NLightning Technology

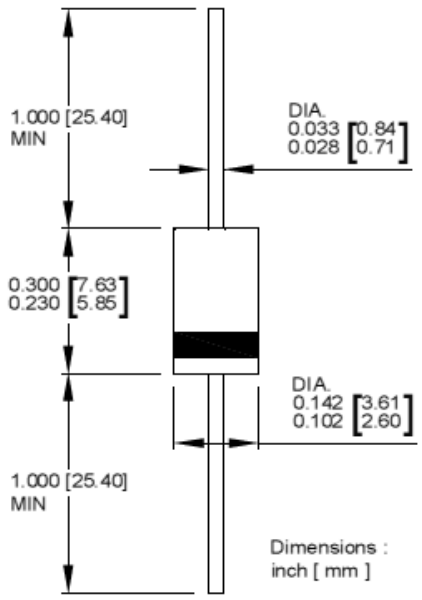
P6KE Series

600W AXIAL LEAD TVS

Features

- Glass Passivated Chip
- Low Leakage
- Uni and Bidirectional Unit
- Excellent Clamping Capability
- Very Fast Response Time
- RoHS Compliant
- 600 W peak pulse power capability with 10/1000us waveform, repetitive rate (dutycycle):0.01 %

Package



DO-15

Application

- IPC
- Car Electronics
- Power Supply
- Smart Meters

Mechanical Characteristics

- Case: Molded Plastic
- Epoxy: UL 94V-0 rate flame retardant
- Lead: Solderable per MIL-STD-202, method 208 guaranteed
- Polarity: Color band denotes cathode end except Bi-directional parts
- Mounting position: Any

DEVICE CHARACTORISTICS

Maximum Rating			
Parameter	**Symbol**	**Value**	**Units**
Peak Power Dissipation With 10/1000us Waveform	P_{PP}	600	Watt
Peak Pulse Current With 10/1000us Waveform	I_{PP}	-	A
Power Dissipation On Infinite Heatsink @ T_L = 75°C	P_D	5.0	Watt
Peak Forward Surge Current	I_{FSM}	100	A
Maximum Instantaneous Forward Voltage @ 50 A	V_F	3.5/5	V
Operating Temperature Range	T_J	-55~150	°C
Storage Temperature Range	T_{STG}	-55~150	°C

ELECTRICAL CHARACTORISTICS @ 25°C								
Part Number	**Part Number**	**Breakdown Voltage VBR @IT**			**IR @ V_{RWM}**	**V_{RWM}**	**I_{PP}**	**V_C @ I_{PP}**
		Min (V)	**Max (V)**	**IT (mA)**	**(uA)**	**(V)**	**(A)**	**(V)**
P6KE6.8A	P6KE6.8CA	6.46	7.14	10	1000	5.8	57	10.5
P6KE7.5A	P6KE7.5CA	7.13	7.88	10	500	6.4	53	11.3
P6KE8.2A	P6KE8.2CA	7.79	8.61	10	200	7	50	12.1
P6KE9.1A	P6KE9.1CA	8.65	9.56	1	50	7.8	45	13.4
P6KE10A	P6KE10CA	9.5	10.5	1	10	8.6	41	14.5
P6KE11A	P6KE11CA	10.45	11.55	1	5	9.4	38	15.6
P6KE12A	P6KE12CA	11.4	12.6	1	5	10.2	36	16.7
P6KE13A	P6KE13CA	12.35	13.65	1	1	11.1	33	18.2
P6KE15A	P6KE15CA	14.25	15.75	1	1	12.8	28	21.2
P6KE16A	P6KE16CA	15.2	16.8	1	1	13.6	27	22.5
P6KE18A	P6KE18CA	17.1	18.9	1	1	15.3	24	25.2
P6KE20A	P6KE20CA	19	21	1	1	17.1	22	27.7
P6KE22A	P6KE22CA	20.9	23.1	1	1	18.8	20	30.6
P6KE24A	P6KE24CA	22.8	25.2	1	1	20.5	18	33.2
P6KE27A	P6KE27CA	25.65	28.35	1	1	23.1	16	37.5
P6KE30A	P6KE30CA	28.5	31.5	1	1	25.6	14	41.4

DEVICE CHARACTORISTICS

ELECTRICAL CHARACTORISTICS @ 25°C								
Part Number	Part Number	Breakdown Voltage VBR @IT			IR @ V_{RWM}	V_{RWM}	I_{PP}	V_C @ I_{PP}
		Min (V)	Max (V)	IT (mA)	(uA)	(V)	(A)	(V)
P6KE33A	P6KE33CA	31.35	34.65	1	1	28.2	13	45.7
P6KE36A	P6KE36CA	34.2	37.8	1	1	30.8	12	49.9
P6KE39A	P6KE39CA	37.05	40.95	1	1	33.3	11	53.9
P6KE43A	P6KE43CA	40.85	45.15	1	1	36.8	10	59.3
P6KE47A	P6KE47CA	44.65	49.35	1	1	40.2	9.3	64.8
P6KE51A	P6KE51CA	48.45	53.55	1	1	43.6	8.6	70.1
P6KE56A	P6KE56CA	53.2	58.8	1	1	47.8	7.8	77
P6KE62A	P6KE62CA	58.9	65.1	1	1	53	7.1	85
P6KE68A	P6KE68CA	64.6	71.4	1	1	58.1	6.5	92
P6KE75A	P6KE75CA	71.25	78.75	1	1	64.1	5.8	103
P6KE82A	P6KE82CA	77.9	86.1	1	1	70.1	5.3	113
P6KE91A	P6KE91CA	86.45	95.55	1	1	77.8	4.8	125
P6KE100A	P6KE100CA	95	105	1	1	85.5	4.4	137
P6KE110A	P6KE110CA	104.5	115.5	1	1	94	4	152
P6KE120A	P6KE120CA	114	126	1	1	102	3.6	165
P6KE130A	P6KE130CA	123.5	136.5	1	1	111	3.4	179
P6KE150A	P6KE150CA	142.5	157.5	1	1	128	2.9	207
P6KE160A	P6KE160CA	152	168	1	1	136	2.7	219
P6KE170A	P6KE170CA	161.5	178.5	1	1	145	2.6	234
P6KE180A	P6KE180CA	171	189	1	1	154	2.4	246
P6KE200A	P6KE200CA	190	210	1	1	171	2.2	274
P6KE220A	P6KE220CA	209	231	1	1	185	1.8	328
P6KE250A	P6KE250CA	237.5	262.5	1	1	214	1.7	344
P6KE300A	P6KE300CA	285	315	1	1	256	1.5	414
P6KE350A	P6KE350CA	332.5	367.5	1	1	299.3	1.2	482
P6KE380A	P6KE380CA	361	399	1	1	324.9	1.1	524.4
P6KE400A	P6KE400CA	380	420	1	1	342	1.1	548
P6KE440A	P6KE440CA	418	462	1	1	376.2	1	607.2
P6KE500A	P6KE500CA	475	525	1	1	427.5	0.9	690
P6KE520A	P6KE520CA	494	546	1	1	444.6	0.8	717.6
P6KE550A	P6KE550CA	522.5	577.5	1	1	470.3	0.8	759
P6KE600A	P6KE600CA	570	630	1	1	513	0.7	828

RATING CURVES

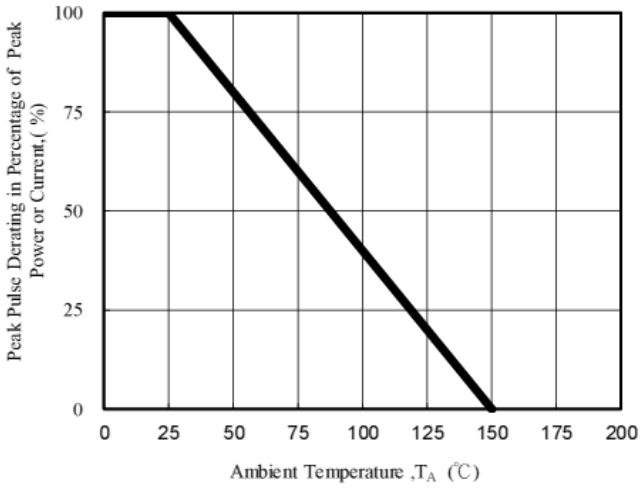


Fig. 1 - Pulse Derating Curve

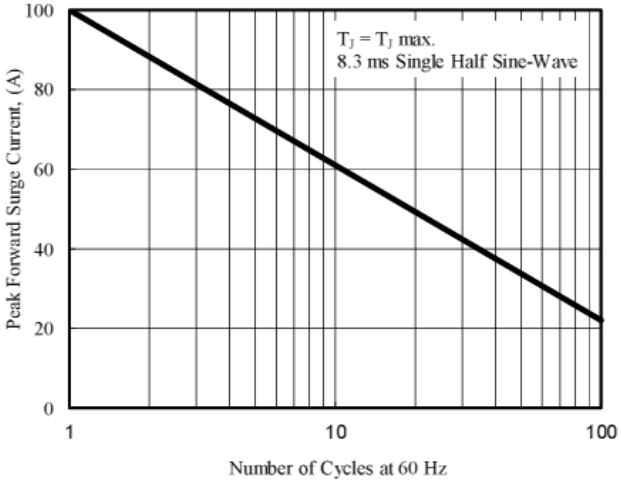


Fig. 2 - Maximum Non-Repetitive Surge Current

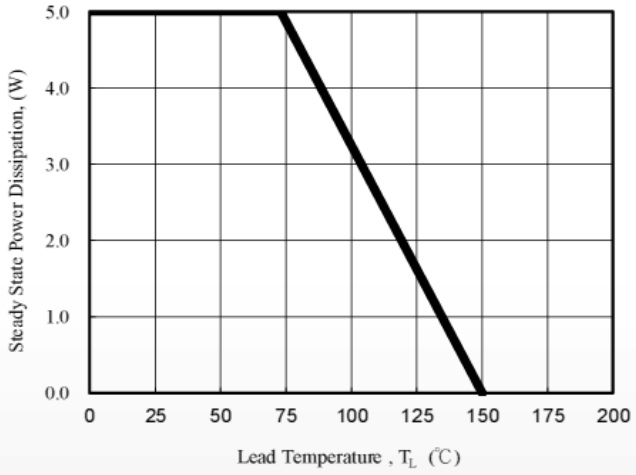


Fig. 3 - Steady State Power Derating Curve

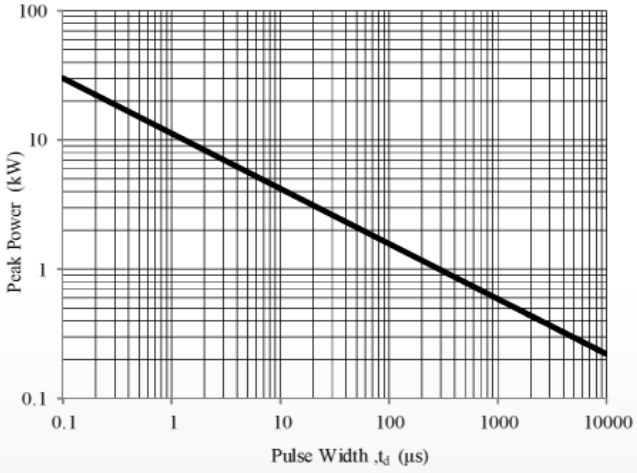


Fig. 4 - Peak Pulse Power Rating Curve

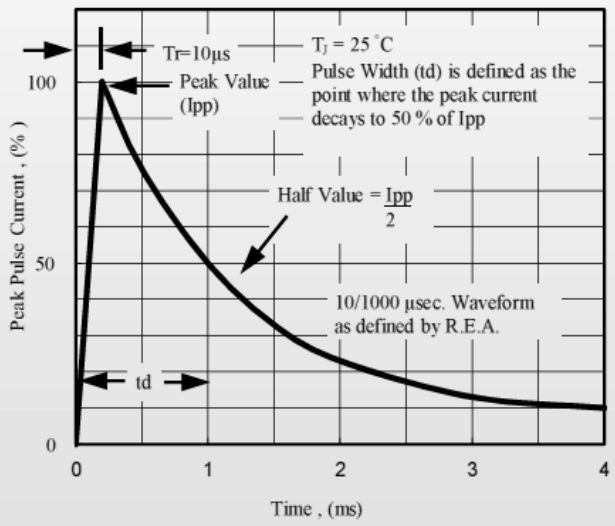


Fig. 5 - Pulse Waveform

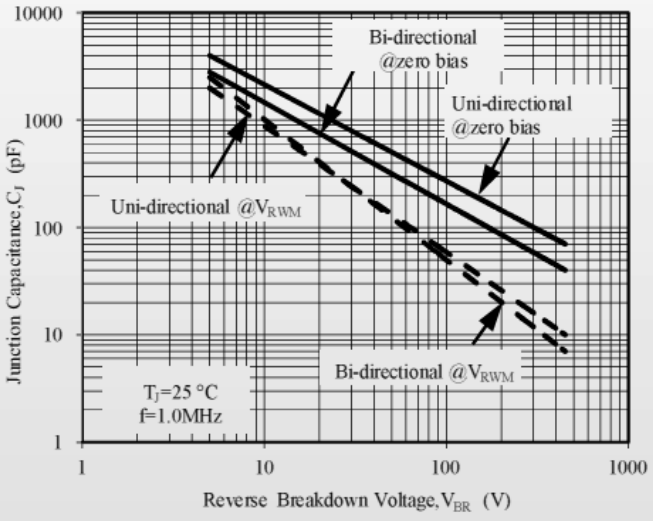


Fig. 6 - Typical Junction Capacitance

REFERENCE

Revision History	Modification Description
Rev.1.0	Initial Release
Rev.1.01	Edit Document Layout