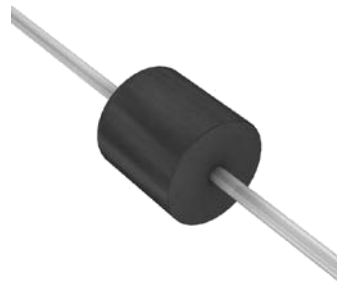


Power TVS in R-6(P600)

Features

- 5000Watts peak pulse power (10/1000 μ s)
- Class passivated junction
- High accuracy, 5% tolerance
- Uni and Bidirectional unit
- Low clamping voltage
- Low Leakage current
- Very fast response time



Mechanical Data

- **Case:** R-6(P600)(plastic package).
Lead free; RoHS compliant
- **Molding Compound Flammability Rating:**
UL 94 V-0
- **Terminals:** High temperature soldering guaranteed:
260 °C/10 sec. at terminals

Applications

- Computers
- Telecom systems
- Industrial equipments
- Consumer electronic applications
- Other VCC bus and I/O interfaces

Absolute Maximum Ratings

Ratings at 25 °C, ambient temperature unless otherwise specified

Parameter	Symbols	Value	Unit
Peak power dissipation with a 10/1000us waveform ⁽¹⁾ (Fig. 1)	P _{PPM}	5000	W
Peak pulse current with a 10/1000us waveform ⁽¹⁾	I _{PPM}	See Next Table	A
Power dissipation on infinite heatsink at TL = 75 °C	P _D	6.5	W
Peak forward surge current 8.3ms single half sine-wave ⁽²⁾	I _{FSM}	400	A
Maximum instantaneous forward voltage @ 50A for unidirectional only ⁽³⁾	V _F	3.5/6.5	V
Operating junction and storage temperature range	T _J , T _{STG}	-55 to +150	°C

Notes:1.Non-repetitive current pulse, per Fig.3 and derated above T_A=25°C per Fig. 2

2. Measured on 8.3ms single half sine-wave or equivalent square wave, duty cycle = 4 pulses per minute maximum.

3. V_F<3.5V for devices of VBR<200V and V_F<6.5V for devices of VBR>201V.

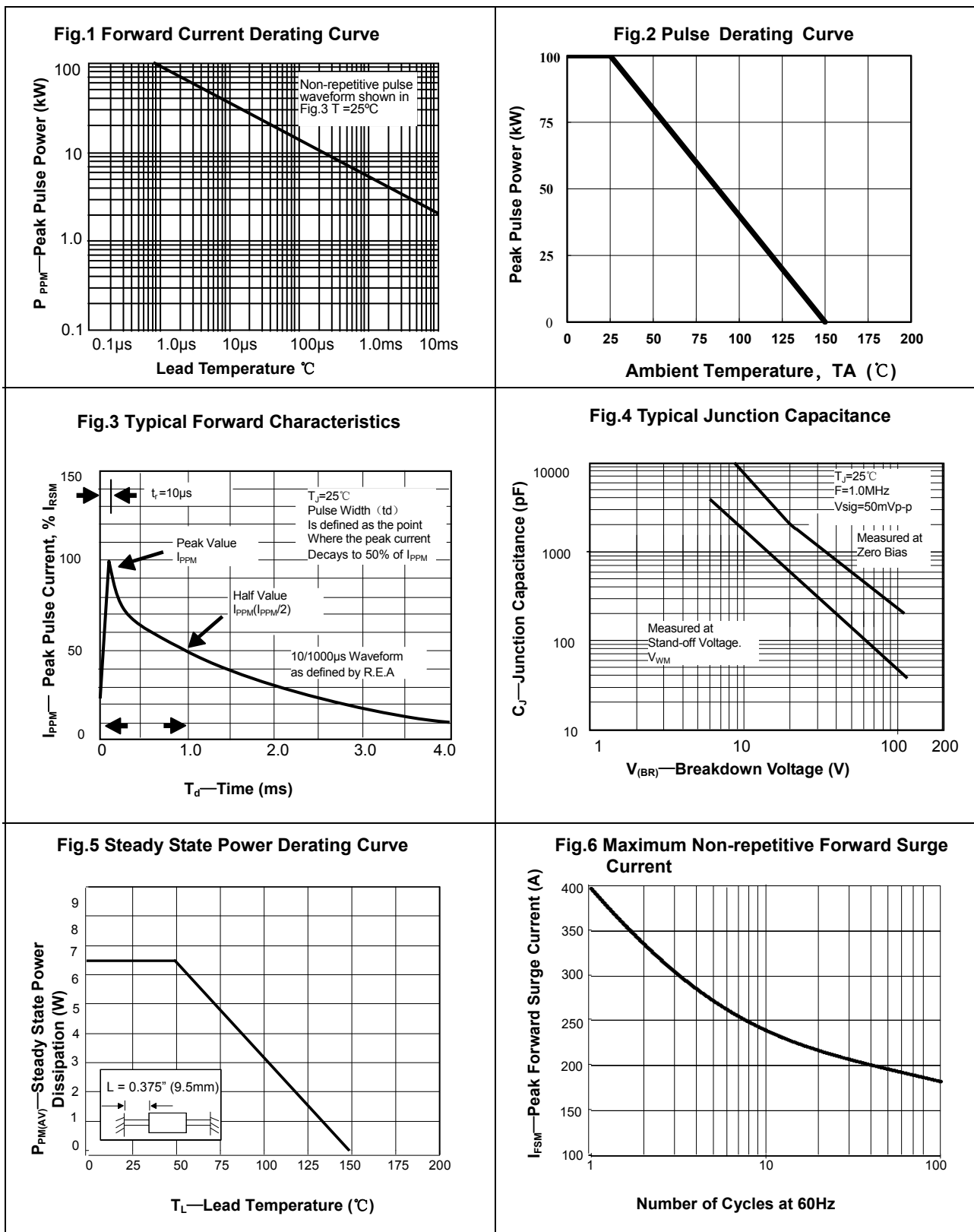
Electrical Characteristics

($T_A=25^\circ\text{C}$, Unless otherwise specified.)

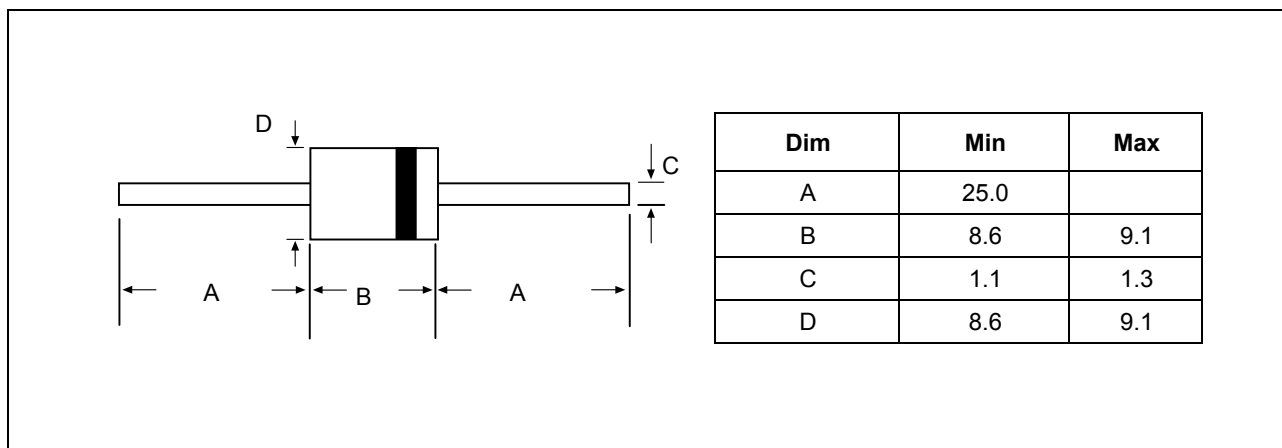
Part Number		Reverse Stand off Voltage V_R (Volts)	Breakdown Voltage V_{BR} (Volts) @ I_T		Test Current I_T (mA)	Maximum Clamping Voltage V_C @ I_{PP} (V)	Maximum Peak Pulse Current I_{PP} (A)	Maximum Reverse Leakage I_R @ V_R (μA)
(Uni)	(Bi)		MIN	MAX				
5KP5.0A	5KP5.0CA	5.0	6.40	7.00	50	9.2	554.3	5000
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	33.0	36.70	40.60	5	53.3	95.7	2
5KP36A	5KP36CA	36.0	40.00	44.20	5	58.1	87.8	2
5KP40A	5KP40CA	40.0	44.40	49.10	5	64.5	79.1	2
5KP43A	5KP43CA	43.0	47.80	52.80	5	69.4	73.5	2
5KP45A	5KP45CA	45.0	50.00	55.30	5	72.7	70.2	2
5KP48A	5KP48CA	48.0	53.30	58.90	5	77.4	65.9	2
5KP51A	5KP51CA	51.0	56.70	62.70	5	82.4	61.9	2
5KP54A	5KP54CA	54.0	60.00	66.30	5	87.1	58.6	2
5KP58A	5KP58CA	58.0	64.40	71.20	5	93.6	54.5	2
5KP60A	5KP60CA	60.0	66.70	73.70	5	96.8	52.7	2
5KP64A	5KP64CA	64.0	71.10	78.60	5	103.0	49.5	2
5KP70A	5KP70CA	70.0	77.80	86.00	5	113.0	45.1	2
5KP75A	5KP75CA	75.0	83.30	92.10	5	121.0	42.1	2
5KP78A	5KP78CA	78.0	86.70	95.80	5	126.0	40.5	2
5KP85A	5KP85CA	85.0	94.40	104.00	5	137.0	37.2	2
5KP90A	5KP90CA	90.0	100.00	111.00	5	146.0	34.9	2
5KP100A	5KP100CA	100.0	110.00	123.00	5	162.0	31.5	2
5KP110A	5KP110CA	110.0	122.00	135.00	5	177.0	28.8	2
5KP120A	5KP120CA	120.0	133.00	147.00	5	193.0	26.4	2
5KP130A	5KP130CA	130.0	144.00	159.00	5	209.0	24.4	2
5KP150A	5KP150CA	150.0	167.00	185.00	5	243.0	21.0	2
5KP160A	5KP160CA	160.0	178.00	197.00	5	259.0	19.7	2
5KP170A	5KP170CA	170.0	189.00	209.00	5	275.0	18.5	2
5KP180A	5KP180CA	180.0	200.00	221.00	5	292.0	17.5	2
5KP190A	5KP190CA	190.0	211.00	233.00	5	310.0	16.5	2
5KP200A	5KP200CA	200.0	222.00	246.00	5	329.2	15.5	2
5KP210A	5KP210CA	210.0	233.00	258.00	5	349.5	14.6	2
5KP220A	5KP220CA	220.0	244.00	270.00	5	371.1	13.7	2
5KP250A	5KP250CA	250.0	277.00	306.00	5	425.0	12.0	2

For bidirectional type having V_R of 10 volts and less, the I_R limit is double. For parts without A, the V_{BR} is $\pm 10\%$ and V_C is 5% higher than with A parts

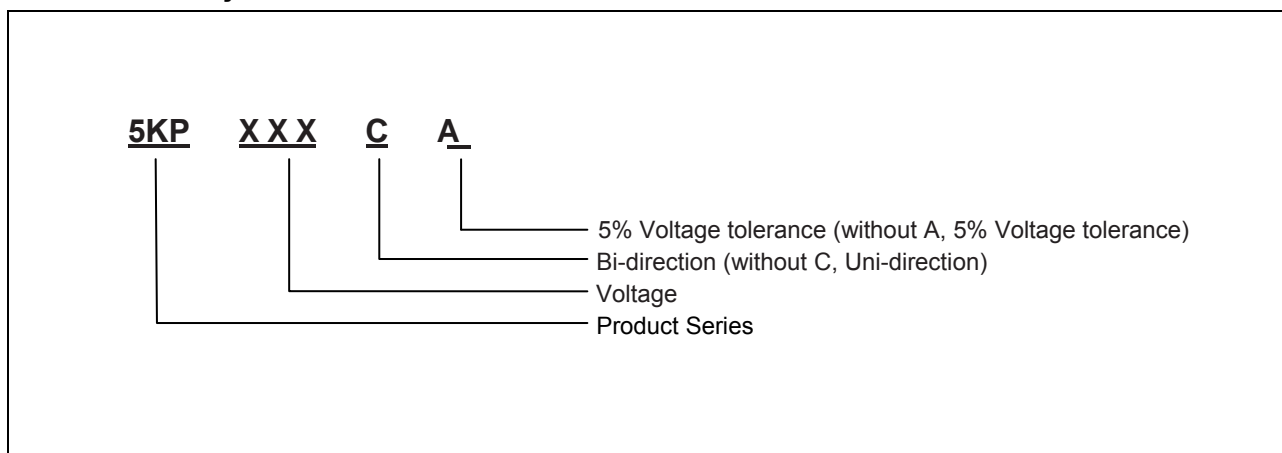
Typical Characteristics ($T_{amb} = 25\text{ }^{\circ}\text{C}$ unless otherwise specified)



Package Dimensions



Part number system



Ordering information

Order code	Package	Packaging option	Base quantity	Packaging specification
5KPxxA(CA)	R-6(P600)	Tape&BOX	400pcs	EIA STD RS-481

Revision history

Date	Revision	Changes
5-Jul.-2023	3.0	Update

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