

GLASS PASSIVAED JUNCTION TRANSIENT VOLTAGE SUPPRESSOR

Features

- ◆ 600w peak pulse power capability
- ◆ Excellent clamping capability
- ◆ Low incremental surge resistance
- ◆ Fast response time:typically less than 1.0ps from 0v to VBR for unidirectional and 5.0ns for bidirectional types.
- ◆ High temperature soldering guaranteed:
265°C/10S/9.5mm lead length at 5 lbs tension

Mechanical Data

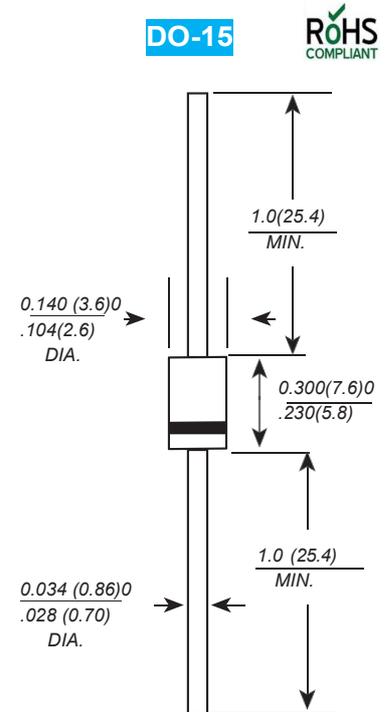
Case : JEDEC DO-15 Molded plastic body

Terminals : Solder plated, solderable per MIL-STD-750,Method 2026

Polarity : Polarity symbol marking on body

Mounting Position : Any

Weight : 0.014 ounce, 0.40 grams



Dimensions in inches and (millimeters)

Maximum Ratings And Electrical Characteristics

Ratings at 25°C ambient temperature unless otherwise specified.

Single phase half-wave 60Hz, resistive or inductive load, for capacitive load current derate by 20%.

	SYMBOLS	VALUE	UNITS
Peak power dissipation	P _{ppm}	Minimum 600	W
peak power dissipation (Note 1)	I _{ppm}	See Table 1	A
Steady state power dissipation (Note 2)	P _{M(AV)}	5.0	W
Peak forward surge current(Note 3)	I _{FSM}	100	A
Maximum instantaneous forward voltage at 50A for unidirectional only (Note 4)	V _F	3.5/5.0	V
Operating junction and storage temperature range	T _{STG} , T _J	-55 to + 175	°C

Notes:

1. 10/1000µs waveform non-repetitive current pulse, per Fig.3 and derated above T_a=25°C per Fig.2
2. T_L=75°C, lead lengths 9.5mm, Mounted on copper pad area of (40x40mm) Fig.5
3. Measured on 8.3ms single half sine-wave or equivalent square wave, duty cycle=4 pulses per minute maximum.
4. V_F=3.5V max. for devices of V(BR)<200V, and V_F=5.0V max. for devices of V(BR)>200V

ELECTRICAL CHARACTERISTICS (at TA=25°C unless otherwise noted)

Device Type	Breakdown Voltage V _(BR) (Volts)(NOTES 1)		Test Current I _T (mA)	Stand-off Voltage V _{WM} (Volts)	Maximum Reverse Leakage at V _{WM} I _D (NOTE3)(μA)	Maximum Peak Pulse Reverse Current I _{PPM} (NOTE2) (Amps)	Maximum Clamping Voltage at I _{PPM} V _c (Volts)	Maximum Temperature Coefficient of V _(BR) (%/°C)
	MIN	MAX7						
P6KE6.8	6.126	.487.	10.0	5.505	1000.0	55.6	10.8	0.0570
P6KE6.8A	.456.	148.	10.0	.806.	1000.0	57.1	10.5	.0570.
P6KE7.5	757.	257.	1.0	056.	500.0	51.3	11.7	0610.
P6KE7.5A	137.	889.	1.0	406.	500.0	53.1	11.3	0610.
P6KE8.2	387.	028.	1.0	637.	200.0	48.0	12.5	0650.
P6KE8.2A	798.	61	1.0	027.	200.0	49.6	12.1	0650.
P6KE9.1	198.	10.0	1.0	377.	50.0	43.5	13.8	0680.
P6KE9.1A	659.	9.55	1.0	788.	50.0	44.8	13.4	0680.
P6KE10	009.	11.0	1.0	108.	10.0	40.0	15.0	0730.
P6KE10A	509.	10.5	1.0	558.	10.0	41.4	14.5	0730.
P6KE11	9010.	12.1	1.0	929.	5.0	37.0	16.2	0750.
P6KE11A	510.	11.6	1.0	409.	5.0	38.5	15.6	0750.
P6KE12	811.	13.2	1.0	7210.	5.0	34.7	17.3	0780.
P6KE12A	411.	12.6	1.0	2105	5.0	35.9	16.7	0780.
P6KE13	712.	14.3	1.0	11.1	5.0	31.6	19.0	0810.
P6KE13A	413.	13.7	1.0	12.1	5.0	33.0	18.2	0810.
P6KE15	514.	16.5	1.0	12.8	5.0	27.3	22.0	0840.
P6KE15A	314.	15.8	1.0	12.9	5.0	28.3	21.2	0840.
P6KE16	415.	17.6	1.0	13.6	5.0	25.5	23.5	0860.
P6KE16A	216.	16.8	1.0	14.5	5.0	26.7	22.5	0860.
P6KE18	217.	19.8	1.0	15.3	5.0	22.6	26.5	0880.
P6KE18A	118.	18.9	1.0	16.2	5.0	23.8	25.2	0880.
P6KE20	019.	22.	1.0	17.1	5.0	20.6	29.1	0900.
P6KE20A	019.	021.	1.0	17.8	5.0	21.7	27.7	0900.
P6KE22	820.	024.	1.0	18.8	5.0	18.8	31.9	0920.
P6KE22A	921.	223.	1.0	19.4	5.0	19.6	30.6	0920.
P6KE24	622.	126.	1.0	20.5	5.0	17.3	34.7	0940.
P6KE24A	824.	425.	1.0	21.8	5.0	18.1	33.2	0940.
P6KE27	325.	229.	1.0	23.1	5.0	15.3	39.1	0960.
P6KE27A	727.	728.	1.0	24.3	5.0	16.0	37.5	0960.
P6KE30	028.	433.	1.0	25.6	5.0	13.8	43.5	0970.
P6KE30A	529.	031.	1.0	26.8	50.	14.5	41.4	0970.
P6KE33	731.	536.	1.0	28.2	5.0	12.6	47.7	0980.
P6KE33A	432.	334.	1.0	29.1	5.0	13.1	45.7	0980.
P6KE36	434.	739.	1.0	30.8	5.0	11.5	52.0	0990.
P6KE36A	235.	637.	1.0	31.6	5.0	12.0	49.9	0990.
P6KE39	137.	842.	1.0	33.3	5.0	10.6	56.4	1000.
P6KE39A	138.	941.	1.0	34.8	5.0	11.19	53.9	1000.
P6KE43	740.	047.	1.0	36.8	5.0	.7	61.9	1010.
P6KE43A	942.	345.	1.0	38.1	5.0	10.18	59.3	1010.
P6KE47	344.	251.	1.0	40.2	5.0	.8	67.8	1010.
P6KE47A	745.	749.	1.0	41.3	5.0	9.3	64.8	1010.
P6KE51	948.	456.	1.0	43.6	5.0	8.2	73.5	1020.
P6KE51A	550.	153.	1.0	45.4	5.0	8.6	70.1	1020.
P6KE56	453.2	661.	1.0	47.8	5.0	7.5	80.5	1030.
P6KE56A		658.8	1.0		5.0	7.8	77.0	103

ELECTRICAL CHARACTERISTICS (at TA=25°C unless otherwise noted)

Device Type	Breakdown Voltage V _(BR) (Volts)(NOTES 1)		Test Current I _T (mA)	Stand-off Voltage V _{WM} (Volts)	Maximum Reverse Leakage Current I _D (NOTE3)(μA)	Maximum Peak Pulse Reverse Current I _{PPM} (NOTE2) (Amps)	Maximum Clamping Voltage at I _{PPM} V _C (Volts)	Maximum Temperature Coefficient of V _(BR) (%/°C)
	MIN	MAX						
P6KE62	55.8	68.2	1.0	50.2	5.05	6.77	89.0	0.1040
P6KE62A	58.9	65.1	1.0	53.0	.05	16.1	85.0	.1040
P6KE68	61.2	74.8	1.0	55.1	05.0	6.5	98.0	1040.
P6KE68A	64.6	71.4	1.0	58.1	5.0	5.6	92.0	1040.
P6KE75	67.5	82.5	1.0	60.7	5.05	5.8	108	1050.
P6KE75A	71.3	78.8	1.0	64.1	.05.	5.15.	103	1050.
P6KE82	73.8	90.2	1.0	66.4	05.0	3	118	1050.
P6KE82A	77.9	86.1	1.0	70.1	5.0	4.6	113	1050.
P6KE91	81.9	100	1.0	73.7	5.05	4.8	131	1060.
P6KE91A	86.5	95.5	1.0	77.8	.05.	4.2	125	1060.
P6KE100	90.0	110	1.0	81.0	05.0	4.4	144	1060.
P6KE100A	95.0	105	1.0	85.5	5.0	3.8	137	1060.
P6KE110	99.0	121	1.0	89.2	5.05	3.9	158	1070.
P6KE110A	105	116	1.0	94.0	.05.	3.5	152	1070.
P6KE120	108	132	1.0	97.2	05.0	3.6	173	1070.
P6KE120A	114	126	1.0	102	5.0	3.2	165	1070.
P6KE130	117	143	1.0	105	5.05	3.4	187	1070.
P6KE130A	124	137	1.0	111	.05.	2.8	179	1070.
P6KE150	135	165	1.0	121	05.0	2.9	215	1080.
P6KE150A	143	158	1.0	128	5.0	2.6	207	1080.
P6KE160	144	176	1.0	130	5.05	2.72.	230	1080.
P6KE160A	152	168	1.0	136	.05.	5	219	1080.
P6KE170	153	187	1.0	138	05.0	2.6	244	1080.
P6KE170A	162	179	1.0	145	5.0	2.3	234	1080.
P6KE180	162	198	1.0	146	5.05	2.4	258	1080.
P6KE180A	171	189	1.0	154	.05.	2.12.	246	1080.
P6KE200	180	220	1.0	162	05.0	2	287	1080.
P6KE200A	190	210	1.0	171	5.0	1.71.	274	1080.
P6KE220	198	242	1.0	175	5.05	8	344	1080.
P6KE220A	209	231	1.0	185	.05.	1.71.	328	1080.
P6KE250	225	275	1.0	202	05.0	7.14	360	1100.
P6KE250A	237	263	1.0	214	5.0	1.4	344	1100.
P6KE300	270	330	1.0	243		1.2	430	1100.
P6KE300A	285	315	1.0	256		1.2	414	1100.
P6KE350	315	385	1.0	284		1.0	504	1100.
P6KE350A	332	368	1.0	300		1.10.	482	1100.
P6KE400	360	440	1.0	324		95.1.0	574	1100.
P6KE400A	380	420	1.0	342			548	1100.
P6KE440	396	484	1.0	356			631	1100.
P6KE440A	418	462	1.0	376			602	110

NOTES:

1. V_(BR) measured after I_T applied for 300μs, I_T=square wave pulse or equivalent 2 surge current waveform per Fig.3 and derated per Fig.2
3. For bidirectional types having V_{WM} of 10 volts and less, the I_D limit is doubled 4
- . All items and symbols are consistent with ANSI/IEEE C62.35

FIG. 1-PEAK PULSE POWER RATING CURVE

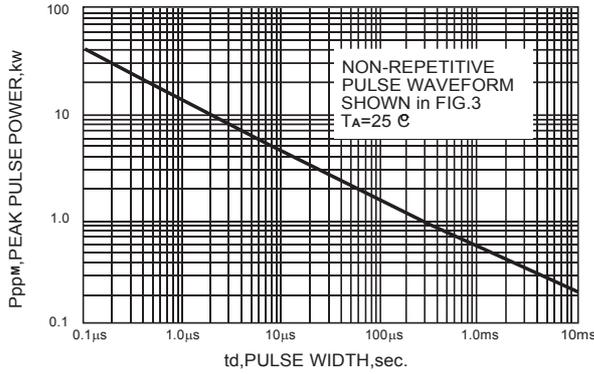


FIG. 2-PULSE DERATING CURVE

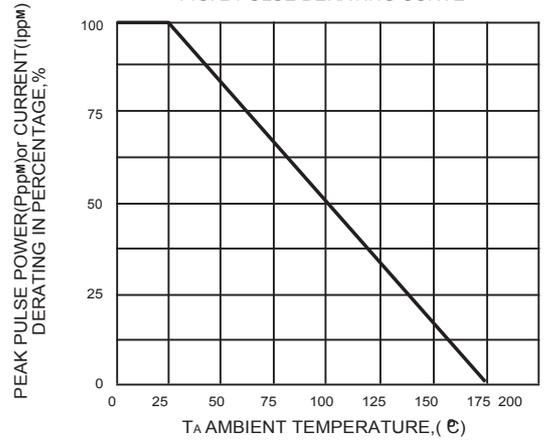


FIG.3-PULSE WAVEFORM

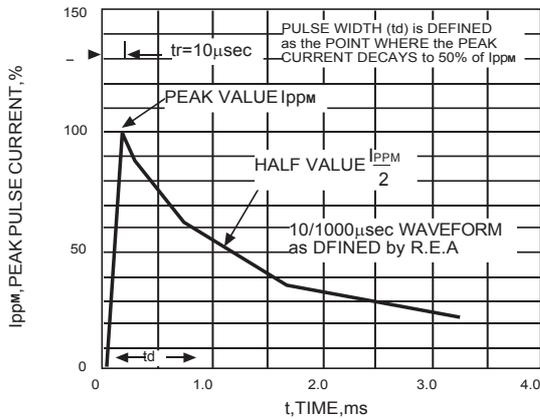


FIG. 4-TYPICAL JUNCTION CAPACITANCE UNIDIRECTIONAL

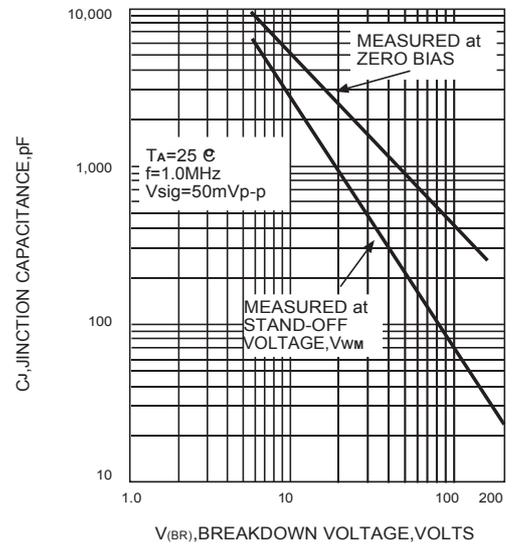


FIG.5-STEADY STATE POWER DERATING CURVE

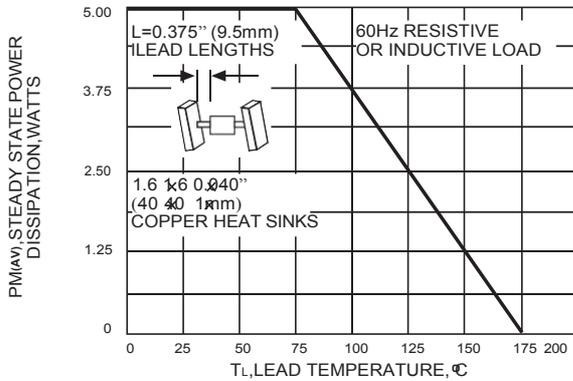


FIG.6-MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT UNIDIRECTIONAL ONLY

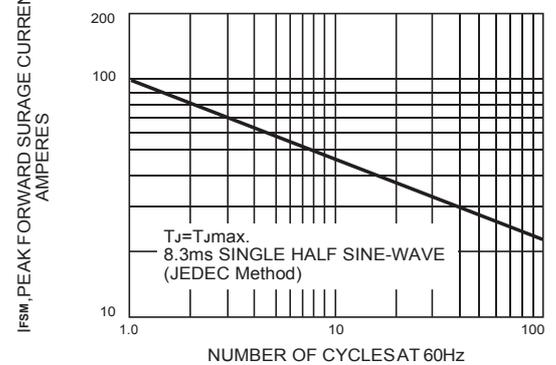
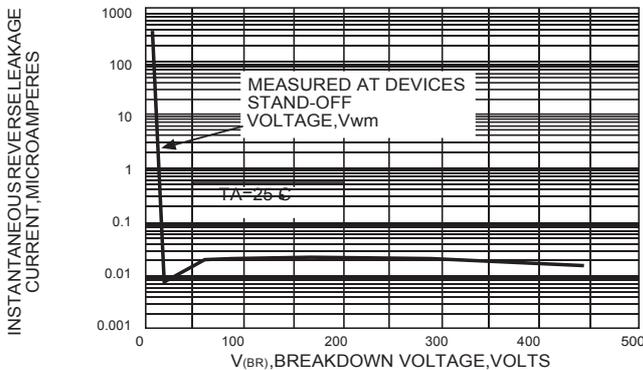


FIG.7-TYPICAL REVERSE LEAKAGE CHARACTERISTICS



The curve characteristics above is for reference only.