



DO-204AC/DO-15



RoHS
COMPLIANT

FEATURES

- 600 W peak pulse power dissipation.
- Glass passivated chip junction in DO-15 package.
- Plastic package.
- Rosh compliant.
- Excellent clamping capability.
- Very fast response time.
- Low zener impedance.
- Typical IR less than 1uA above 10V.
- High Temperature soldering:260°C/10 seconds at terminals.

MECHANICAL DATA

- Case: JEDEC DO-15 Molded Plastic.
- Terminal:Solder plated,solderable per MIL-STD-750, Method 2026.
- Polarity:Color band denoted positive end (cathode),except Bidirectional.
- Plastic material has UL flammability classification 94V-0
- Weight: 0.015 ounce, 0.4 grams.

PRIMARY CHARACTERISTICS	
V_{RWM}	5.8 V to154 V
P_{PPM}	600 W
P_D	5W
I_{FSM}	100 A
T_J max.	175 °C

TYPICAL APPLICATIONS

Use in sensitive electronics protection against voltage transients induced by inductive load switching and lighting on ICs, MOSFET, signal lines of sensor units for consumer, computer, industrial, automotive and telecommunication.

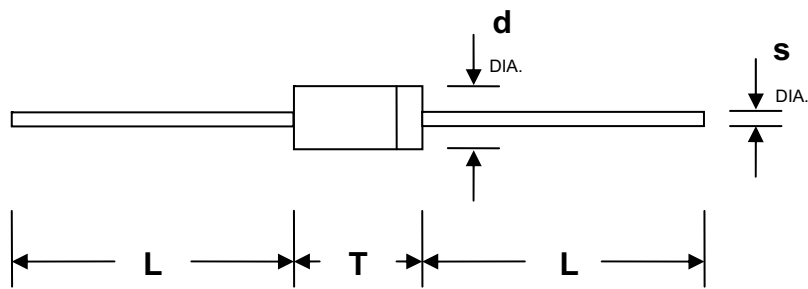
CHARACTERISTICS

MAXIMUM RATINGS ($T_A = 25^\circ\text{C}$ unless otherwise noted)			
PARAMETER	SYMBOL	VALUE	UNIT
Peak Pulse Power Dissipation on 10/1000 μs waveform. (Note 1 Fig. 1)	P_{PPM}	600	W
Peak Pulse Current on 10/1000 μs waveform. (Note 1 Fig. 3)	I_{PPM}	See next table	A
Steady State Power Dissipation at $T_L = 75^\circ\text{C}$ Lead length .375" (9.5mm). (Fig. 5)	P_D	5	W
Peak Forward Surge Current 8.3ms Single Half Sine-Wave Superimposed on Rated Load. (JEDEC Method) (Note 2, Fig. 6)	I_{FSM}	100	A
Operating junction and Storage Temperature Range.	T_J, T_{STG}	- 55 to + 175	°C

Notes: 1. Non-repetitive current pulse, per Fig. 3 and derated above $T_A = 25^\circ\text{C}$ per Fig. 2.

2. 8.3ms single half sine-wave, or equivalent square wave, Duty cycle = 4 pulses per minute maximum.

■ PACKAGE DIMENSIONS



DO-204AC/DO-15

Item	Millimeters		Inches	
	Min.	Max.	Min.	Max.
L	25.4	-	1.000	-
T	5.80	7.60	0.230	0.300
d	2.60	3.60	0.104	0.140
s	0.71	0.86	0.028	0.034

■ ELECTRICAL CHARACTERISTICS

Type Number		Reverse Stand-Off Voltage	Breakdown Voltage Min. @I	Breakdown Voltage Max. @I	Test Current	Maximum Clamping Voltage	Peak Pulse Current	Reverse Leakage @V _{RMW}
(Uni)	(Bi)	V _{RMW} (V)	V _{BR MIN} (V)	V _{BR MAX} (V)	I _T (mA)	V _C (V)	I _{PP} (A)	I _R (uA)
0.6KE6.8A	0.6KE6.8CA	5.8	6.45	7.14	10	10.5	58.1	1000
0.6KE7.5A	0.6KE7.5CA	6.0	7.13	7.88	10	11.3	54.0	500
0.6KE8.2A	0.6KE8.2CA	7.0	7.79	8.61	10	12.1	50.4	200
0.6KE9.1A	0.6KE9.1CA	7.5	8.65	9.55	1	13.4	45.5	50
0.6KE10A	0.6KE10CA	8.5	9.50	10.50	1	14.5	42.1	10
0.6KE11A	0.6KE11CA	9.0	10.50	11.60	1	15.6	39.1	5
0.6KE12A	0.6KE12CA	10.0	11.40	12.60	1	16.7	36.5	5
0.6KE13A	0.6KE13CA	11.0	12.40	13.70	1	18.2	33.5	1
0.6KE15A	0.6KE15CA	12.5	14.30	15.80	1	21.2	28.8	1
0.6KE16A	0.6KE16CA	13.5	15.20	16.80	1	22.5	27.1	1
0.6KE18A	0.6KE18CA	15.0	17.10	18.90	1	25.2	24.2	1
0.6KE20A	0.6KE20CA	17.0	19.00	21.00	1	27.7	22.0	1

Type Number		Reverse Stand-Off Voltage	Breakdown Voltage Min. @I	Breakdown Voltage Max. @ I	Test Current	Maximum Clamping Voltage	Peak Pulse Current	Reverse Leakage @V _{RWM}
(Uni)	(Bi)	V _{RWM} (V)	V _{BR MIN} (V)	V _{BR MAX} (V)	I _T (mA)	V _C (V)	I _{PP} (A)	I _R (uA)
0.6KE22A	0.6KE22CA	18.5	20.90	23.10	1	30.6	19.9	1
0.6KE24A	0.6KE24CA	20.5	22.80	25.20	1	33.2	18.4	1
0.6KE27A	0.6KE27CA	23.0	25.70	28.40	1	37.5	16.3	1
0.6KE30A	0.6KE30CA	25.5	28.50	31.50	1	41.4	14.7	1
0.6KE33A	0.6KE33CA	28.0	31.40	34.70	1	45.7	13.3	1
0.6KE36A	0.6KE36CA	30.5	34.20	37.80	1	49.9	12.2	1
0.6KE40A	0.6KE40CA	33.0	37.10	41.00	1	53.9	11.3	1
0.6KE43A	0.6KE43CA	36.5	40.90	45.20	1	59.3	10.3	1
0.6KE47A	0.6KE47CA	40.0	44.70	49.40	1	64.8	9.4	1
0.6KE51A	0.6KE51CA	43.5	48.50	53.60	1	70.1	8.7	1
0.6KE56A	0.6KE56CA	47.5	53.20	58.80	1	77.0	7.9	1
0.6KE62A	0.6KE62CA	53.0	58.90	65.10	1	85.0	7.2	1
0.6KE68A	0.6KE68CA	58.0	64.60	71.40	1	92.0	6.6	1
0.6KE75A	0.6KE75CA	64.0	71.30	78.80	1	103.0	5.9	1
0.6KE82A	0.6KE82CA	70.0	77.90	86.10	1	113.0	5.4	1
0.6KE91A	0.6KE91CA	77.5	86.50	95.50	1	125.0	4.9	1
0.6KE100A	0.6KE100CA	85.5	95.00	105.00	1	137.0	4.5	1
0.6KE110A	0.6KE110CA	94.0	105.00	116.00	1	152.0	4.0	1
0.6KE120A	0.6KE120CA	102.0	114.00	126.00	1	165.0	3.7	1
0.6KE130A	0.6KE130CA	111.0	124.00	137.00	1	179.0	3.4	1
0.6KE150A	0.6KE150CA	128.0	143.00	158.00	1	207.0	2.9	1
0.6KE160A	0.6KE160CA	136.00	152.00	168.00	1	219.0	2.8	1
0.6KE170A	0.6KE170CA	145.00	162.00	179.00	1	234.0	2.6	1
0.6KE180A	0.6KE180CA	154.00	171.00	189.00	1	246.0	2.5	1

RATINGS AND CHARACTERISTIC CURVES (TA=25°C unless otherwise noted)

Figure 1 - Peak Pulse Power Rating Curve

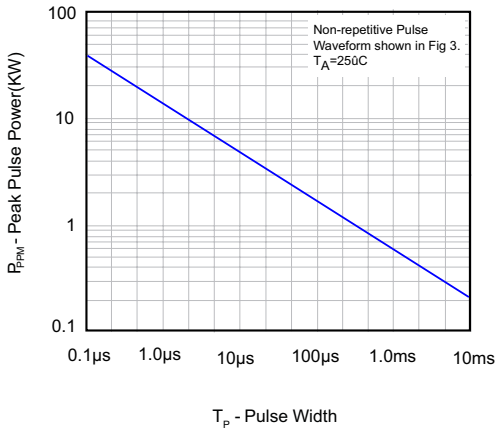


Figure 2 - Pulse Derating Curve

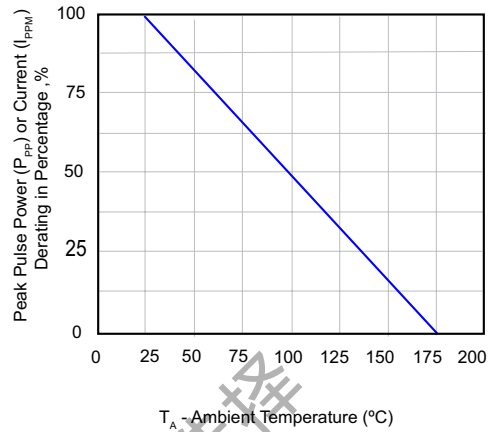


Figure 3 - Pulse Waveform

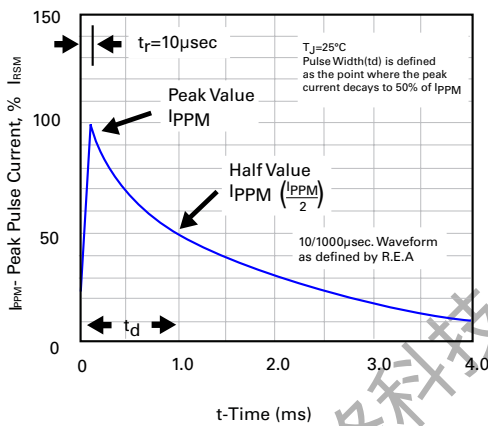


Figure 4 - Typical Junction Capacitance

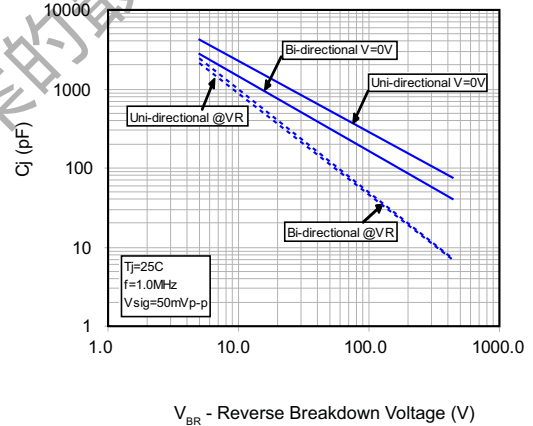


Figure 5 - Steady State Power Dissipation Derating Curve

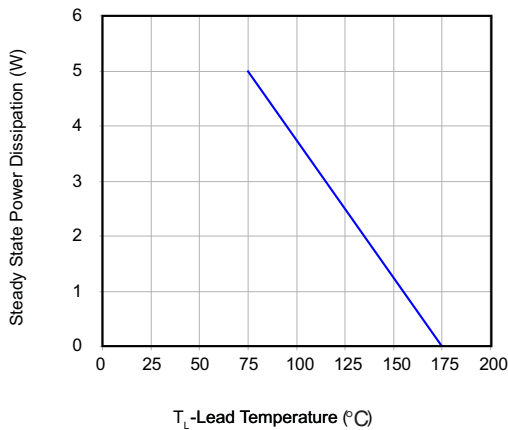
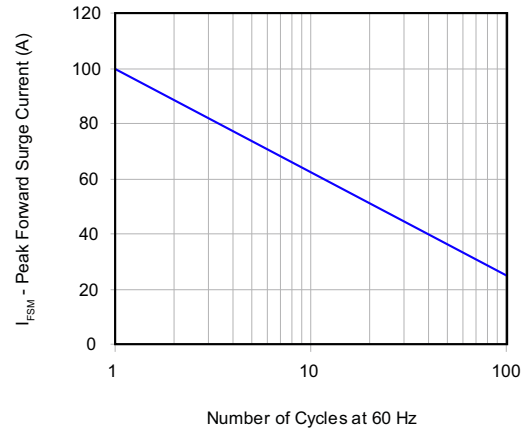


Figure 6 - Maximum Non-Repetitive Forward Surge Current Uni-Directional Only



APPLICATION NOTE

The 0.6KP series of high power transient voltage suppressors were designed to be used on the output of switching power supplies. These devices may be used to replace crowbar circuits. Both the 5 % and 10 % voltage tolerances are referenced to the power supply output voltage level.

They are able to withstand high levels of peak current while allowing a circuit breaker to trip or a fuse blow before shorting. This will enable the user to reset the breaker or replace the fuse and continue operation. For this type operation, it is recommended that a sufficient mounting surface be used for dissipating the heat generated by the Transient Voltage Suppressor during the transient or over-voltage condition.

韬略科技-EMC方案的最佳选择

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