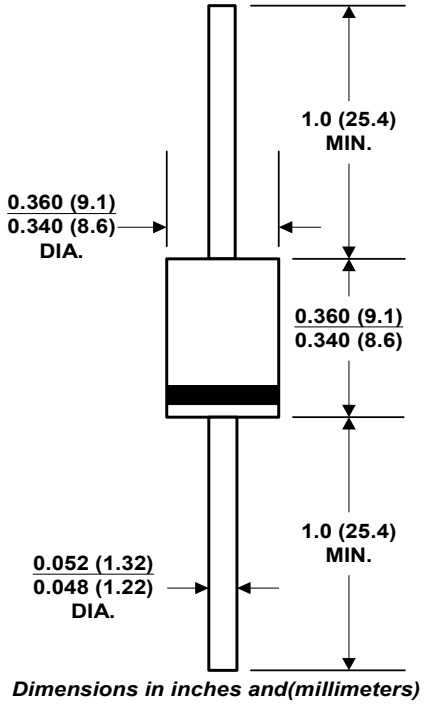
5KP SERIES

GLASS PASSIVATED JUNCTION TRANSIENT VOLTAGE SUPPRESSOR
STAND-OFF VOLTAGE - 5.0 TO 250 Volts
5000 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 chip junction
- 5000W Peak Pulse Power capability on 10/1000 μs waveform
- Excellent clamping capability
- Pepetition 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, 2.1gram

MAXIMUM RATINGS AND CHARACTERISTICS

Ratings at 25℃ ambient temperature unless otherwise specified.

RATING	SYMBOL	VALUE	UNITS
Peak Pulse Power Dissipation on 10/1000 μs waveform (Note 1,FIG.1)	P_{PPM}	Minimum 5000	Watts
Peak Pulse Current of on 10/1000 μs waveform (Note 1,FIG.3)	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.

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GLASS PASSIVATED JUNCTION TRANSIENT VOLTAGE SUPPRESSOR
STAND-OFF VOLTAGE - 5.0 TO 250 Volts
5000 Watt Peak Pulse Power

5KP PART NUMBER		REVERSE STAND- OFF VOLTAGE V_{RWM}(V)	BREAKDOWN VOLTAGE V_{BR}(V) @I_T		TEST CURRENT I_T (mA)	MAXIMUN CLAMPING VOLTAGE @I_{PP} V_C (V)	PEAK PULSE CURRENT Ipp (A)	REVERSE LEAKAGE @ V_{RWM} I_R(μ A)
UNI-POLAR	BI-POLAR		MIN	MAX				
5KP5.0A	5KP5.0CA	5.0	6.40	7.00	50	9.2	554.3	5000
5KP6.0A	5KP6.0CA	6.0	6.67	7.37	50	10.3	495.1	5000
5KP6.5A	5KP6.5CA	6.5	7.22	7.98	50	11.2	455.4	2000
5KP7.0A	5KP7.0CA	7.0	7.78	8.60	50	12.0	425.0	1000
5KP7.5A	5KP7.5CA	7.5	8.33	9.21	5	12.9	395.3	250
5KP8.0A	5KP8.0CA	8.0	8.89	9.83	5	13.6	375.0	150
5KP8.5A	5KP8.5CA	8.5	9.44	10.40	5	14.4	354.2	50
5KP9.0A	5KP9.0CA	9.0	10.00	11.10	5	15.4	331.2	20
5KP10A	5KP10CA	10.0	11.10	12.30	5	17.0	300.0	15
5KP11A	5KP11CA	11.0	12.20	13.50	5	18.2	280.2	2
5KP12A	5KP12CA	12.0	13.30	14.70	5	19.9	256.3	2
5KP13A	5KP13CA	13.0	14.40	15.90	5	21.5	237.2	2
5KP14A	5KP14CA	14.0	15.60	17.20	5	23.2	219.8	2
5KP15A	5KP15CA	15.0	16.70	18.50	5	24.4	209.0	2
5KP16A	5KP16CA	16.0	17.80	19.70	5	26.0	196.2	2
5KP17A	5KP17CA	17.0	18.90	20.90	5	27.6	184.8	2
5KP18A	5KP18CA	18.0	20.00	22.10	5	29.2	174.7	2
5KP20A	5KP20CA	20.0	22.20	24.50	5	32.4	157.4	2
5KP22A	5KP22CA	22.0	24.00	26.90	5	35.5	143.7	2
5KP24A	5KP24CA	24.0	26.70	29.50	5	38.9	131.1	2
5KP26A	5KP26CA	26.0	28.90	31.90	5	42.1	121.1	2
5KP28A	5KP28CA	28.0	31.10	34.40	5	45.4	112.3	2
5KP30A	5KP30CA	30.0	33.30	36.80	5	48.4	105.4	2
5KP33A	5KP33CA	33	36.7	40.6	5	53.3	95.7	2
5KP36A	5KP36CA	36	40.0	44.2	5	58.1	87.8	2
5KP40A	5KP40CA	40	44.4	49.1	5	64.5	79.1	2
5KP43A	5KP43CA	43	47.8	52.8	5	69.4	73.5	2
5KP45A	5KP45CA	45	50.0	55.3	5	72.7	70.2	2
5KP48A	5KP48CA	48	53.3	58.9	5	77.4	65.9	2
5KP51A	5KP51CA	51	56.7	62.7	5	82.4	61.9	2
5KP54A	5KP54CA	54	60.0	66.3	5	87.1	58.6	2
5KP58A	5KP58CA	58	64.4	71.2	5	93.6	54.5	2
5KP60A	5KP60CA	60	66.7	73.7	5	96.8	52.7	2
5KP64A	5KP64CA	64	71.1	78.6	5	103.0	49.5	2
5KP70A	5KP70CA	70	77.8	86.0	5	113.0	45.1	2
5KP75A	5KP75CA	75	83.3	92.1	5	121.0	42.1	2
5KP78A	5KP78CA	78	86.7	95.8	5	126.0	40.5	2
5KP85A	5KP85CA	85	94.4	104.0	5	137.0	37.2	2
5KP90A	5KP90CA	90	100.0	111.0	5	146.0	34.9	2
5KP100A	5KP100CA	100	110.0	123.0	5	162.0	31.5	2
5KP110A	5KP110CA	110	122.0	135.0	5	177.0	28.8	2
5KP120A	5KP120CA	120	133.0	147.0	5	193.0	26.4	2
5KP130A	5KP130CA	130	144.0	159.0	5	209.0	24.4	2
5KP150A	5KP150CA	150	167.0	185.0	5	243.0	21.0	2
5KP160A	5KP160CA	160	178.0	197.0	5	259.0	19.7	2
5KP170A	5KP170CA	170	189.0	209.0	5	275.0	18.5	2
5KP180A	5KP180CA	180	200.0	221.0	5	292.0	17.5	2
5KP190A	5KP190CA	190	211.0	233.0	5	310.0	16.5	2
5KP200A	5KP200CA	200	222.0	246.0	5	329.2	15.5	2
5KP210A	5KP210CA	210	233.0	258.0	5	349.5	14.6	2
5KP220A	5KP220CA	220	244.0	270.0	5	371.1	13.7	2
5KP250A	5KP250CA	250	277.0	306.0	5	425.0	12.0	2

For bidirectional type having Vrwm of 10 volts and less, the IR limit is double.
For parts without A , the V_{BR} is ± 10% , the Vc is 10% higher

RATINGS AND CHARACTERISTIC CURVES

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

Fig. 1 - Peak Pulse Power Rating Curve

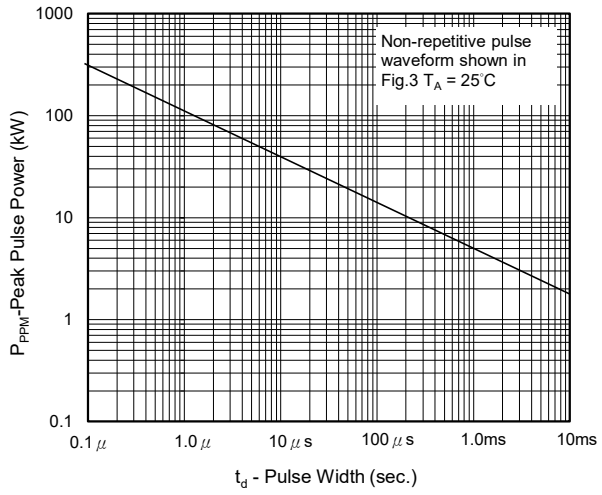


Fig.2 - Pulse Derating Curve

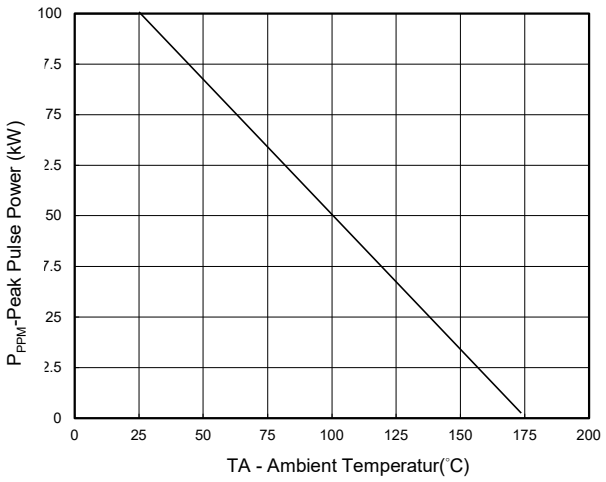


Fig.3 - Pulse Waveform

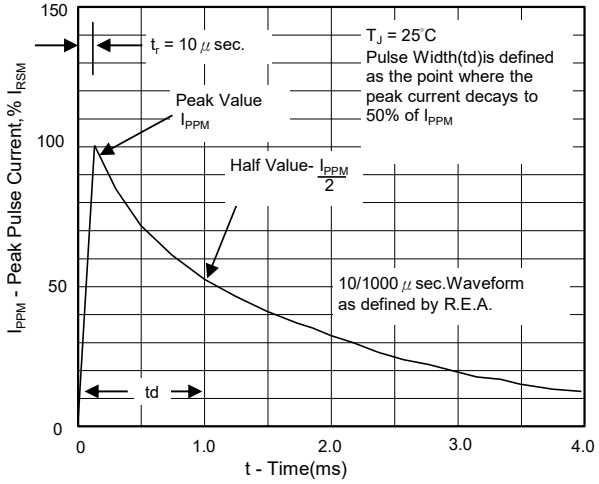


Fig. 4 - Typical Junction Capacitance

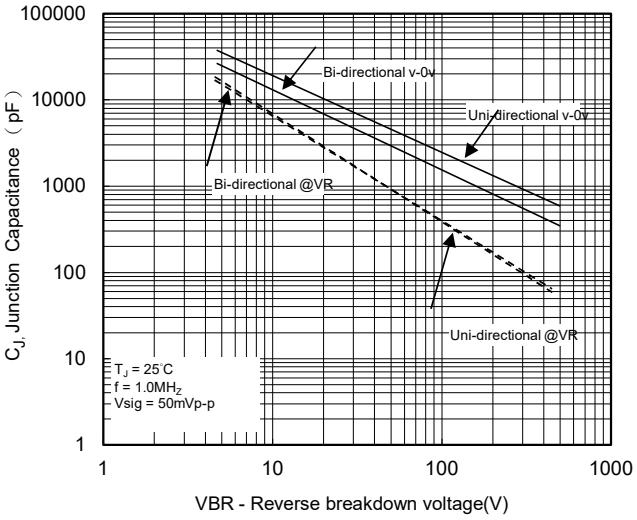


Fig. 5 - Steady State Power Derating Curve

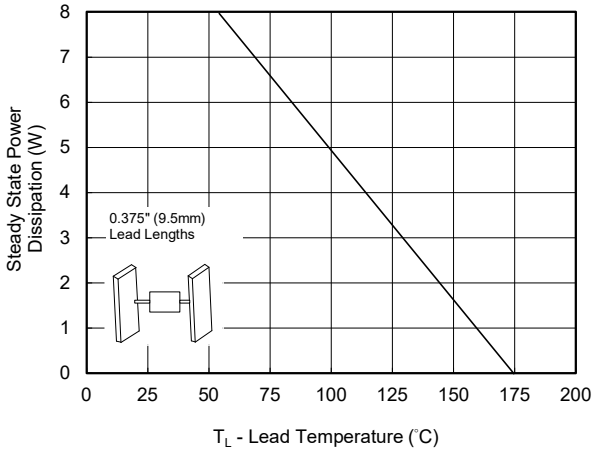
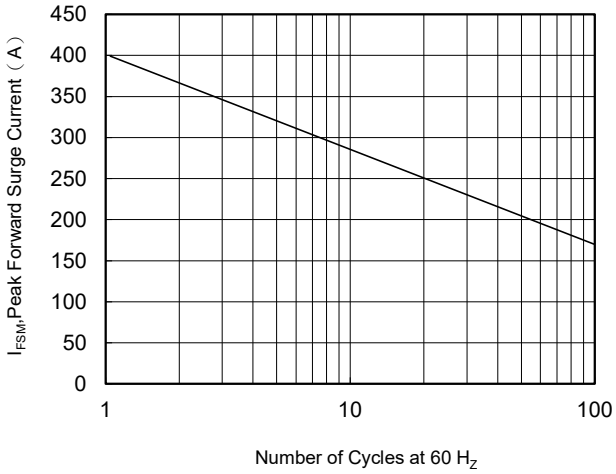


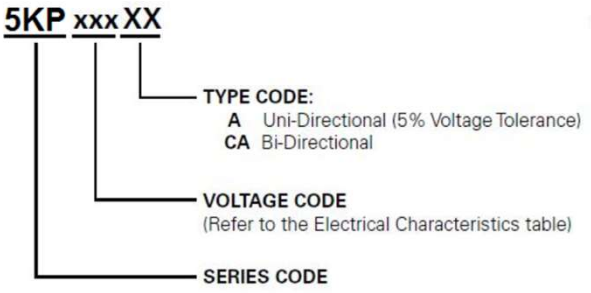
Fig.6 - Maximum Non-repetitive Forward Surge current



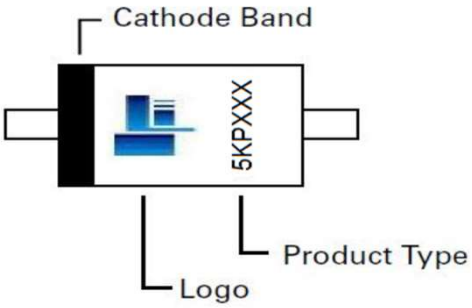
5KP SERIES

GLASS PASSIVATED JUNCTION TRANSIENT VOLTAGE SUPPRESSOR

Part Numbering System



Part Marking System



Packaging

Part number	Component Package	Quantity	Packaging Option	Packaging Specification
5KPxxxXX	P-600	750	Tape & Reel	EIA STD RS-296E
5KPxxxXX	P-600	300	Tape & Box	Lucky Forests Packing Spec. DM-024
5KPxxxXX	P-600	200	Bulk	Lucky Forests Packing Spec. DM-024