

15000W Transient Voltage Suppressors

TVS Diodes - 15000W > 15KP Series



Description

The 15KP series is designed specifically to protect sensitive electronic equipment from voltage transients induced by lightning and other transient voltage events.

Features

- Plastic material has UL flammability classification 94V-O
- Typical IR less than 1uA above 12V
- Fast response time
- Glass passivated junction
- Low zener impedance • Excellent clamping capability
- Low inductance



Package: P600

Applications

- I/O interface
- AC/DC power supply
- Low frequency signal transmission line.

Electrical Characteristics

Parameter	Symbol	Value	Unit
Peak Pulse Power Dissipation at TA=25°C by 10 / 1000µs waveform (Fig.1)(Note 1)	PPPM	15000	W
Steady state power dissipation at TL=75°C (Fig.5)	PM(AV)	8	W
Peak Forward Surge Current, 8.3ms Single Half Sine Wave superimposed on rated load, (JEDEC Method) (Note2, Fig.6)	IFSM	400	A
Operating Junction and Storage Temperature Range	TJ, TSTG	-55 to 175	°C
Typical Thermal Resistance Junction to Lead	RθJL	15	°C/W
Typical Thermal Resistance Junction to Ambient	RθJA	75	°C/W

Notes:

1. Non-repetitive current pulse, per Fig.3 and derated above TA=25°C per Fig. 2.
2. 8.3ms single half sine-wave, or equivalent square wave, duty cycle=4 pulses per minutes maximum.

Electrical Characteristics (TA=25°C)



Part Number		Reverse Stand-Off Voltage	Breakdown Voltage $V_{BR}(V)$ (olts)@IT		Test Current	Maximum Clamping Voltage@IPP	Peak Pulse Current	Reverse Leakage @VRWM	Certification	Delivery Time
Uni-Polar	Bi-polar	VRWM(V)	Min	Max	IT(mA)	VC(V)	IPP(A)	IR(μA)	UL	days
15KP17A	15KP17CA	17.0	18.9	20.9	5	29.3	515.4	5000	√	15days
15KP18A	15KP18CA	18.0	20.0	22.1	5	30.9	488.7	5000	√	15days
15KP20A	15KP20CA	20.0	22.2	24.5	5	34.3	440.2	1500	√	15days
15KP22A	15KP22CA	22.0	24.0	26.9	5	37.1	407.0	500	√	15days
15KP24A	15KP24CA	24.0	26.7	29.5	5	40.7	371.0	150	√	15days
15KP26A	15KP26CA	26.0	28.9	31.9	5	44.0	343.2	50	√	15days
15KP28A	15KP28CA	28.0	31.1	34.4	5	47.5	317.9	25	√	15days
15KP30A	15KP30CA	30.0	33.3	36.8	5	50.7	297.8	15	√	15days
15KP33A	15KP33CA	33.0	36.7	40.6	5	54.7	276.1	2	√	15days
15KP36A	15KP36CA	36.0	40.0	44.2	5	59.8	252.5	2	√	15days
15KP40A	15KP40CA	40.0	44.4	49.1	5	65.8	229.5	2	√	15days
15KP43A	15KP43CA	43.0	47.8	52.8	5	69.8	216.3	2	√	15days
15KP45A	15KP45CA	45.0	50.0	55.3	5	72.8	207.4	2	√	15days
15KP48A	15KP48CA	48.0	53.3	58.9	5	77.7	194.3	2	√	15days
15KP51A	15KP51CA	51.0	56.7	62.7	5	82.9	182.1	2	√	15days
15KP54A	15KP54CA	54.0	60.0	66.3	5	87.7	172.2	2	√	15days
15KP58A	15KP58CA	58.0	64.4	71.2	5	93.8	161.0	2	√	15days
15KP60A	15KP60CA	60.0	66.7	73.7	5	97.4	155.0	2	√	15days
15KP64A	15KP64CA	64.0	71.1	78.6	5	104.2	144.9	2	√	15days
15KP70A	15KP70CA	70.0	77.8	86.0	5	113.6	132.9	2	√	15days
15KP75A	15KP75CA	75.0	83.3	92.1	5	122.0	123.8	2	√	15days
15KP78A	15KP78CA	78.0	86.7	95.8	5	126.1	119.7	2	√	15days
15KP85A	15KP85CA	85.0	94.4	104	5	137.6	109.7	2	√	15days
15KP90A	15KP90CA	90.0	100	111	5	145.6	103.7	2	√	15days

Electrical Characteristics (TA=25°C)

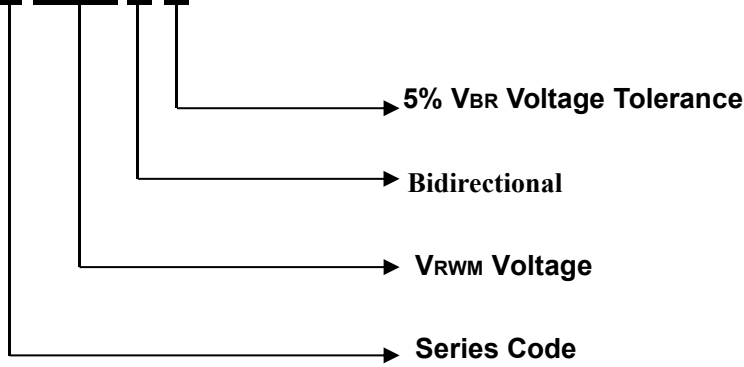


Part Number		Reverse Stand-Off Voltage	Breakdown Voltage V_{BR} (Volts)@ I_T		Test Current	Maximum Clamping Voltage@ I_{PP}	Peak Pulse Current	Reverse Leakage @ V_{RWM}	Certification	Delivery Time
Uni-Polar	Bi-polar	$V_{RWM}(V)$	Min	Max	$I_T(mA)$	$V_C(V)$	$I_{PP}(A)$	$IR(\mu A)$	UL	days
15KP100A	15KP100CA	100.0	110	123	5	161.3	93.6	2	√	15days
15KP110A	15KP110CA	110.0	122	135	5	178.6	84.5	2	√	15days
15KP120A	15KP120CA	120.0	133	147	5	192.3	78.5	2	√	15days
15KP130A	15KP130CA	130.0	144	159	5	208.3	72.5	2	√	15days
15KP150A	15KP150CA	150.0	167	185	5	241.9	62.4	2	√	15days
15KP160A	15KP160CA	160.0	178	197	5	258.6	58.4	2	√	15days
15KP170A	15KP170CA	170.0	189	209	5	272.7	55.4	2	√	15days
15KP180A	15KP180CA	180.0	200	221	5	288.5	52.3	2	√	15days
15KP200A	15KP200CA	200.0	222	246	5	319.1	47.3	2	√	15days
15KP220A	15KP220CA	220.0	244	270	5	352.5	42.8	2	√	15days
15KP240A	15KP240CA	240.0	268	292	5	384.6	39.3	2	√	15days
15KP260A	15KP260CA	260.0	289	317	5	416.7	36.2	2	√	15days
15KP280A	15KP280CA	280.0	311	341	5	454.5	33.2	2	√	15days


Description of Part Number



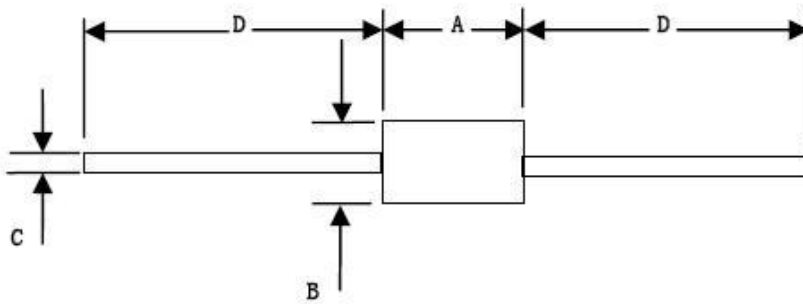
15KP XXX C A



Packing Options

Package Type	Description	Packing Quantity	Industry Standard
 P600	Tape and Reel Pack	300PCS	EIA STD RS-296

Dimensions - P600



Dimension	Inches		Millimeters	
	Min	Max	Min	Max
A	0.34	0.36	8.60	9.10
B	0.34	0.36	8.60	9.10
C	0.048	0.052	1.22	1.32
D	1.000		25.4	

Ratings and Characteristics Curve

Figure 1. Peak Pulse Power Rating Curve

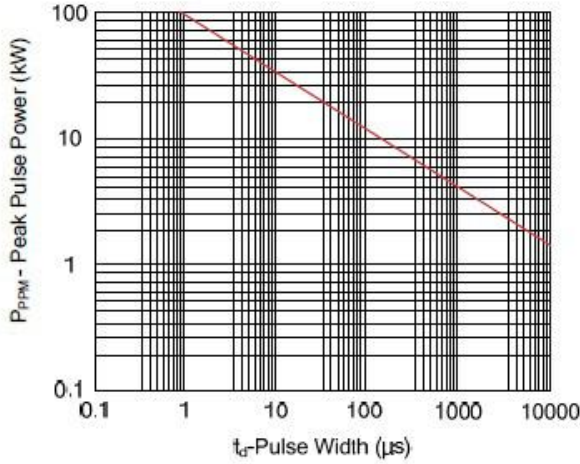


Figure 2. Pulse Derating Curve

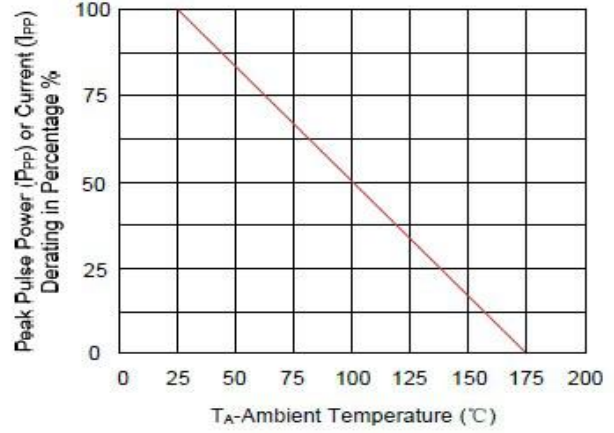


Figure 3. Pulse Waveform

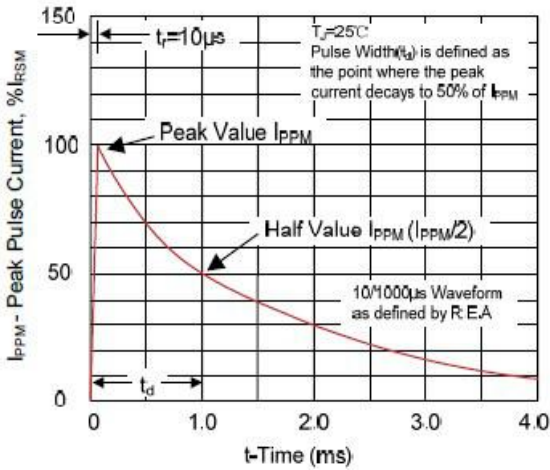


Figure 4. Typical Junction Capacitance

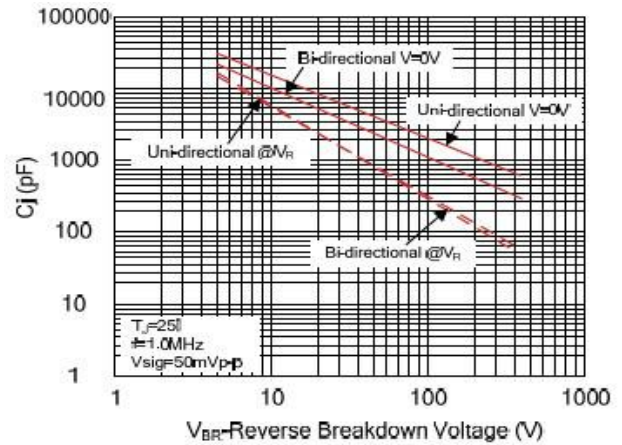


Figure 5. Steady State Power Dissipation Derating Curve

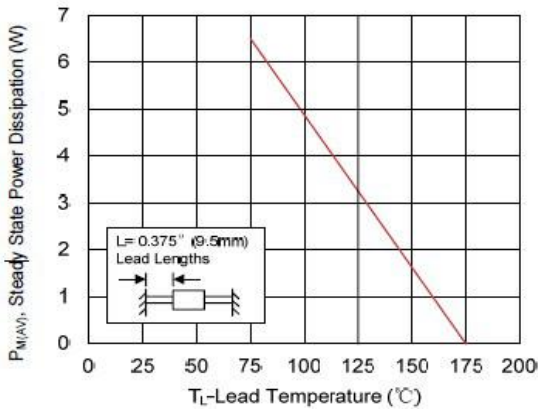


Figure 6. Maximum Non-Repetitive Forward Surge Current Uni-Directional Only

