Olitech Electronics Co. Ltd

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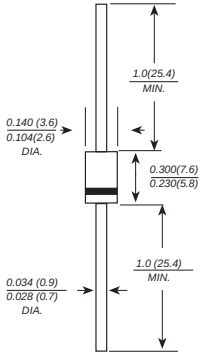
P6KE6.8A THRU P6KE600A TRANSIENT VOLTAGE SUPPRESSOR

Breakdown Voltage:6.8-550 Volts Peak Pulse Power:600 Watts

Glass passivated type is available

DO-15



Dimensions in inches and (millimeters)

FEATURE

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

MECHANICAL DATA

Case: JEDEC DO-15 molded plastic body over passivated junction
Terminals: Plated axial leads, solderable per MIL-STD 750, method 2026
Polarity: Color band denotes cathode except for bidirectional types
Mounting Position: Any
Weight: 0.014 ounce,0.40 grams

MAXIMUM RATINGS AND CHARACTERISTICS

Ratings at 25℃ ambient temperature unless otherwise specified.

	SYMBOLS	*VALUE*	*UNITS*
Peak power dissipation (Note 1)	Pppm	Minimum 600	Watts
Peak pulse reverse current (Note 1, Fig.3)	Ippm	See Table 1	Amps
Steady state power dissapation (Note 2)	$P_{M(AV)}$	5.0	Watts
Peak forward surge current (Note 3)	I_{FSM}	100	Amps
Maximum instantaneous forward voltage at 50A for unidirectional only (Note 4)	V_F	3.5/5.0	Volts
Operating junction and storage temperature range	T_{STG},T_J	-55 to + 175	°C

Notes:

1.10/1000ms waveform non-repetitive current pulse,per Fig.3 and derated above Ta=25℃ per Fig.2
2.T_L=75℃,lead lengths 9.5mm,Mounted on copper pad atea 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.VF=3.5V max.for devices of $V_{(BR)}$≤200V,and VF=5.0V max.for devices of $V_{(BR)}$>200V

ELECTRICAL CHARACTERISTICS (at T_A=25℃ unless otherwise noted)

Part Number		Reverse Stand off Voltage VR	Breakdown Voltage VBR (Volts) @ IT		Test Current IT	Maximum Clamping Voltage VC @ Ipp	Maximum Peak Pulse Current Ipp	Maximum Reverse Leakage IR@ VR
(Uni)	(Bi)	(Volts)	MIN	AX	(mA)	(V)	(A)	(μA)
P6KE6.8A	P6KE6.8CA	5.80	6.45	7.14	10	10.5	58.1	1000
P6KE7.5A	P6KE7.5CA	6.40	7.13	7.88	10	11.3	54.0	500
P6KE8.2A	P6KE8.2CA	7.02	7.79	8.61	10	12.1	50.4	200
P6KE9.1A	P6KE9.1CA	7.78	8.65	9.55	1	13.4	45.5	50
P6KE10A	P6KE10CA	8.55	9.50	10.50	1	14.5	42.1	10
P6KE11A	P6KE11CA	9.40	10.50	11.60	1	15.6	39.1	5
P6KE12A	P6KE12CA	10.20	11.40	12.60	1	16.7	36.5	5
P6KE13A	P6KE13CA	11.10	12.40	13.70	1	18.2	33.5	1
P6KE15A	P6KE15CA	12.80	14.30	15.80	1	21.2	28.8	1
P6KE16A	P6KE16CA	13.60	15.20	16.80	1	22.5	27.1	1
P6KE18A	P6KE18CA	15.30	17.10	18.90	1	25.2	24.2	1
P6KE20A	P6KE20CA	17.10	19.00	21.00	1	27.7	22.0	1
P6KE22A	P6KE22CA	18.80	20.90	23.10	1	30.6	19.9	1
P6KE24A	P6KE24CA	20.50	22.80	25.20	1	33.2	18.4	1
P6KE27A	P6KE27CA	23.10	25.70	28.40	1	37.5	16.3	1
P6KE30A	P6KE30CA	25.60	28.50	31.50	1	41.4	14.7	1
P6KE33A	P6KE33CA	28.20	31.40	34.70	1	45.7	13.3	1
P6KE36A	P6KE36CA	30.80	34.20	37.80	1	49.9	12.2	1
P6KE39A	P6KE39CA	33.30	37.10	41.00	1	53.9	11.3	1
P6KE43A	P6KE43CA	36.80	40.90	45.20	1	59.3	10.3	1
P6KE47A	P6KE47CA	40.20	44.70	49.40	1	64.8	9.4	1
P6KE51A	P6KE51CA	43.60	48.50	53.60	1	70.1	8.7	1
P6KE56A	P6KE56CA	47.80	53.20	58.80	1	77.0	7.9	1
P6KE62A	P6KE62CA	53.00	58.90	65.10	1	85.0	7.2	1
P6KE68A	P6KE68CA	58.10	64.60	71.40	1	92.0	6.6	1
P6KE75A	P6KE75CA	64.10	71.30	78.80	1	103.0	5.9	1
P6KE82A	P6KE82CA	70.10	77.90	86.10	1	113.0	5.4	1
P6KE91A	P6KE91CA	77.80	86.50	95.50	1	125.0	4.9	1
P6KE100A	P6KE100CA	85.50	95.00	105.00	1	137.0	4.5	1
P6KE110A	P6KE110CA	94.00	105.00	116.00	1	152.0	4.0	1
P6KE120A	P6KE120CA	102.00	114.00	126.00	1	165.0	3.7	1
P6KE130A	P6KE130CA	111.00	124.00	137.00	1	179.0	3.4	1
P6KE150A	P6KE150CA	128.00	143.00	158.00	1	207.0	2.9	1
P6KE160A	P6KE160CA	136.00	152.00	168.00	1	219.0	2.8	1
P6KE170A	P6KE170CA	145.00	162.00	179.00	1	234.0	2.6	1
P6KE180A	P6KE180CA	154.00	171.00	189.00	1	246.0	2.5	1
P6KE200A	P6KE200CA	171.00	190.00	210.00	1	274.0	2.2	1
P6KE220A	P6KE220CA	185.00	209.00	231.00	1	328.0	1.9	1
P6KE250A	P6KE250CA	214.00	237.00	263.00	1	344.0	1.8	1
P6KE300A	P6KE300CA	256.00	285.00	315.00	1	414.0	1.5	1
P6KE350A	P6KE350CA	300.00	332.00	368.00	1	482.0	1.3	1
P6KE400A	P6KE400CA	342.00	380.00	420.00	1	548.0	1.1	1
P6KE440A	P6KE440CA	376.00	418.00	462.00	1	602.0	1.0	1
P6KE480A	P6KE480CA	408.00	456.00	504.00	1	658.0	0.9	1
P6KE510A	P6KE510CA	434.00	485.00	535.00	1	698.0	0.9	1
P6KE530A	P6KE530CA	477.00	503.50	556.50	1	725.0	0.8	1
P6KE540A	P6KE540CA	486.00	513.00	567.00	1	740.0	0.8	1
P6KE550A	P6KE550CA	495.00	522.50	577.50	1	760.0	0.8	1
P6KE600A	P6KE600CA	512.00	570.00	630.00	1	828.0	0.8	1

For bidirectional type having V_R of 10 volts and less, the I_R limit is double.

For parts without A , the V_{BR} is ± 10% and V_C is 5% higher than with A parts

RATINGS AND CHARACTERISTIC CURVES P6KE6.8A THUR P6KE600A

FIG. 1-PEAK PULSE POWER RATING CURVE

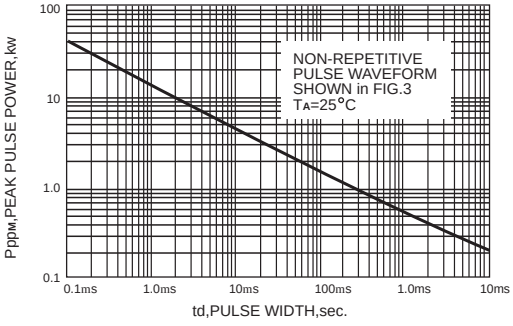


FIG. 2-PULSE DERATING CURVE

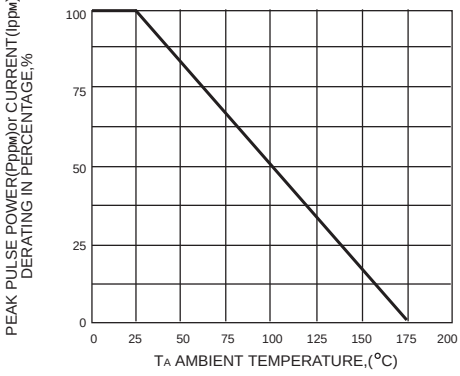


FIG.3-PULSE WAVEFORM

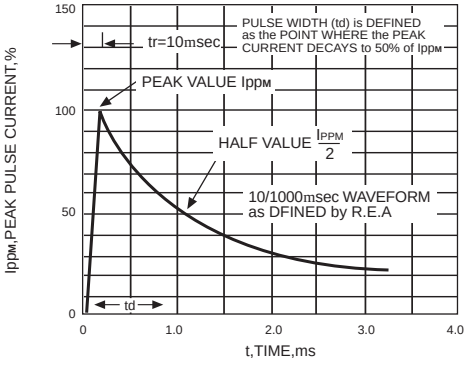


FIG. 4-TYPICAL JUNCTIONAL CAPACITANCE
UNIDIRECTIONAL

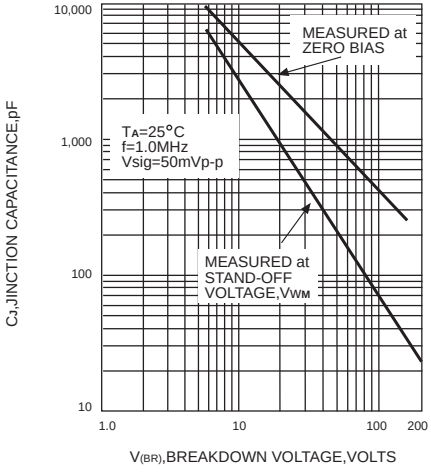


FIG.5-STEADY STATE POWER DERATING CURVE

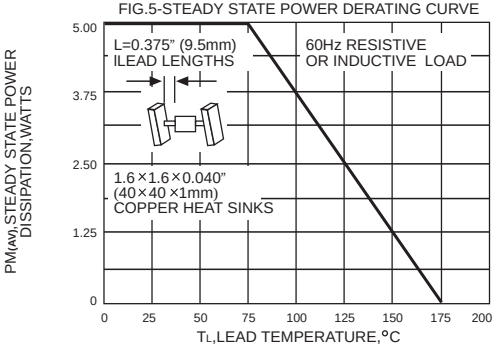


FIG.6-MAXIMUM NON-REPETITIVE FORWARD SURGE
CURRENT UNIDIRECTIONAL ONLY

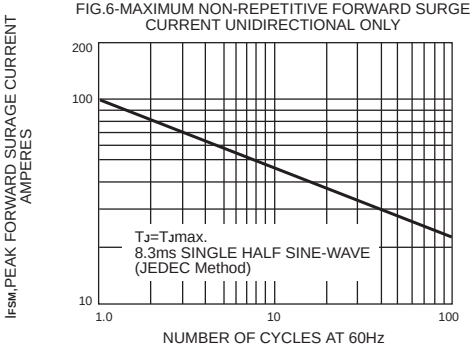


FIG.7-TYPICAL REVERSE LEAKAGE CHARCTERISTICS