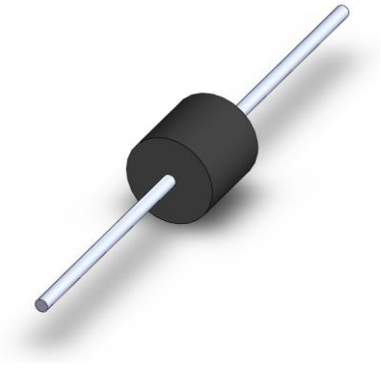
5KP18 THRU 5KP160

Stand-off Voltage:18 to 160V
Peak pulse power:5000W

FEATURES

- Glass passivated chip junction
- Available in uni-directional and bi-directional
- 5000W peak pulse power capability with
- Excellent clamping capability
- Very fast response time



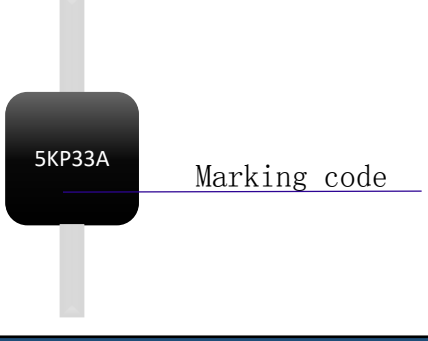
TYPICAL APPLICATIONS

Use in sensitive electronics protection against voltage transients induced by inductive load switching and for consumer, computer, industrial, automotive andtelecommunication.

MECHANICAL DATA

Case: P600
Epoxy meets UL 94V-0 flammability rating
Polarity: Color band denotes cathode end

Printing description



MAXIMUM RATINGS (TA=25℃unless otherwise noted)			
PARAMETER	SYMBOL	VALUE	UNIT
Peak pulse power dissipation with a 10/1000μs waveform	P_{PPM}	5000	W
Peak pulse current with a waveform	I_{PPM}	See next table	A
Peak forward surge current 8.3 ms single half sine-wave uni-directional only	I_{FSM}	200	A
Operating junction and storage temperature range	T_J, T_{STG}	-55 to +125	℃

Notes:
(1) Non-repetitive current pulse, per Fig. 3 and derated above TA = 25℃ per

ELECTRICAL CHARACTERISTICS (TA = 25℃ unless otherwise noted)

Part Number		Breakdown voltage VBR@IT		Test Current IT	Reverse Stand off Voltage VRWMV	Max. Reverse Leakage@V RWM	Max. Clamping Voltage@ IPP	Max. Peak Pulse Current
Bi	UNI	MIN(V)	MAX(V)	(mA)	V	uA	V	A
5KP18A	5KP18CA	20	22.1	5	18	2	29.2	174.7
5KP20A	5KP20CA	22.2	24.5	5	20	2	32.4	157.4
5KP22A	5KP22CA	24	26.9	5	22	2	35.5	143.7
5KP24A	5KP24CA	26.7	29.5	5	24	2	38.9	131.1
5KP26A	5KP26CA	28.9	31.9	5	26	2	42.1	121.1
5KP28A	5KP28CA	31.1	34.4	5	28	2	45.4	112.3
5KP30A	5KP30CA	33.3	36.8	5	30	2	48.4	105.4
5KP33A	5KP33CA	36.7	40.6	5	33	2	53.3	95.7
5KP36A	5KP36CA	40	44.2	5	36	2	58.1	87.8
5KP40A	5KP40CA	44.4	49.1	5	40	2	64.5	79.1
5KP43A	5KP43CA	47.8	52.8	5	43	2	69.4	73.5
5KP45A	5KP45CA	50	55.3	5	45	2	72.7	70.2
5KP48A	5KP48CA	53.3	58.9	5	48	2	77.4	65.9
5KP51A	5KP51CA	56.7	62.7	5	51	2	82.4	61.9
5KP54A	5KP54CA	60	66.3	5	54	2	87.1	58.6
5KP58A	5KP58CA	64.4	71.2	5	58	2	93.6	54.5
5KP60A	5KP60CA	66.7	73.7	5	60	2	96.8	52.7
5KP64A	5KP64CA	71.1	78.6	5	64	2	103	49.5
5KP70A	5KP70CA	77.8	86	5	70	2	113	45.1
5KP75A	5KP75CA	83.3	92.1	5	75	2	121	42.1
5KP78A	5KP78CA	86.7	95.8	5	78	2	126	40.5
5KP85A	5KP85CA	94.4	104	5	85	2	137	37.2
5KP90A	5KP90CA	100	111	5	90	2	146	34.9
5KP100A	5KP100CA	110	123	5	100	2	162	31.5
5KP110A	5KP110CA	122	135	5	110	2	177	28.8
5KP120A	5KP120CA	133	147	5	120	2	193	26.4
5KP130A	5KP130CA	144	159	5	130	2	209	24.4
5KP150A	5KP150CA	167	185	5	150	2	243	21
5KP160A	5KP160CA	178	197	5	160	2	259	19.7

RATINGS AND CHARACTERISTICS CURVES

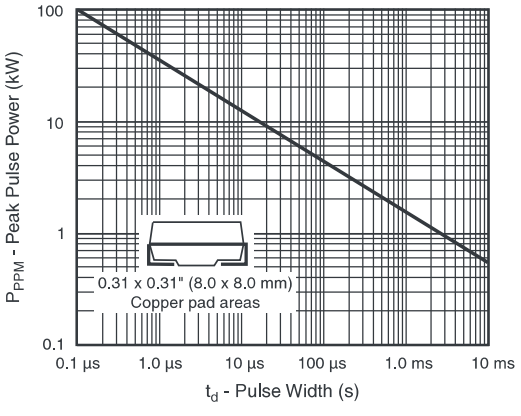


Figure 1. Peak Pulse Power Rating Curve

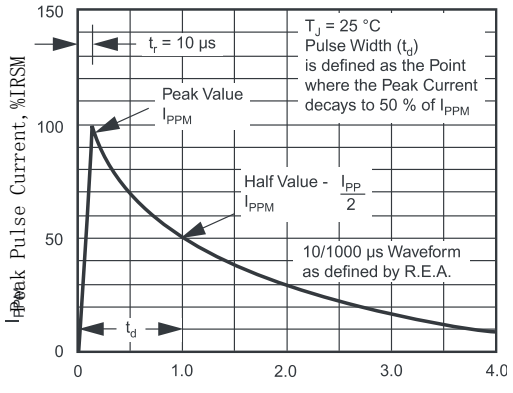


Figure 3. Pulse Waveform

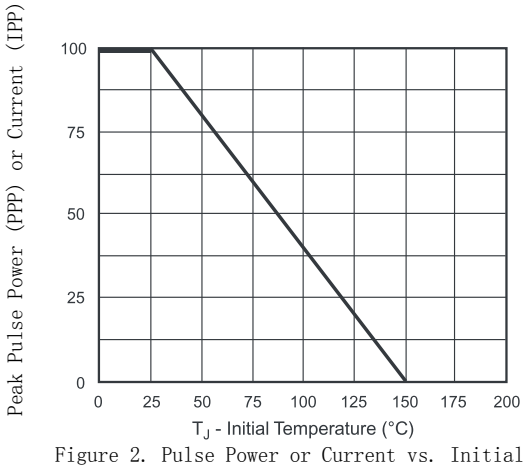


Figure 2. Pulse Power or Current vs. Initial Junction Temperature

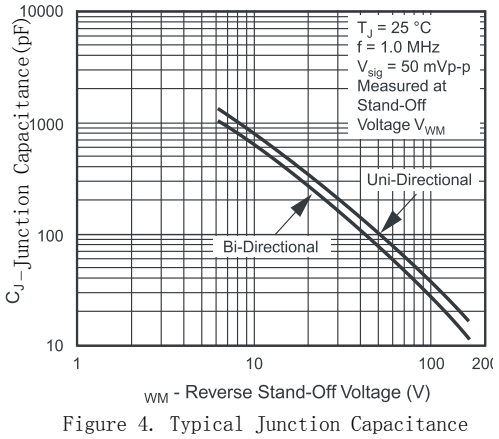


Figure 4. Typical Junction Capacitance

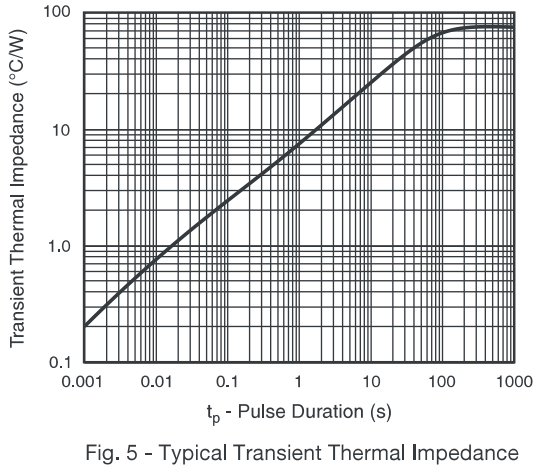


Fig. 5 - Typical Transient Thermal Impedance

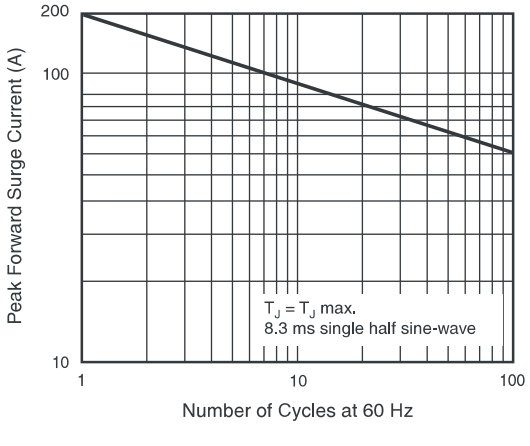
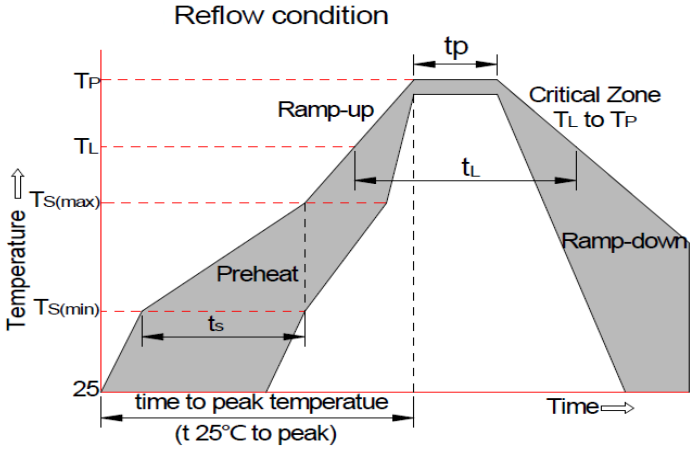


Fig. 6 - Maximum Non-Repetitive Peak Forward Surge Curren
Uni-Directional Use On

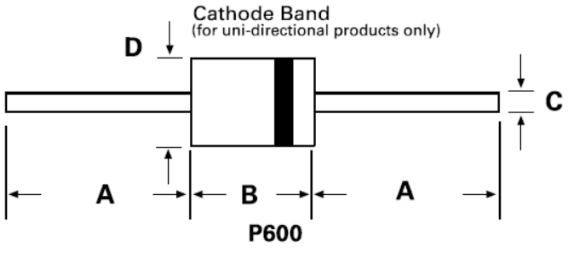
Soldering Parameters



Reflow Condition		PbFree assembly (see asbellow)
Pre Heat	-Temperature Min (Ts(Min))	+150℃
	-Temperature Max(Ts(max))	+200℃
	-Time (Min to Max) (ts)	60-180 secs.
Average ramp up rate (Liquid us Temp (TL) to peak)		3℃/sec. Max
	Ts(max) to TL -Ramp-up Rate	3℃/sec. Max
Reflow	-Temperature(T_L)(Liquid us)	+217℃
	-Temperature(t_L)	60-150 secs.
Peak Temp (Tp)		+260(+0/-5)℃
Time within 5℃ of actual Peak Temp (tp)		30 secs. Max
Ramp-down Rate		6℃/sec. Max
Time 25℃ to Peak Temp (T_P)		8 min. Max
Do not exceed		+260℃

PACKAGE OUTLINE DIMENSIONS

in inches (millimeters)



Dimensions	Inches		Millimeters	
	Min	Max	Min	Max
A	1.00	-	25.4	-
B	0.285	0.375	7.2	9.5
C	0.038	0.042	0.96	1.37
D	0.19	0.21	7.2	9.5