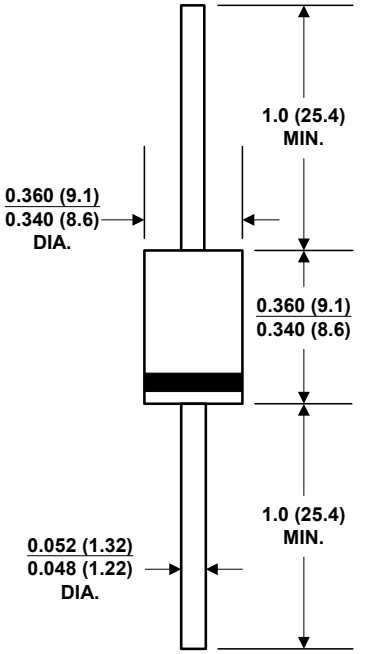
30KPA SERIES

GLASS PASSIVATED JUNCTION TRANSIENT VOLTAGE SUPPRESSOR
STAND-OFF VOLTAGE-28 TO 288 Volts
30000 Watt Peak Pulse Power

Case Style P600



Dimensions in inches and(millimeters)

FEATURES

◎ Halogen-Free
◎ RoHS compliant
◎ Typical maximum temperature coefficient $\triangle V_{BR}$=0.1%xV_{BR}@25℃x$\triangle$T
◎ Plastic package
◎ Glass passivated junction
◎ 30000W Peak Pulse Power capability on 10/1000μs waveform
◎ Excellent clamping capability
◎ Repetition rate (duty cycle):0.05%
◎ Low incremental surge resistance
◎ Fast response time: typically less than 1.0ps from 0 Volts to BV
◎ High temperature soldering guaranteed: 260°C/40 seconds/.375", (9.5mm) lead length, 5lbs., (2.3kg) tension
◎ Matte Tin Lead-free plated

MECHANICAL DATA

Case: Molded plastic over glass passivated junction
Terminal: Solderable per MIL-STD-750, Method 2026
Polarity: Color band denotes positive end (cathode) except Bipolar
Mounting Position: Any
Weight: 0.07ounce, 2.3gram

MAXIMUM RATINGS AND CHARACTERISTICS

Ratings at 25℃ ambient temperature unless otherwise specified.

RATING	SYMBOL	VALUE	UNITS
Peak Pulse Power Dissipation on 10/1000μs waveform	P_{PPM}	Minimum 30000	Watts
Peak Pulse Current of on 10/1000μs waveform	I_{PPM}	SEE TABLE 1	Amps
Steady State Power Dissipation at T_L = 75℃ , Lead lengths.375",(9.5mm) (Note 2)	$P_{M(AV)}$	8	Watts
Peak Forward Surge Current,8.3ms Single Half Sine-Wave Superimposed on Rated Load,(JEDEC Method) (Note 3)	I_{FSM}	400	Amps
Operating junction and Storage Temperature Range	T_J , T_{STG}	-55 to + 175	℃

Notes :
1.Non-repetitive current pulse , per Fig. 3 and derated above T_A = 25℃ per Fig. 2 .
2.Mounted on Copper Pad area of 0.8×0.8" (20×20mm) per Fig. 5.
3.8.3ms single half sine-wave , or equivalent square wave, Duty cycle = 4 pulses per minutes maximum.

30KPA SERIES

STAND-OFF VOLTAGE-28 TO 288 Volts

30000 Watt Peak Pulse Power

30KPA PART NUMBER		REVERSE STAND- OFF VOLTAGE V_{RWM}(V)	BREAKDOWN VOLTAGE V_{BR}(V) MIN. @I_T	TEST CURRENT I_T (mA)	PEAK PULSE CURRENT Ipp (A)	REVERSE LEAKAGE @ VRWM IR(μA)	MAXIMUN CLAMPING VOLTAGE @I_{PP} V_C (V)
UNI-POLAR	BI-POLAR						
30KPA28A	30KPA28CA	28	31.28	50	606.0	5000	50.0
30KPA30A	30KPA30CA	30	33.51	50	548.9	5000	55.2
30KPA33A	30KPA33CA	33	36.9	50	517.9	5000	58.5
30KPA36A	30KPA36CA	36	40.2	50	490.3	5000	61.8
30KPA39A	30KPA39CA	39	43.6	20	450.9	2000	67.2
30KPA42A	30KPA42CA	42	46.9	10	420.8	1000	72.0
30KPA43A	30KPA43CA	43	48.0	10	415.1	1000	73.0
30KPA45A	30KPA45CA	45	50.3	5	391.5	250	77.4
30KPA48A	30KPA48CA	48	53.6	5	371.3	150	81.6
30KPA51A	30KPA51CA	51	57.0	5	350.7	50	86.4
30KPA54A	30KPA54CA	54	60.3	5	331.5	20	91.4
30KPA58A	30KPA58CA	58	64.8	5	327.9	20	92.4
30KPA60A	30KPA60CA	60	67.0	5	297.1	15	102.0
30KPA64A	30KPA64CA	64	71.5	5	291.3	10	104.0
30KPA66A	30KPA66CA	66	73.7	5	283.2	2	107.0
30KPA70A	30KPA70CA	70	78.2	5	278.0	2	109.0
30KPA71A	30KPA71CA	71	79.3	5	271.7	2	111.5
30KPA72A	30KPA72CA	72	80.4	5	265.8	2	114.0
30KPA75A	30KPA75CA	75	83.8	5	253.8	2	119.4
30KPA78A	30KPA78CA	78	87.1	5	234.9	2	129.0
30KPA84A	30KPA84CA	84	93.8	5	217.7	2	139.2
30KPA90A	30KPA90CA	90	100.5	5	207.0	2	146.4
30KPA96A	30KPA96CA	96	107.2	5	194.2	2	156.0
30KPA102A	30KPA102CA	102	113.9	5	183.0	2	165.6
30KPA108A	30KPA108CA	108	120.6	5	172.9	2	175.2
30KPA120A	30KPA120CA	120	134.0	5	155.9	2	194.4
30KPA132A	30KPA132CA	132	147.4	5	142.3	2	213.0
30KPA144A	30KPA144CA	144	160.8	5	135.8	2	223.2
30KPA150A	30KPA150CA	150	167.6	5	129.8	2	233.4
30KPA156A	30KPA156CA	156	174.3	5	123.7	2	245.0
30KPA160A	30KPA160CA	160	178.7	5	120.0	2	252.6
30KPA168A	30KPA168CA	168	187.7	5	111.2	2	272.4
30KPA170A	30KPA170CA	170	189.9	5	110.2	2	275.0
30KPA180A	30KPA180CA	180	201.1	5	104.3	2	290.4
30KPA198A	30KPA198CA	198	221.2	5	94.7	2	319.8
30KPA216A	30KPA216CA	216	241.3	5	86.9	2	348.6
30KPA240A	30KPA240CA	240	268.1	5	78.3	2	387.0
30KPA258A	30KPA258CA	258	288.2	5	72.8	2	416.4
30KPA260A	30KPA260CA	260	290.4	5	72.8	2	416.0
30KPA270A	30KPA270CA	270	301.6	5	69.5	2	436.2
30KPA280A	30KPA280CA	280	312.8	5	65.3	2	464.0
30KPA288A	30KPA288CA	288	321.7	5	64.5	2	469.9

For bidirectional type having Vrwm of 60 volts and less, the IR limit is double.

For parts without A , the V_{BR} is ± 10%

VC is 10% higher than with A Parts.

RATINGS AND CHARACTERISTIC CURVES

Ratings and Characteristic Curves (T_A=25℃ unless otherwise noted)

Fig. 1 - Peak Pulse Power Rating Curve

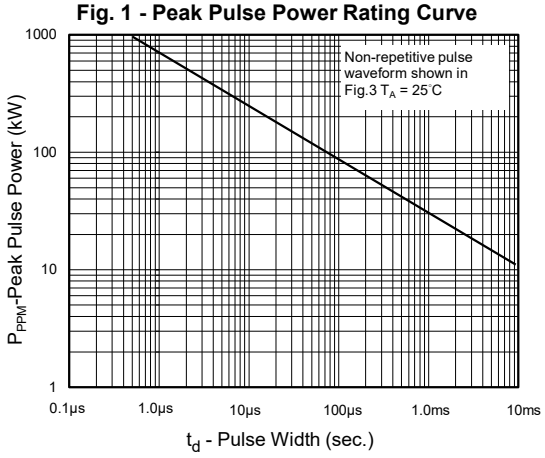


Fig.2 - Pulse Derating Curve

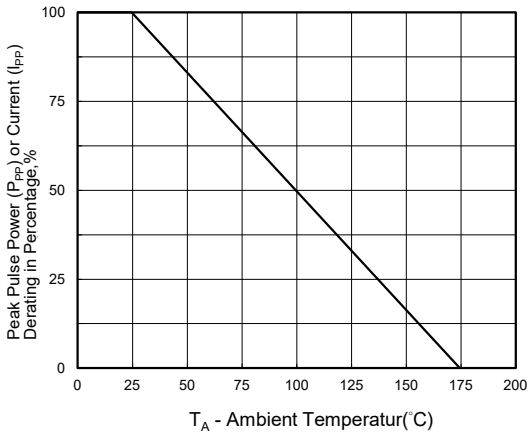


Fig.3 - Test Pulse Waveform

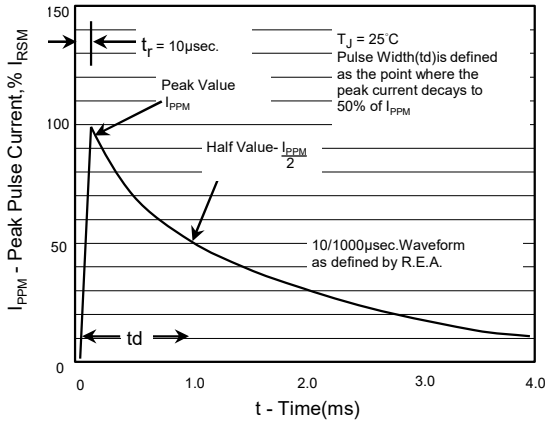


Fig. 4 - Typical Junction Capacitance

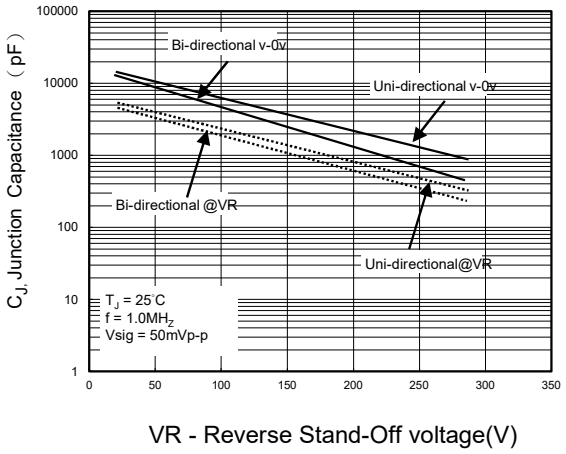


Fig. 5 - Steady State Power Derating Curve

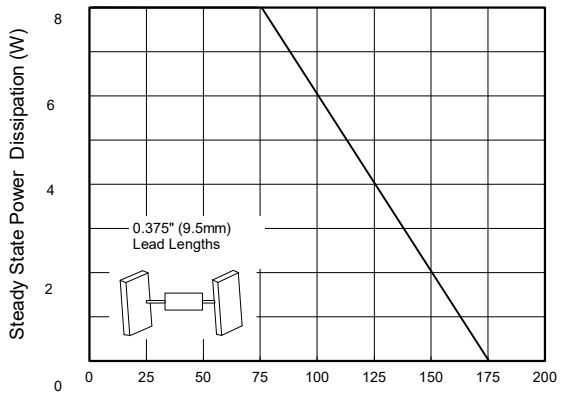
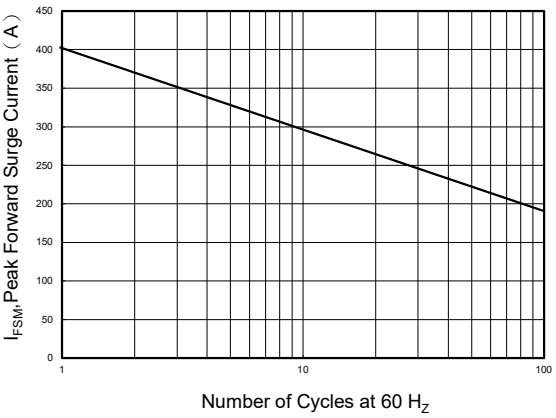


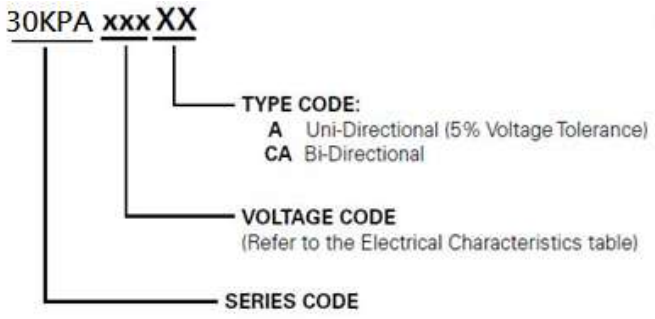
Fig.6 - Maximum Non-repetitive Forward Surge current



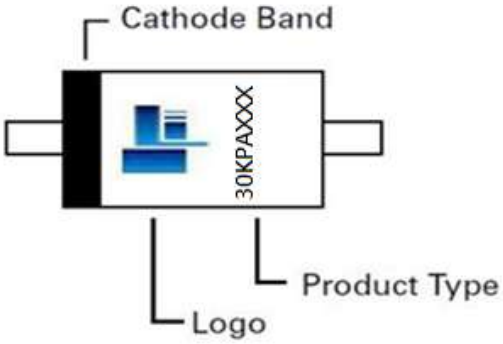
30KPA SERIES

GLASS PASSIVATED JUNCTION TRANSIENT VOLTAGE SUPPRESSOR

Part Numbering System



Part Marking System



Packaging

Part number	Component Package	Quantity	Packaging Option	Packaging Specification
30KPAxxxXX	P-600	750	Tape & Reel	EIA STD RS-296E
30KPAxxxXX	P-600	300	Tape & Box	Lucky Forests Packing Spec. DM-024
30KPAxxxXX	P-600	200	Bulk	Lucky Forests Packing Spec. DM-024