.2	58.8	1.0	5.0	77.0	19.5	56.0
*1N6058	48.0	55.8	68.2	1.0	5.0	89.0	16.9	64.0
*1N6058A	53.0	58.9	65.1	1.0	5.0	85.0	17.7	62.0
*1N6059	55.0	61.2	74.8	1.0	5.0	98.0	15.3	70.0
*1N6059A	58.0	64.6	71.4	1.0	5.0	92.0	16.3	68.0
1N6060	60.0	67.5	82.5	1.0	5.0	108.0	13.9	77.0
1N6060A	64.0	71.3	78.8	1.0	5.0	103.0	14.6	75.0
*1N6061	66.0	73.8	90.2	1.0	5.0	118.0	12.7	84.0
*1N6061A	70.0	77.9	86.1	1.0	5.0	113.0	13.3	82.0
1N6062	73.0	81.9	100.0	1.0	5.0	131.0	11.4	90.0
1N6062A	75.0	86.5	95.5	1.0	5.0	125.0	12.0	86.0
*1N6063	81.0	90.0	110.0	1.0	5.0	144.0	10.4	99.0
*1N6063A	82.0	95.0	105.0	1.0	5.0	137.0	11.0	94.0
1N6064	90.0	99.0	121.0	1.0	5.0	158.0	9.5	109.0
1N6064A	94.0	105.0	116.0	1.0	5.0	152.0	9.9	104.0
1N6065	95.0	108.0	132.0	1.0	5.0	173.0	8.7	120.0
1N6065A	100.0	114.0	126.0	1.0	5.0	165.0	9.1	115.0
1N6066	105.0	117.0	143.0	1.0	5.0	187.0	8.0	131.0
1N6066A	110.0	124.0	137.0	1.0	5.0	179.0	8.4	125.0
1N6067	121.0	135.0	165.0	1.0	5.0	215.0	7.0	142.0
1N6067A	128.0	143.0	158.0	1.0	5.0	207.0	7.2	136.0
1N6068	137.0	153.0	187.0	1.0	5.0	258.0	5.8	164.0
1N6068A	145.0	162.0	179.0	1.0	5.0	245.0	6.1	157.0
*1N6069	145.0	162.0	198.0	1.0	5.0	274.0	5.5	175.0
*1N6069A	150.0	171.0	189.0	1.0	5.0	261.0	5.7	167.0
1N6070	155.0	171.0	210.0	1.0	5.0	292.0	5.1	186.0
1N6070A	160.0	181.0	200.0	1.0	5.0	278.0	5.4	188.0
*1N6071	165.0	180.0	220.0	1.0	5.0	308.0	4.9	197.0
*1N6071A	170.0	190.0	210.0	1.0	5.0	294.0	5.1	188.0
1N6072	175.0	198.0	242.0	1.0	5.0	344.0	4.3	219.0
1N6072A	185.0	209.0	231.0	1.0	5.0	328.0	4.6	209.0

* Represents Preferred Voltages

Suffix 'A' denotes a 5% tolerance device, no suffix denotes a 10% tolerance device.

