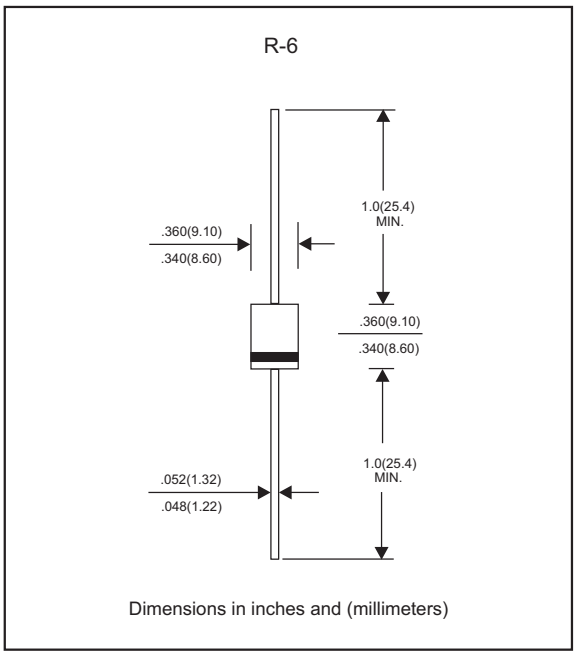
15KPA SERIES

15000W Axial Leaded Transient Voltage Suppressors - 17V-280V

Features

- Axial lead type devices for through hole design.
- 15kW peak pulse power capability with a 10/1000us waveform, repetition rate (duty cycle): 0.01%.
- Excellent clamping capability.
- Repetition rated(utycycle):0.05%.
- Low incremental surge resistance.
- Glass passivated chip junction.
- Lead-free parts meet environmental standards of MIL-STD-19500 /228
- Suffix "-H" indicates Halogen-free part, ex.15KPA17A-H.

Package outline



Mechanical data

- Epoxy : UL94-V0 rated flame retardant
- Case : Molded plastic, R-6
- Lead : Axial leads, solderable per MIL-STD-202, Method 208 guaranteed
- Polarity: Color band denotes cathode end
- Mounting Position : Any

Maximum ratings (AT T_A=25°C unless otherwise noted)

PARAMETER	CONDITIONS	Symbol	VALUE	UNIT
Peak power dissipation	with a 10/1000 us waveform	P_{PPM}	15000	W
Peak pulse current	with a 10/1000 us waveform	I_{PPM}	See table 1	A
Steady state power dissipation	at T_L=75°C	$P_{M(AV)}$	8.0	W
Peak forward surge current	8.3ms single half sine-wave for unidirectional only	I_{FSM}	400	A
Operating junction temperature range		T_J	-55~+150	°C
Storage temperature range		T_{STG}	-55~+150	°C

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Electrical characteristics (at T_A=25°C unless otherwise noted) Table 1

Part No.	Reverse Stand-off Voltage	Breakdown Voltage @I_T		Test Current	Maximum Clamping Voltage @I_{PP}		Maximum Reverse Leakage Current	
	V_{RWM}	$V_{BR\ Min}$	$V_{BR\ Max}$	I_T	V_C@I_{PP}		I_R(uA)	
	Volts	Volts	Volts	mA	Volts	I_{PP}(A)	UNI	BI
15KPA17(C)A	17.0	18.9	20.9	50	29.3	515.4	5000	10000
15KPA18(C)A	18.0	20.0	22.1	50	30.9	488.7	5000	10000
15KPA20(C)A	20.0	22.2	24.5	20	34.3	440.2	1500	3000
15KPA22(C)A	22.0	24.4	26.9	10	37.1	407.0	500	1000
15KPA24(C)A	24.0	26.7	29.5	5.0	40.7	371.0	150	300
15KPA26(C)A	26.0	28.9	31.9	5.0	44.0	343.2	50	100
15KPA28(C)A	28.0	31.1	34.4	5.0	47.5	317.9	25	50
15KPA30(C)A	30.0	33.3	36.8	5.0	50.7	297.8	15	30
15KPA33(C)A	33.0	36.7	40.6	5.0	54.7	276.1	2	2
15KPA36(C)A	36.0	40.0	44.2	5.0	59.8	252.5	2	2
15KPA40(C)A	40.0	44.4	49.1	5.0	65.8	229.5	2	2
15KPA43(C)A	43.0	47.8	52.8	5.0	69.8	216.3	2	2
15KPA45(C)A	45.0	50.0	55.3	5.0	72.8	207.4	2	2
15KPA48(C)A	48.0	53.3	58.9	5.0	77.7	194.3	2	2
15KPA51(C)A	51.0	56.7	62.7	5.0	82.9	182.1	2	2
15KPA54(C)A	54.0	60.0	66.3	5.0	87.7	172.2	2	2
15KPA58(C)A	58.0	64.4	71.2	5.0	93.8	161.0	2	2
15KPA60(C)A	60.0	66.7	73.7	5.0	97.4	155.0	2	2
15KPA64(C)A	64.0	71.1	78.6	5.0	104.2	144.9	2	2
15KPA70(C)A	70.0	77.8	86.0	5.0	113.6	132.9	2	2
15KPA75(C)A	75.0	83.3	92.1	5.0	122.0	123.8	2	2
15KPA78(C)A	78.0	86.7	95.8	5.0	126.1	119.7	2	2
15KPA85(C)A	85.0	94.4	104.0	5.0	137.6	109.7	2	2
15KPA90(C)A	90.0	100.0	111.0	5.0	145.6	103.7	2	2
15KPA100(C)A	100.0	111.0	123.0	5.0	161.3	93.6	2	2
15KPA110(C)A	110.0	122.0	135.0	5.0	178.6	84.5	2	2
15KPA120(C)A	120.0	133.0	147.0	5.0	192.3	78.5	2	2
15KPA130(C)A	130.0	144.0	159.0	5.0	208.3	72.5	2	2
15KPA150(C)A	150.0	167.0	185.0	5.0	241.9	62.4	2	2
15KPA160(C)A	160.0	178.0	197.0	5.0	258.6	58.4	2	2
15KPA170(C)A	170.0	189.0	209.0	5.0	272.7	55.4	2	2
15KPA180(C)A	180.0	201.0	222.0	5.0	288.5	52.3	2	2
15KPA200(C)A	200.0	224.0	247.0	5.0	319.1	47.3	2	2
15KPA220(C)A	220.0	246.0	272.0	5.0	352.5	42.8	2	2
15KPA240(C)A	240.0	268.0	292.0	5.0	384.6	39.3	2	2
15KPA260(C)A	260.0	289.0	317.0	5.0	416.7	36.2	2	2
15KPA280(C)A	280.0	311.0	341.0	5.0	454.5	33.2	2	2

Note 1. V_{BR} measured after I_T applied for 300us, I_T=square wave pulse or equivalent
2. Surge current waveform per Fig. 3 and derated per Fig. 2
3. For bi-directional types having V_{RWM} of 30 volts and less, the I_R 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

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Rating and characteristic curves (15KPA SERIES)

FIG.1:V- I curve characteristics (Uni-directional)

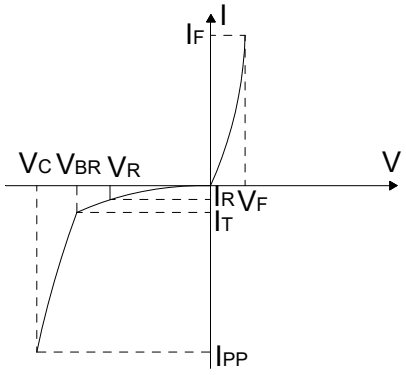


FIG.2:V- I curve characteristics (Bi-directional)

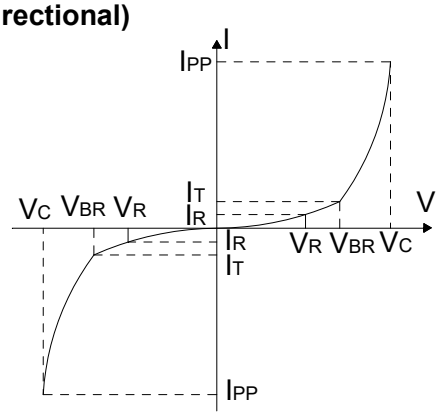


FIG.3: Pulse waveform

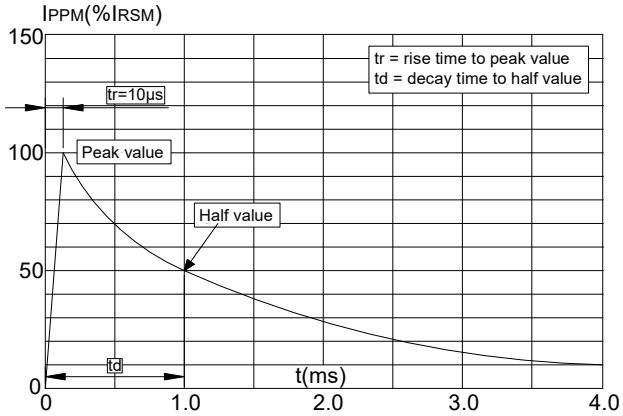


FIG.4: Pulse derating curve

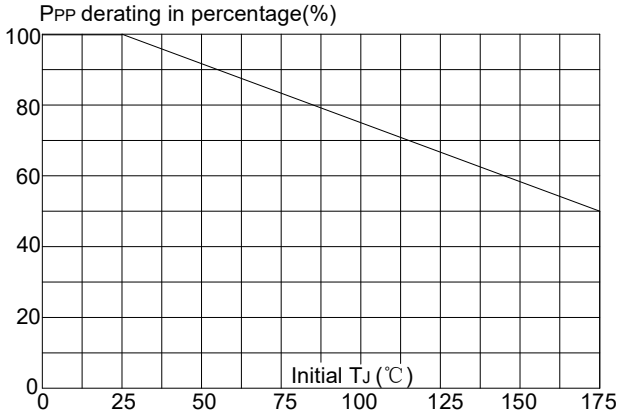
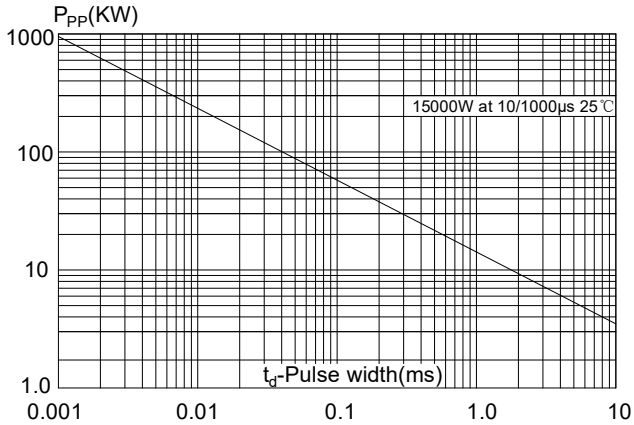


FIG.5:Peak pulse power dissipation vs. pulse width



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Pinning information

Pin	Simplified outline	Symbol
Uni-Directional Pin1 cathode Pin2 anode		
Bi-Directional