

## 15KW AXIAL LEADED TRANSIENT VOLTAGE SUPPRESSORS, 17V – 280V

Value Inch[mm]	
Dim.	Min. Max.
A	1.000[25.40] ---
B	0.340[8.64] 0.360[9.14]
C	0.340[8.64] 0.360[9.14]
D	0.047[1.22] 0.051[1.32]

### PRODUCT FEATURES

1. FLAMMABILITY CLASSIFICATION 94V-0
2. GLASS PASSIVATED CHIP JUNCTION
3. 15KW PEAK PULSE POWER CAPABILITY WITH A 10/1000  $\mu$ S WAVEFORM, REPETITION RATE (DUTY CYCLE): 0.01%.
4. EXCELLENT CLAMPING CAPABILITY
5. FAST RESPONSE TIME FROM 0V TO  $V_{BR}$ , TYPICALLY <1 pS FOR UNI-DIRECTIONAL & <10 nS FOR BI-DIRECTIONAL
6. POLARITY: INDICATED BY CATHODE BAND
7. MOLDED PLASTIC CASE P600
8. DIMENSIONS IN INCHES AND (MILLIMETERS)
9. LEADS: SOLDERABILITY PER MIL-STD-202 METHOD 208
10. WEIGHT: 2.10 GRAMS
11. RoHS COMPLIANT. ADD SUFFIX "-H" FOR HALOGEN FREE PART. i.e. 15KPA17A-H.

## ELECTRICAL CHARACTERISTICS

### MAXIMUM RATINGS ( $T_A = 25^\circ\text{C}$ UNLESS OTHERWISE NOTED)

PARAMETER	CONDITIONS	SYMBOL		UNIT
PEAK POWER DISSIPATION	WITH A 10/1000 $\mu$ S WAVEFORM, SEE NOTE 1 & FIG.1	$P_{PPM}$	15,000	W
PEAK PULSE CURRENT	WITH A 10/1000 $\mu$ S WAVEFORM, SEE NOTE 1 & FIG.1	$I_{PPM}$	SEE TABLE	A
STEADY STATE POWER DISSIPATION	AT $T_L = 75^\circ\text{C}$ , LEAD LENGTH 0.375" (9.5mm)	$P_{M(AV)}$	8.0	W
PEAK FORWARD SURGE CURRENT	8.3ms SINGLE HALF SINE-WAVE (JEDEC METHOD), SEE NOTE 2	$I_{FSM}$	400	A
OPERATING JUNCTION TEMPERATURE RANGE		$T_J$	-55 TO +150	$^\circ\text{C}$
STORAGE TEMPERATURE RANGE		$T_{STG}$	-55 TO +150	$^\circ\text{C}$

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

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



# 15KPA\_SERIES SPECIFICATION

Rev. A

Part No.	Reverse Stand-off Voltage	Breakdown Voltage @I <sub>T</sub>		Test Current	Maximum Clamping Voltage @I <sub>PP</sub>		Maximum Reverse Leakage Current	
	V <sub>RWM</sub>	V <sub>BR</sub> Min	V <sub>BR</sub> Max	I <sub>T</sub>	V <sub>C</sub> @I <sub>PP</sub>		I <sub>R</sub> (uA)	
	Volts	Volts	Volts	mA	Volts	I <sub>PP</sub> (A)	UNI	BI
15KPA17(C)A	17.0	18.99	20.79	50	29.3	515.4	5000	10000
15KPA18(C)A	18.0	20.11	22.01	50	30.9	488.7	5000	10000
15KPA20(C)A	20.0	22.34	24.46	20	34.3	440.2	1500	3000
15KPA22(C)A	22.0	24.57	26.91	10	37.1	407.0	500	1000
15KPA24(C)A	24.0	26.81	29.35	5.0	40.7	371.0	150	300
15KPA26(C)A	26.0	29.04	31.80	5.0	44.0	343.2	50	100
15KPA28(C)A	28.0	31.28	34.24	5.0	47.5	317.9	25	50
15KPA30(C)A	30.0	33.51	36.70	5.0	50.7	297.8	15	30
15KPA33(C)A	33.0	36.9	40.4	5.0	54.7	276.1	2	2
15KPA36(C)A	36.0	40.2	44.0	5.0	59.8	252.5	2	2
15KPA40(C)A	40.0	44.7	48.9	5.0	65.8	229.5	2	2
15KPA43(C)A	43.0	48.0	52.6	5.0	69.8	216.3	2	2
15KPA45(C)A	45.0	50.3	55.0	5.0	72.8	207.4	2	2
15KPA48(C)A	48.0	53.6	58.7	5.0	77.7	194.3	2	2
15KPA51(C)A	51.0	57.0	62.4	5.0	82.9	182.1	2	2
15KPA54(C)A	54.0	60.3	66.0	5.0	87.7	172.2	2	2
15KPA58(C)A	58.0	64.8	70.9	5.0	93.8	161.0	2	2
15KPA60(C)A	60.0	67.0	73.4	5.0	97.4	155.0	2	2
15KPA64(C)A	64.0	71.5	78.3	5.0	104.2	144.9	2	2
15KPA70(C)A	70.0	78.2	85.6	5.0	113.6	132.9	2	2
15KPA75(C)A	75.0	83.8	91.7	5.0	122.0	123.8	2	2
15KPA78(C)A	78.0	87.1	95.4	5.0	126.1	119.7	2	2
15KPA85(C)A	85.0	94.9	104.0	5.0	137.6	109.7	2	2
15KPA90(C)A	90.0	100.5	110.1	5.0	145.6	103.7	2	2
15KPA100(C)A	100.0	111.7	122.3	5.0	161.3	93.6	2	2
15KPA110(C)A	110.0	122.9	134.5	5.0	178.6	84.5	2	2
15KPA120(C)A	120.0	134.0	146.8	5.0	192.3	78.5	2	2
15KPA130(C)A	130.0	145.2	159.0	5.0	208.3	72.5	2	2
15KPA150(C)A	150.0	167.6	183.5	5.0	241.9	62.4	2	2
15KPA160(C)A	160.0	178.7	195.7	5.0	258.6	58.4	2	2
15KPA170(C)A	170.0	189.9	207.9	5.0	272.7	55.4	2	2
15KPA180(C)A	180.0	201.1	220.1	5.0	288.5	52.3	2	2
15KPA200(C)A	200.0	223.4	244.6	5.0	319.1	47.3	2	2
15KPA220(C)A	220.0	245.7	269.1	5.0	428.6	35.2	2	2
15KPA240(C)A	240.0	268.1	293.5	5.0	384.6	39.3	2	2
15KPA260(C)A	260.0	290.4	318.0	5.0	416.7	36.2	2	2
15KPA280(C)A	280.0	312.8	342.4	5.0	454.5	33.2	2	2

- Note 1. V<sub>BR</sub> measured after I<sub>T</sub> applied for 300us, I<sub>T</sub>=square wave pulse or equivalent  
 2. Surge current waveform per Fig. 3 and derated per Fig. 2  
 3. For bi-directional types having V<sub>RWM</sub> of 10 volts and less, the I<sub>R</sub> limit is doubled  
 4. Suffix 'C' denotes bi-directional devices. Suffix 'A' denotes 5% tolerance devices, no suffix denotes 10% tolerance devices.  
 5. All terms and symbols are consistent with ANS/IEEE C62.35

## RATINGS AND CHARACTERISTIC CURVES

Fig. A - Transients of several thousand volts can be clamped to a safe level by the TVS

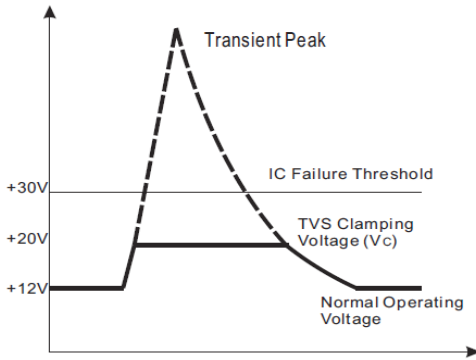


Fig. B - Transient current is diverted to ground thru TVS; the voltage seen by the protected load is limited to the clamping voltage level

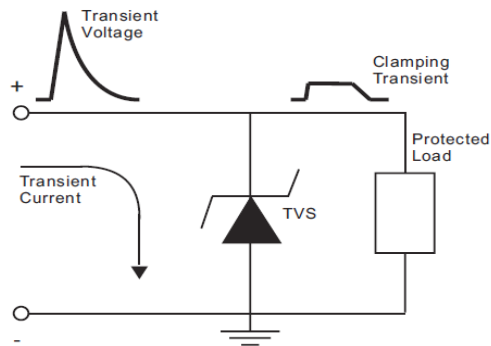


Fig.1 - Peak Pulse Power Rating Curve

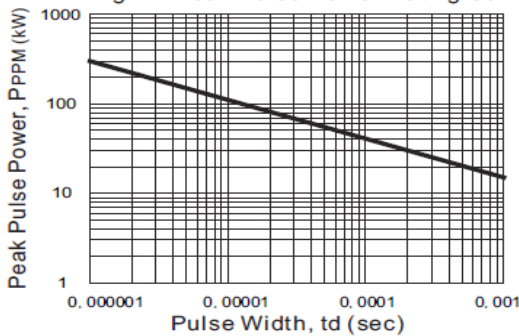


Fig.2 - Pulse Derating Curve

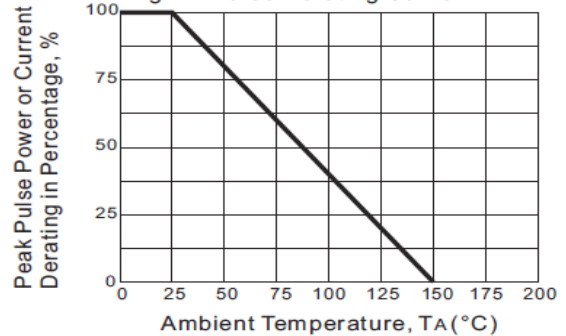


Fig.3 - Pulse Waveform

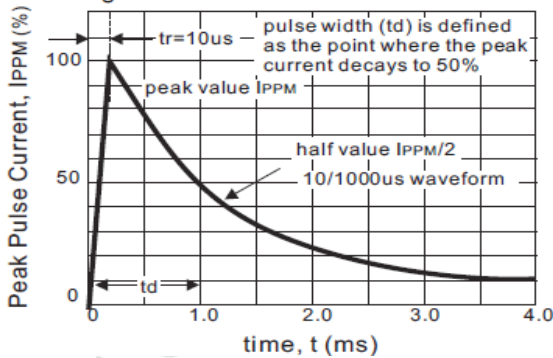


Fig.4 - Typical Junction Capacitance

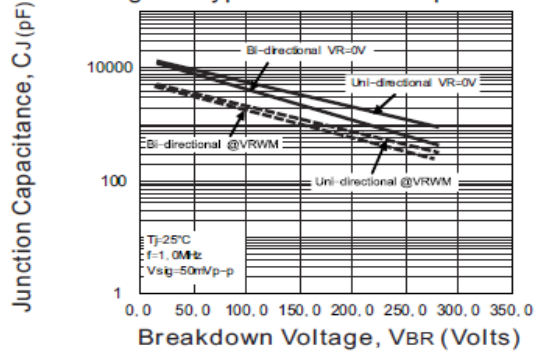


Fig.5 - Steady State Power Derating Curve

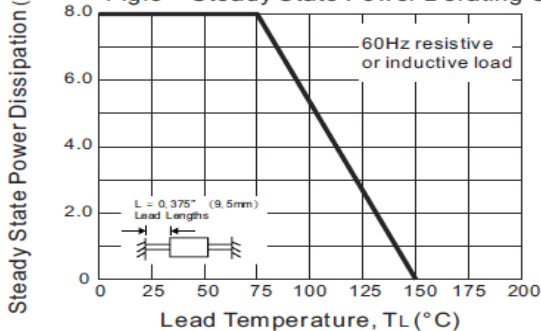


Fig.6 - Maximum Non-Repetitive Forward Surge Current

