PANJIT SEMI CONDUCTOR

P6KE6.8A ~ P6KE440CA Series

GLASS PASSIVATED JUNCTION TRANSIENT VOLTAGE SUPPRESSOR POWER 600Watt

BREAKDOWN VOLTAGE | **6.8 to 440 Volt**

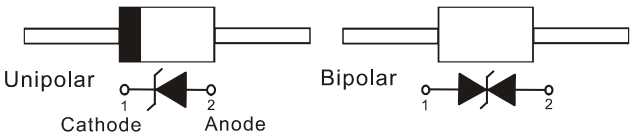
Recongnized File # E210467 (P6KE6.8A~P6KE300CA)

FEATURES

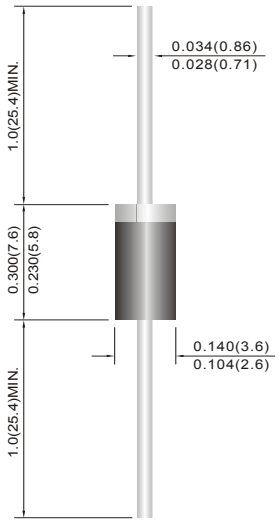
- Plastic package has Underwriters Laboratory Flammability Classification 94V-O
- 600W surge capability at 1ms
- Excellent clamping capability
- Low zener impedance
- Fast response time: typically less than 1 ps from 0 volts to BV min
- ESD IEC-61000-4-2 Air ± 30kV, Contact ± 30kV
- Lead free in compliance with EU RoHS 2.0
- Green molding compound as per IEC 61249 standard

MECHANICAL DATA

- Case : JEDEC DO-15 Molded plastic
- Terminals : Axial leads, solderable per MIL-STD-750, Method 2026
- Polarity : Color band denotes cathode end
- Approx. Weight : 0.397 gram



DO-15 Unit : inch(mm)



DEVICES FOR BIPOLAR APPLICATIONS

For Bidirectional use CA Suffix for types
Electrical characteristics apply in both directions.

MAXIMUM RATINGS AND CHARACTERISTICS

Rating at 25°Cambient temperature unless otherwise specified. Resistive or inductive load, 60Hz.
For Capacitive load derate current by 20%.

Rating	Symbol	Value	Units
Power Dissipation on T_A=25°C, t_P=1ms (Notes 1)	P_{PP}	600	Watts
Typical Thermal Resistance (Notes 2)	$R_{\theta JA}$ $R_{\theta JC}$	70 30	°C / W
Peak Pulse Current on tp=10/1000μs waveform (Notes 1)	I_{PPM}	see Table	Amps
Peak Forward Surge Current, 8.3ms Single Half Sine-Wave Superimposed on Rated Load (Notes 3)	I_{FSM}	100	Amps
ESD IEC-61000-4-2 (Air) ESD IEC-61000-4-2 (Contact)	V_{ESD}	±30 ±30	kV
Operating Junction and Storage Temperature Range	T_J,T_{STG}	-65 to +175	°C

NOTES :

1. Non-repetitive current pulse, per Fig. 3 and derated above T_A=25°C per Fig. 2.
2. Mounted on 48cm^2 FR-4 PCB.
3. 8.3ms single half sine-wave, duty cycle= 4 pulses per minutes maximum.
4. A transient suppressor is selected according to the working peak reverse voltage (V_{RWM}), which should be equal to or greater than the DC or continuous peak operating voltage level.

P6KE6.8A ~ P6KE440CA Series

Part Number		Reverse Stand-off Voltage	Breakdown Voltage		Test Current	Reverse Leakage		Max. Clamp Voltage 10/1000us	Peak Pulse Current 10/1000us	Marking Code	
		V_{RWM} (Notes 4)	V_{BR} @ I_T		I_T	I_R @ V_{RWM}		V_C @ I_{PP}	I_{PP}		
			Min.	Max.		UNI	BI				
UNI	BI	V	V	V	mA	uA	uA	V	A	UNI	BI
600W Transient Voltage Suppressor											
P6KE6.8A	P6KE6.8CA	5.8	6.45	7.14	10	1000	2000	10.5	57	P6KE6.8A	P6KE6.8CA
P6KE7.5A	P6KE7.5CA	6.4	7.13	7.88	10	500	1000	11.3	53	P6KE7.5A	P6KE7.5CA
P6KE8.2A	P6KE8.2CA	7.02	7.79	8.61	10	200	400	12.1	50	P6KE8.2A	P6KE8.2CA
P6KE9.1A	P6KE9.1CA	7.78	8.65	9.50	1	50	100	13.4	45	P6KE9.1A	P6KE9.1CA
P6KE10A	P6KE10CA	8.55	9.5	10.50	1	10	20	14.5	41	P6KE10A	P6KE10CA
P6KE11A	P6KE11CA	9.4	10.5	12	1	5	10	15.6	38	P6KE11A	P6KE11CA
P6KE12A	P6KE12CA	10.2	11.4	13	1	5	5	16.7	36	P6KE12A	P6KE12CA
P6KE13A	P6KE13CA	11.1	12.4	14	1	1	1	18.2	33	P6KE13A	P6KE13CA
P6KE15A	P6KE15CA	12.8	14.3	15.8	1	1	1	21.2	28	P6KE15A	P6KE15CA
P6KE16A	P6KE16CA	13.6	15.2	16.8	1	1	1	22.5	27	P6KE16A	P6KE16CA
P6KE18A	P6KE18CA	15.3	17.1	18.9	1	1	1	25.2	24	P6KE18A	P6KE18CA
P6KE20A	P6KE20CA	17.1	19	21	1	1	1	27.7	22	P6KE20A	P6KE20CA
P6KE22A	P6KE22CA	18.8	20.9	23.1	1	1	1	30.6	20	P6KE22A	P6KE22CA
P6KE24A	P6KE24CA	20.5	22.8	25.2	1	1	1	33.2	18	P6KE24A	P6KE24CA
P6KE27A	P6KE27CA	23.1	25.7	28.4	1	1	1	37.5	16	P6KE27A	P6KE27CA
P6KE30A	P6KE30CA	25.6	28.5	31.5	1	1	1	41.4	14.4	P6KE30A	P6KE30CA
P6KE33A	P6KE33CA	28.2	31.4	34.7	1	1	1	45.7	13.2	P6KE33A	P6KE33CA
P6KE36A	P6KE36CA	30.8	34.2	37.8	1	1	1	49.9	12	P6KE36A	P6KE36CA
P6KE39A	P6KE39CA	33.3	37.1	41	1	1	1	53.9	11.2	P6KE39A	P6KE39CA
P6KE43A	P6KE43CA	36.8	40.9	45.2	1	1	1	59.3	10.1	P6KE43A	P6KE43CA
P6KE47A	P6KE47CA	40.2	44.7	49.4	1	1	1	64.8	9.3	P6KE47A	P6KE47CA
P6KE51A	P6KE51CA	43.6	48.5	53.6	1	1	1	70.1	8.6	P6KE51A	P6KE51CA
P6KE56A	P6KE56CA	47.8	53.2	58.8	1	1	1	77	7.8	P6KE56A	P6KE56CA
P6KE62A	P6KE62CA	53	58.9	65.1	1	1	1	85	7.1	P6KE62A	P6KE62CA
P6KE68A	P6KE68CA	58.1	64.6	71.4	1	1	1	92	6.5	P6KE68A	P6KE68CA
P6KE75A	P6KE75CA	64.1	71.3	78.8	1	1	1	103	5.8	P6KE75A	P6KE75CA
P6KE82A	P6KE82CA	70.1	77.9	86.1	1	1	1	113	5.3	P6KE82A	P6KE82CA
P6KE91A	P6KE91CA	77.8	86.5	95.5	1	1	1	125	4.8	P6KE91A	P6KE91CA
P6KE100A	P6KE100CA	85.5	95	105	1	1	1	137	4.4	P6KE100A	P6KE100CA
P6KE110A	P6KE110CA	94	105	116	1	1	1	152	4	P6KE110A	P6KE110CA
P6KE120A	P6KE120CA	102	114	126	1	1	1	165	3.6	P6KE120A	P6KE120CA
P6KE130A	P6KE130CA	111	124	137	1	1	1	179	3.3	P6KE130A	P6KE130CA
P6KE150A	P6KE150CA	128	143	158	1	1	1	207	2.9	P6KE150A	P6KE150CA
P6KE160A	P6KE160CA	136	152	168	1	1	1	219	2.7	P6KE160A	P6KE160CA
P6KE170A	P6KE170CA	145	162	179	1	1	1	234	2.6	P6KE170A	P6KE170CA
P6KE180A	P6KE180CA	154	171	189	1	1	1	246	2.4	P6KE180A	P6KE180CA
P6KE200A	P6KE200CA	171	190	210	1	1	1	274	2.2	P6KE200A	P6KE200CA
P6KE220A	P6KE220CA	185	209	231	1	1	1	328	1.9	P6KE220A	P6KE220CA
P6KE250A	P6KE250CA	214	237	263	1	1	1	344	1.8	P6KE250A	P6KE250CA
P6KE300A	P6KE300CA	256	285	315	1	1	1	414	1.5	P6KE300A	P6KE300CA
P6KE350A	P6KE350CA	300	332	368	1	1	1	482	1.3	P6KE350A	P6KE350CA

P6KE6.8A ~ P6KE440CA Series

Part Number		Reverse Stand-off Voltage	Breakdown Voltage		Test Current	Reverse Leakage		Max. Clamp Voltage 10/1000us	Peak Pulse Current 10/1000us	Marking Code	
		V_{RWM} (Notes 4)	V_{BR} @ I_T		I_T	I_R @ V_{RWM}		V_C @ I_{PP}	I_{PP}		
			Min.	Max.		UNI	BI				
UNI	BI	V	V	V	mA	uA	uA	V	A	UNI	BI
600W Transient Voltage Suppressor											
P6KE400A	P6KE400CA	342	380	420	1	1	1	548	1.1	P6KE400A	P6KE400CA
P6KE440A	P6KE440CA	376	418	462	1	1	1	600	1.04	P6KE440A	P6KE440CA

P6KE6.8A ~ P6KE440CA Series

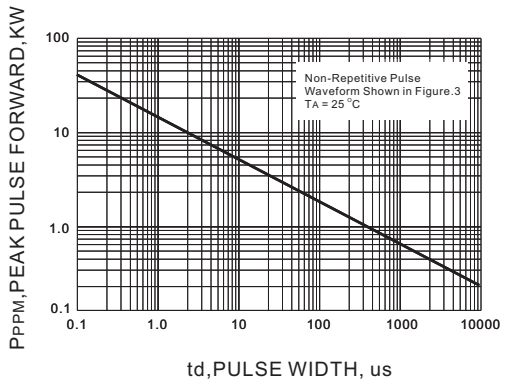


Fig.1 PEAK PULSE POWER RATING PULSE TIME CURVE

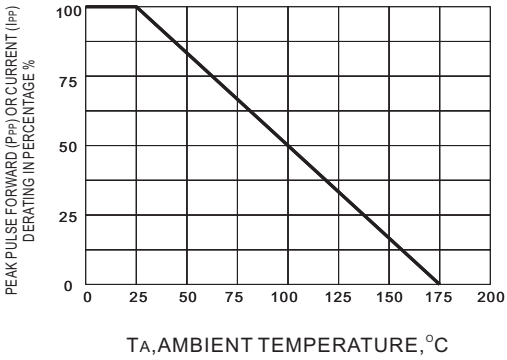


Fig.2 PULSE DERATING CURVE

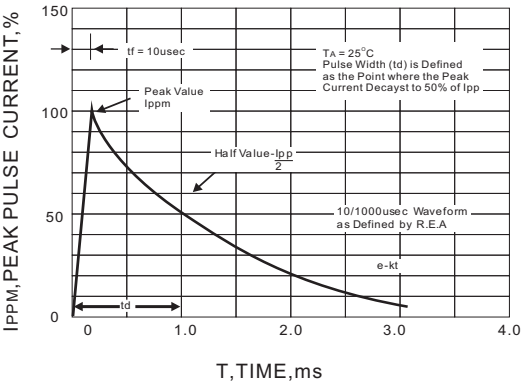


Fig.3 PULSE WAVEFORM

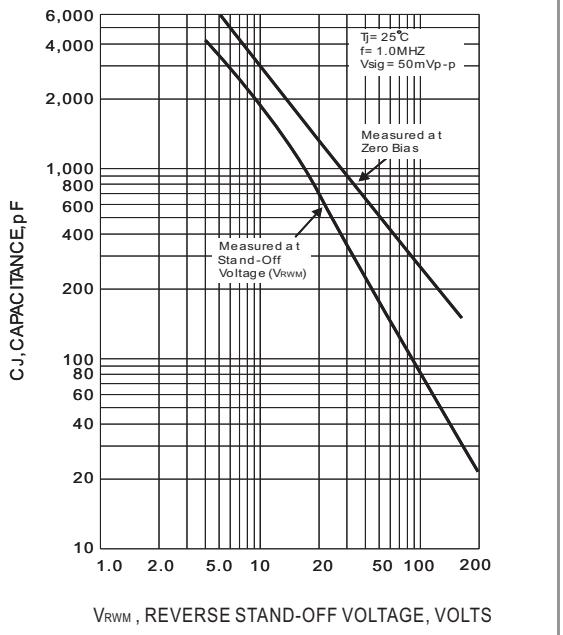


Fig.4 TYPICAL JUNCTION CAPACITANCE UNIDIRECTIONAL

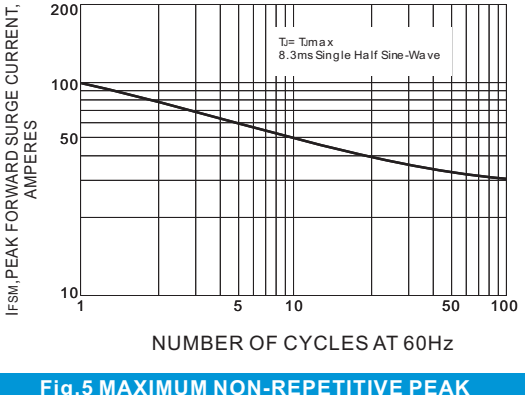


Fig.5 MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

Disclaimer

- Reproducing and modifying information of the document is prohibited without permission from Panjit International Inc..
- Panjit International Inc. reserves the rights to make changes of the content herein the document anytime without notification. Please refer to our website for the latest document.
- Panjit International Inc. disclaims any and all liability arising out of the application or use of any product including damages incidentally and consequentially occurred.
- Panjit International Inc. does not assume any and all implied warranties, including warranties of fitness for particular purpose, non-infringement and merchantability.
- Applications shown on the herein document are examples of standard use and operation. Customers are responsible in comprehending the suitable use in particular applications. Panjit International Inc. makes no representation or warranty that such applications will be suitable for the specified use without further testing or modification.
- The products shown herein are not designed and authorized for equipments requiring high level of reliability or relating to human life and for any applications concerning life-saving or life-sustaining, such as medical instruments, transportation equipment, aerospace machinery et cetera. Customers using or selling these products for use in such applications do so at their own risk and agree to fully indemnify Panjit International Inc. for any damages resulting from such improper use or sale.
- Since Panjit uses lot number as the tracking base, please provide the lot number for tracking when complaining.