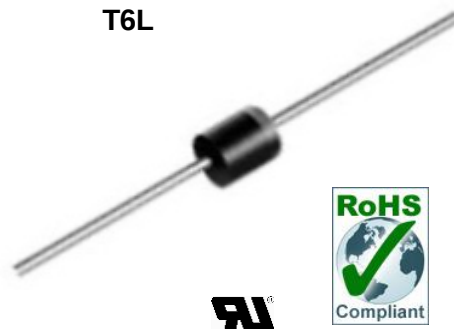


5000W Transient Voltage Suppressor

T6L

Features

- Stand-off voltage from 5.0 to 250 volts
- Glass passivated junction
- 5000W Peak Pulse Power capability on 10/1000 μ s waveform repetition rate(duty cycle): 0.05%
- Fast response time: typically less than 1.0ps from 0v to VBR
- Low incremental surge resistance, excellent clamping capability
- High temperature soldering guaranteed:
265°C/10 seconds, 0.375" (9.5mm) lead length at 5lbs. (2.3kg tension)
- This series is UL recognized under component index. File number E315008
- RoHS Compliant



Mechanical Data

Case:	Molded plastic body over glass passivated junction
Terminals:	Plated axial leads, solderable per MIL-STD-750, Method 2026
Polarity:	Color band denotes the cathode except Bi-directional
Mounting position:	Any
Weight:	0.07 ounce, 2.1 grams

Maximum Ratings ($T_{Ambient}=25^{\circ}\text{C}$ unless noted otherwise)

Symbol	Description	Value	Unit	Conditions
PPPM	Peak Pulse Power Dissipation on 10/1000 μ s test waveform	5000	W	Non-repetitive current pulse , per Fig. 3 and derated above $T_A=25^{\circ}\text{C}$ per Fig.2
P_D	Steady State Power Dissipation on infinite heat sink	8	W	$T_L=75^{\circ}\text{C}$ (Fig. 5)
I_{FSM}	Peak Forward Surge Current	400	A	8.3ms single half sine-wave superimposed on rated load (JEDEC method)
V_F	Maximum Instantaneous Forward Voltage at 100A for Unidirectional only	3.5/5.0	V	$V_F<3.5\text{V}$ for devices of $V_{BR}\leq 200\text{V}$ and $V_F<5.0\text{V}$ for devices of $V_{BR}\geq 201\text{V}$.
RθJA	Typical Thermal Resistance Junction to Ambient	40	$^{\circ}\text{C/W}$	
RθJL	Typical Thermal Resistance Junction to Lead	8	$^{\circ}\text{C/W}$	
T_J,T_{STG}	Operating and Storage Temperature Range	-55 to 175	$^{\circ}\text{C}$	

5000W Transient Voltage Suppressor

5KP5.0A - 250CA

Electrical Characteristics ($T_{Ambient}=25^{\circ}C$ unless noted otherwise)

P/N		Stand-Off Voltage	Breakdown Voltage @ I_T			Max. Clamping Vltg. @ I_{PPM}	Max. Peak Pulse Current	Max. Reverse Leakage Current @ V_{WM}
Uni-Polar	Bi-Polar (Note3)		VBR		I_T (mA)			
		V_{WM} (V)	Min.	Max.		V_C (V)	I_{PPM} (A) (Note1)	I_D (μA) (Note1)
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	5.0	12.9	395.3	250
5KP8.0A	5KP8.0CA	8.0	8.89	9.83	5.0	13.6	375.0	150
5KP8.5A	5KP8.5CA	8.5	9.44	10.4	5.0	14.4	354.2	50
5KP9.0A	5KP9.0CA	9.0	10.0	11.1	5.0	15.4	331.2	20
5KP10A	5KP10CA	10.0	11.1	12.3	5.0	17.0	300.0	15
5KP11A	5KP11CA	11.0	12.2	13.5	5.0	18.2	280.2	2.0
5KP12A	5KP12CA	12.0	13.3	14.7	5.0	19.9	256.3	2.0
5KP13A	5KP13CA	13.0	14.4	15.9	5.0	21.5	237.2	2.0
5KP14A	5KP14CA	14.0	15.6	17.2	5.0	23.2	219.8	2.0
5KP15A	5KP15CA	15.0	16.7	18.5	5.0	24.4	209.0	2.0
5KP16A	5KP16CA	16.0	17.8	19.7	5.0	26.0	196.2	2.0
5KP17A	5KP17CA	17.0	18.9	20.9	5.0	27.6	184.8	2.0
5KP18A	5KP18CA	18.0	20.0	22.1	5.0	29.2	174.7	2.0
5KP20A	5KP20CA	20.0	22.2	24.5	5.0	32.4	157.4	2.0
5KP22A	5KP22CA	22.0	24.4	26.9	5.0	35.5	143.7	2.0
5KP24A	5KP24CA	24.0	26.7	29.5	5.0	38.9	131.1	2.0
5KP26A	5KP26CA	26.0	28.9	31.9	5.0	42.1	121.1	2.0
5KP28A	5KP28CA	28.0	31.1	34.4	5.0	45.4	112.3	2.0
5KP30A	5KP30CA	30.0	33.3	36.8	5.0	48.4	105.4	2.0
5KP33A	5KP33CA	33.0	36.7	40.6	5.0	53.3	95.7	2.0
5KP36A	5KP36CA	36.0	40.0	44.2	5.0	58.1	87.8	2.0
5KP40A	5KP40CA	40.0	44.4	49.1	5.0	64.5	79.1	2.0

5000W Transient Voltage Suppressor

5KP5.0A - 250CA

P/N		Stand-Off Voltage	Breakdown Voltage @ I _T			Max. Clamping Vltg. @ I _{PPM}	Max. Peak Pulse Current	Max. Reverse Leakage Current @ V _{WM}
			V _{BR}		I _T (mA)			
Uni-Polar	Bi-Polar (Note3)	V _{WM} (V)	Min.	Max.	I _T (mA)	V _C (V)	I _{PPM} (A) (Note1)	I _D (μA) (Note1)
5KP43A	5KP43CA	43.0	47.8	52.8	5.0	69.4	73.5	2.0
5KP45A	5KP45CA	45.0	50.0	55.3	5.0	72.7	70.2	2.0
5KP48A	5KP48CA	48.0	53.3	58.9	5.0	77.4	65.9	2.0
5KP51A	5KP51CA	51.0	56.7	62.7	5.0	82.4	61.9	2.0
5KP54A	5KP54CA	54.0	60.0	66.3	5.0	87.1	58.6	2.0
5KP58A	5KP58CA	58.0	64.4	71.2	5.0	93.6	54.5	2.0
5KP60A	5KP60CA	60.0	66.7	73.7	5.0	96.8	52.7	2.0
5KP64A	5KP64CA	64.0	71.1	78.6	5.0	103.0	49.5	2.0
5KP70A	5KP70CA	70.0	77.8	86.0	5.0	113.0	45.1	2.0
5KP75A	5KP75CA	75.0	83.3	92.1	5.0	121.0	42.1	2.0
5KP78A	5KP78CA	78.0	86.7	95.8	5.0	126.0	40.5	2.0
5KP85A	5KP85CA	85.0	94.4	104.0	5.0	137.0	37.2	2.0
5KP90A	5KP90CA	90.0	100.0	111.0	5.0	146.0	34.9	2.0
5KP100A	5KP100CA	100.0	111.0	123.0	5.0	162.0	31.5	2.0
5KP110A	5KP110CA	110.0	122.0	135.0	5.0	177.0	28.8	2.0
5KP120A	5KP120CA	120.0	133.0	147.0	5.0	193.0	26.4	2.0
5KP130A	5KP130CA	130.0	144.0	159.0	5.0	209.0	24.4	2.0
5KP150A	5KP150CA	150.0	167.0	185.0	5.0	243.0	21.0	2.0
5KP160A	5KP160CA	160.0	178.0	197.0	5.0	259.0	19.7	2.0
5KP170A	5KP170CA	170.0	189.0	209.0	5.0	275.0	18.5	2.0
5KP180A	5KP180CA	180.0	200.0	221.0	5.0	292.0	17.5	2.0
5KP190A	5KP190CA	190.0	211.0	233.0	5.0	310.0	16.5	2.0
5KP200A	5KP200CA	200.0	222.0	246.0	5.0	329.2	15.5	2.0
5KP210A	5KP210CA	210.0	233.0	258.0	5.0	349.5	14.6	2.0
5KP220A	5KP220CA	220.0	244.0	270.0	5.0	371.1	13.7	2.0
5KP250A	5KP250CA	250.0	277.0	306.0	5.0	425.0	12.0	2.0

Note: 1. Surge current waveform per Fig. 3 and derate per Fig. 2
 2. For Bi-directional types with V_{WM} of 10 volts and less, the I_D limit is doubled.

5000W Transient Voltage Suppressor

5KP5.0A - 250CA

3. C suffix for Bidirectional use, A suffix for 5% tolerance.

Typical Characteristics Curves

Fig.1- Peak Pulse Power Rating Curve

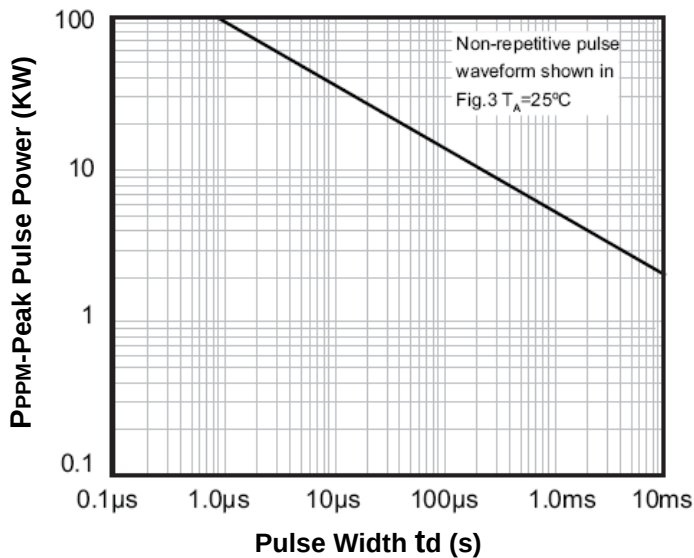


Fig.2- Pulse Derating Curve

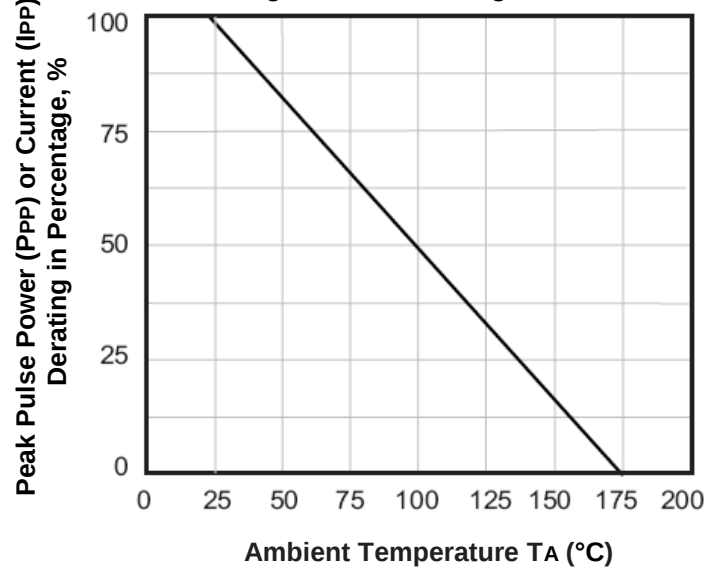


Fig.3- Pulse Waveform

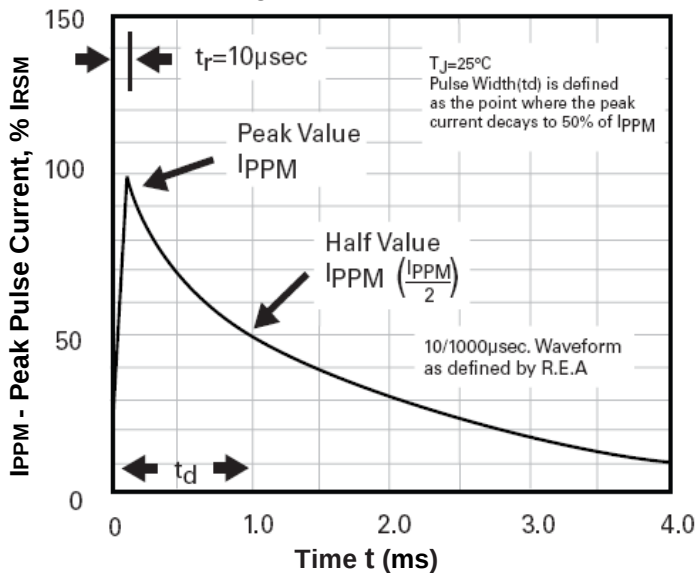
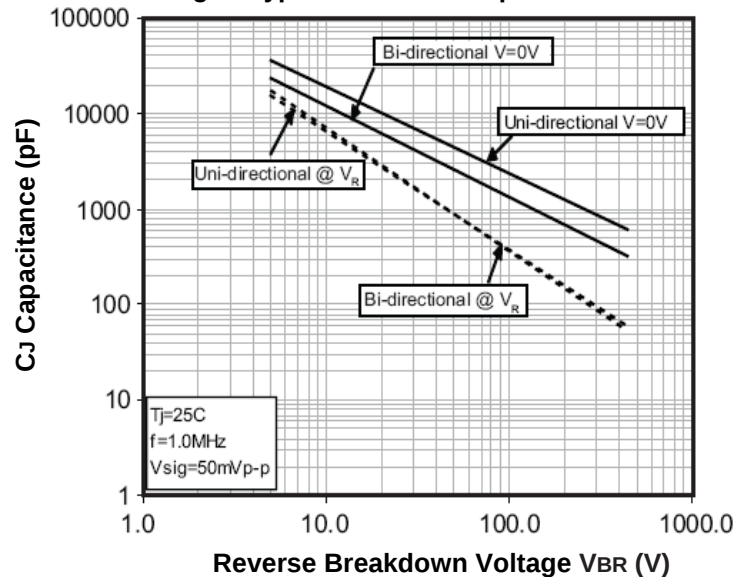


Fig.4- Typical Junction Capacitance



5000W Transient Voltage Suppressor

5KP5.0A - 250CA

Fig.5- Steady State Power Derating Curve

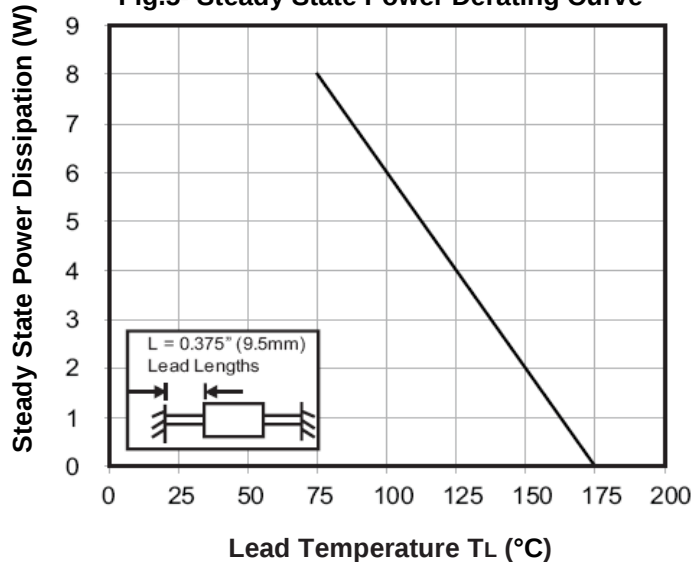
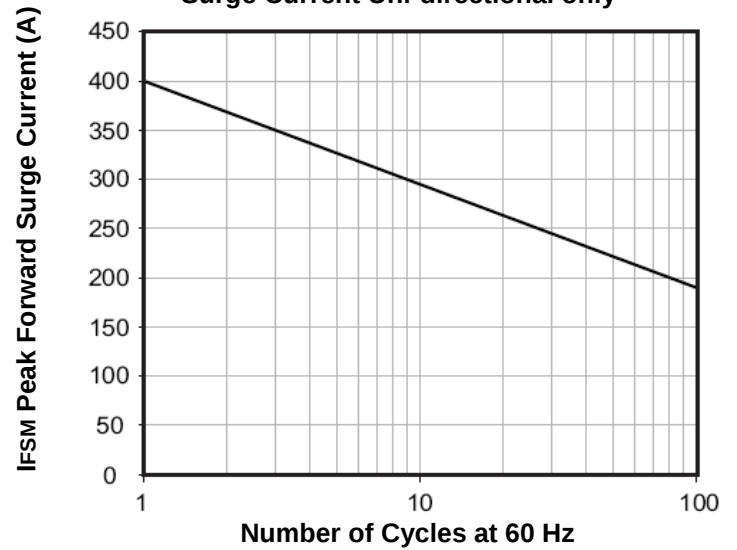
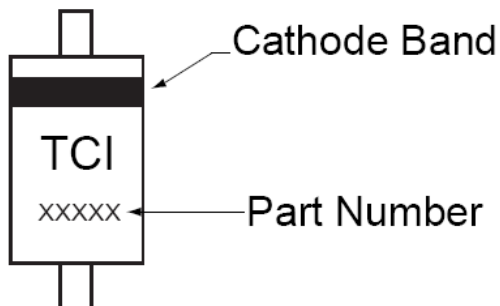


Fig.6- Max. Non-Repetitive Peak Forward Surge Current Uni-directional only

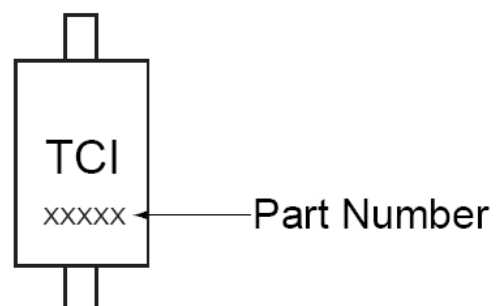


Marking Information

Uni-directional



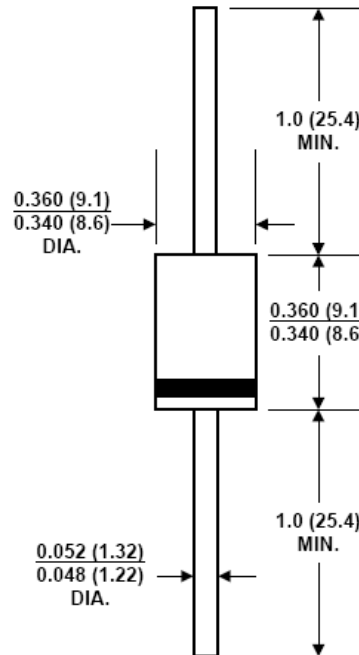
Bi-directional



5000W Transient Voltage Suppressor

5KP5.0A - 250CA

Dimensions in inch (mm)



Case T6L

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