

30000W Transient Voltage Suppressors

TVS Diodes - 30000W > 30KPA Series



Description

The 30KPA 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	30000	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

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 $V_{BR}(V)$		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	$I_T(mA)$	$V_C(V)$	$I_{PP}(A)$	$I_R(\mu A)$	UL	days
30KPA28A	30KPA28CA	28.0	31.28	34.57	50	50.0	606.0	5000	-	15days
30KPA30A	30KPA30CA	30	33.51	37.04	50	55.2	548.9	5000	-	15days
30KPA33A	30KPA33CA	33	36.90	40.78	50	58.5	517.9	5000	-	15days
30KPA36A	30KPA36CA	36	40.20	44.43	50	61.8	490.3	5000	-	15days
30KPA39A	30KPA39CA	39	43.60	48.19	20	67.2	150.9	2000	-	15days
30KPA42A	30KPA42CA	42	46.90	51.84	10	72.0	420.8	1000	-	15days
30KPA43A	30KPA43CA	43	48.00	53.05	10	73.0	515.1	1000	-	15days
30KPA45A	30KPA45CA	45	50.30	55.59	5	77.4	391.5	250	-	15days
30KPA48A	30KPA48CA	48	53.60	59.24	5	81.6	371.3	150	-	15days
30KPA51A	30KPA51CA	51	47.00	63.00	5	86.4	350.7	50	-	15days
30KPA54A	30KPA54CA	54	60.30	66.65	5	91.4	331.5	20	-	15days
30KPA58A	30KPA58CA	58	64.80	71.62	5	92.4	327.9	20	-	15days
30KPA60A	30KPA60CA	60	67.00	74.05	5	102.0	297.1	15	-	15days
30KPA64A	30KPA64CA	64	71.50	79.03	5	104.0	291.3	10	-	15days
30KPA66A	30KPA66CA	67	73.70	81.46	5	107.0	283.2	2	-	15days
30KPA70A	30KPA70CA	70	78.20	86.43	5	109.0	278.0	2	-	15days
30KPA71A	30KPA71CA	71	79.30	87.65	5	111.5	271.1	2	-	15days
30KPA72A	30KPA72CA	72	80.40	88.86	5	114.0	265.8	2	-	15days
30KPA75A	30KPA75CA	75	83.80	92.62	5	119.4	253.8	2	-	15days
30KPA78A	30KPA78CA	78	87.1	96.27	5	129.0	234.9	2	-	15days
30KPA84A	30KPA84CA	84	93.80	103.67	5	139.2	217.7	2	-	15days
30KPA90A	30KPA90CA	90	100.5	111.08	5	146.4	207.0	2	-	15days
30KPA96A	30KPA96CA	96	107.2	118.48	5	156.0	194.2	2	-	15days
30KPA102A	30KPA102CA	102	113.9	125.89	5	165.6	183.0	2	-	15days

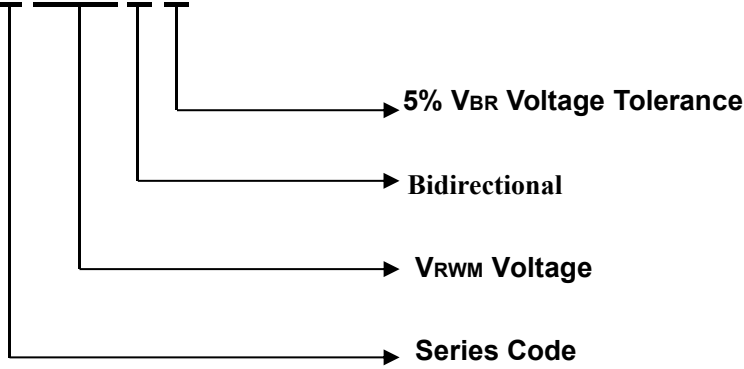
Electrical Characteristics (TA=25°C)




Part Number		Reverse Stand-Off Voltage	Breakdown Voltage $V_{BR}(V)$ @IT		Test Current	Maximum Clamping Voltage @Ipp	Peak Pulse Current	Reverse Leakage @ V_{RWM}	Certification	Delivery Time
Uni-Polar	Bi-polar	$V_{RWM}(V)$	Min	Max	$I_T(mA)$	$V_C(V)$	$I_{PP}(A)$	$I_R(\mu A)$	UL	days
30KPA108A	30KPA108CA	108	120.6	133.29	5	175.2	172.9	2	-	15days
30KPA120A	30KPA120CA	120	134.0	148.11	5	194.4	155.9	2	-	15days
30KPA132A	30KPA132CA	132	147.4	162.92	5	213.0	142.3	2	-	15days
30KPA144A	30KPA144CA	144	160.8	177.73	5	223.2	135.8	2	-	15days
30KPA150A	30KPA150CA	150	167.6	185.24	5	233.4	129.8	2	-	15days
30KPA156A	30KPA156CA	156	174.3	192.65	5	245.0	123.7	2	-	15days
30KPA160A	30KPA160CA	160	178.7	197.51	5	252.6	120.0	2	-	15days
30KPA168A	30KPA168CA	168	187.7	207.46	5	272.4	111.2	2	-	15days
30KPA170A	30KPA170CA	170	189.9	209.89	5	275.0	110.2	2	-	15days
30KPA180A	30KPA180CA	180	201.1	222.27	5	290.4	104.3	2	-	15days
30KPA198A	30KPA198CA	198	221.2	244.48	5	319.8	94.7	2	-	15days
30KPA216A	30KPA216CA	216	241.3	266.70	5	348.6	86.9	2	-	15days
30KPA240A	30KPA240CA	240	268.1	296.32	5	387.0	78.3	2	-	15days
30KPA258A	30KPA258CA	258	288.2	318.54	5	416.4	72.8	2	-	15days
30KPA260A	30KPA260CA	260	290.4	320.97	5	416.0	72.8	2	-	15days
30KPA270A	30KPA270CA	270	301.6	333.35	5	436.2	69.5	2	-	15days
30KPA280A	30KPA280CA	280	312.8	345.73	5	464.0	65.3	2	-	15days
30KPA288A	30KPA288CA	288	321.7	355.56	5	469.9	64.5	2	-	15days

Description of Part Number

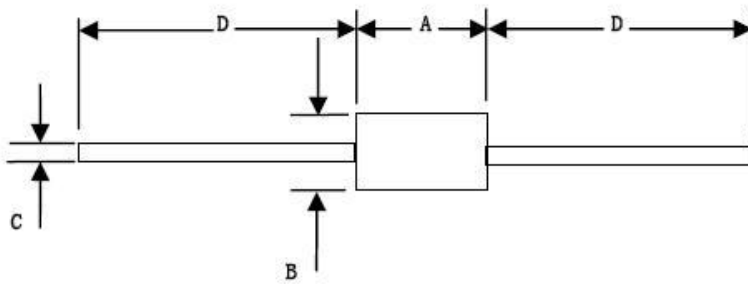
30KPA XXX C A



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

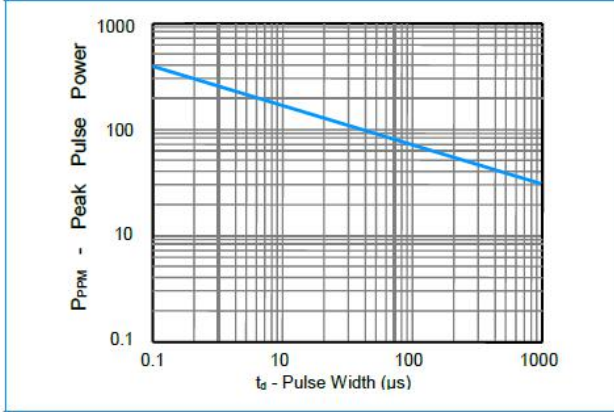


Figure 2 - Pulse Derating Curve

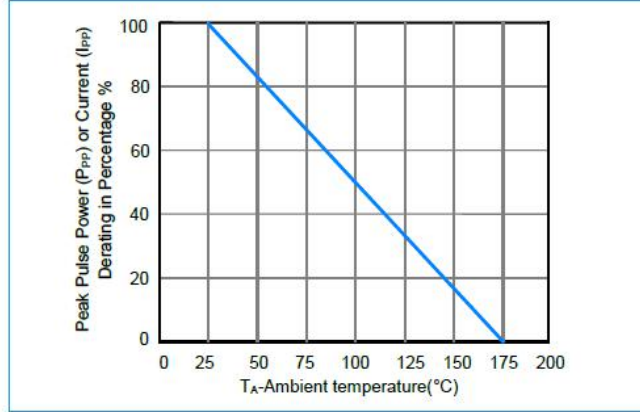


Figure 3 - Pulse Waveform

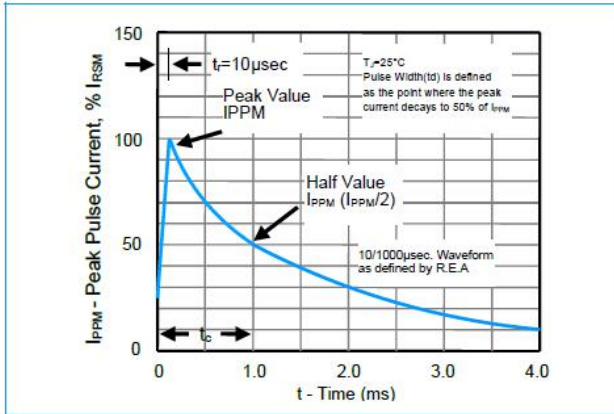


Figure 4 - Typical Junction Capacitance

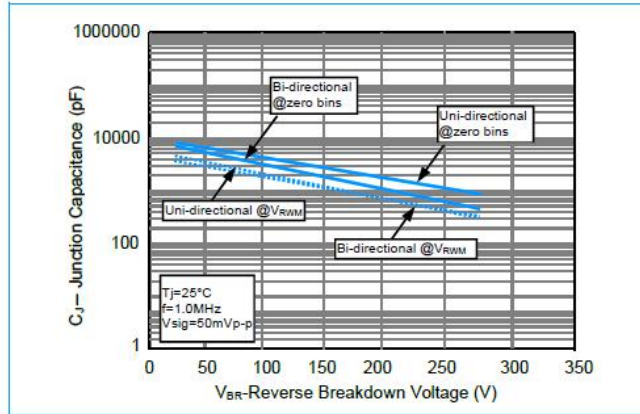


Figure 5 - Steady State Power Derating Curve

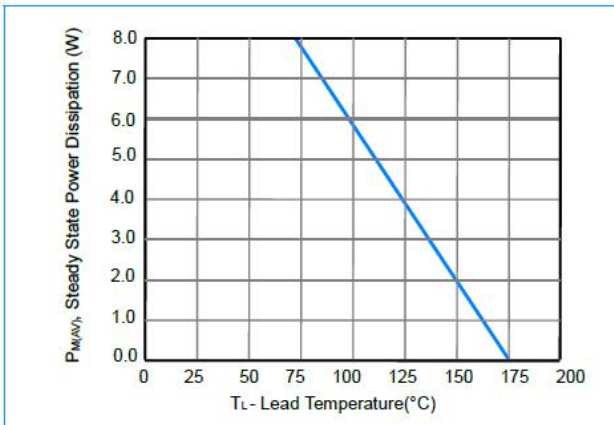


Figure 6 - Maximum Non-Repetitive Surge Current

