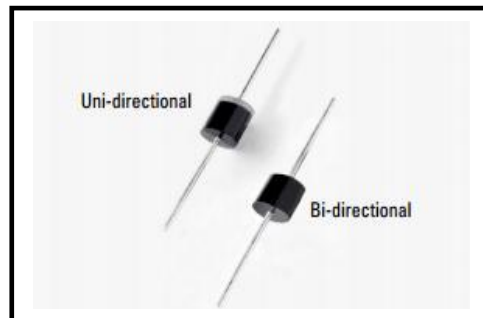


Features

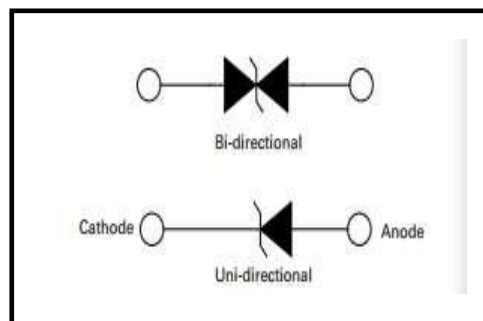
- 5000W peak pulse power capability at 10/1000 μ s waveform, repetition rate (duty cycle): 0.05%
- Typical IR less than 2 μ A above 10V
- Glass passivated chip junction in P600 package.
- Low incremental surge resistance.
- Excellent clamping capability
- High Temperature soldering guaranteed: 265 / °C 10 seconds/.375" , (9.5mm) lead length, 5lbs (2.3kg) tension
- Fast response time
- Meets MSL level 1, per J-STD-020.
- Uni-directional and Bi-directional



Mechanical Data

- Case: Moulded plastic over glass passivated junction
- Terminal: Plated Axial leads, solderable per MIL-STD-750, Method 2026
- Polarity: Color band denotes cathode except bi-directional models
- Mounting Position: Any
- Weight: 2.10g

Functional Diagram



Applications

- I/O interface ■ V_{CC} bus ■ AC/DC power supply
- Low frequency signal transmission line (RS232, RS485, etc.)

Maximum Ratings and Characteristics

Ratings at 25°C ambient temperature unless otherwise specified.

Rating	Symbol	Value	Units
Peak pulse power dissipation at 10/1000 μ s waveform (Note1, Fig.1)	P_{PPM}	Minimum 5000	Watts
Peak pulse current of at 10/1000 μ s waveform (Note 1, Fig.3)	I_{PPM}	See Table	Amps
Steady state power dissipation at TL=75°C(Fig.5)	$P_{M(AV)}$	8.0	Watts
Peak forward surge current, 8.3ms single half sine-wave superimposed on rated load, (JEDEC Method) (Note2, Fig.6)	I_{FSM}	400	Amps
Operating junction and Storage Temperature Range.	T_J, T_{STG}	-55 to +150	°C
Typical thermal resistance junction to lead	$R_{\theta JL}$	8	°C/W
Typical thermal resistance junction to ambient	$R_{\theta JA}$	40	°C/W

Note:

1. Non-repetitive current pulse, per Fig.3 and derated above $T_A=25^\circ\text{C}$ per Fig.2.
2. 8.3ms single half sine-wave, or equivalent square wave, duty cycle=4 pulses per minutes maximum.

Electrical Characteristics (T_A=25°C)

Part Number		VR	V _{BR} @ I _T		I _T	V _{CL} @ I _{pp}	IPP	IR @VR
(Uni)	(Bi)	(V)	Min (V)	Max (V)	(mA)	(V)	(A)	(uA)
5KP 5.0A	5KP 5.0CA	5.0	6.40	7.00	50	9.2	554.3	5000
5KP 6.0A	5KP 6.0CA	6.0	6.67	7.37	50	10.3	495.1	5000
5KP 6.5A	5KP 6.5CA	6.5	7.22	7.98	50	11.2	455.4	2000
5KP 7.0A	5KP 7.0CA	7.0	7.78	8.60	50	12.0	425.0	1000
5KP 7.5A	5KP 7.5CA	7.5	8.33	9.21	5	12.9	395.3	250
5KP 8.0A	5KP 8.0CA	8.0	8.89	9.83	5	13.6	375.0	150
5KP 8.5A	5KP 8.5CA	8.5	9.44	10.40	5	14.4	354.2	50
5KP 9.0A	5KP 9.0CA	9.0	10.00	11.10	5	15.4	331.2	20
5KP 10A	5KP 10CA	10.0	11.10	12.30	5	17.0	300.0	15
5KP 11A	5KP 11CA	11.0	12.20	13.50	5	18.2	280.2	2
5KP 12A	5KP 12CA	12.0	13.30	14.70	5	19.9	256.3	2
5KP 13A	5KP 13CA	13.0	14.40	15.90	5	21.5	237.2	2
5KP 14A	5KP 14CA	14.0	15.60	17.20	5	23.2	219.8	2
5KP 15A	5KP 15CA	15.0	16.70	18.50	5	24.4	209.0	2
5KP 16A	5KP 16CA	16.0	17.80	19.70	5	26.0	196.2	2
5KP 17A	5KP 17CA	17.0	18.90	20.90	5	27.6	184.8	2
5KP 18A	5KP 18CA	18.0	20.00	22.10	5	29.2	174.7	2
5KP 20A	5KP 20CA	20.0	22.20	24.50	5	32.4	157.4	2
5KP 22A	5KP 22CA	22.0	24.00	26.90	5	35.5	143.7	2
5KP 24A	5KP 24CA	24.0	26.70	29.50	5	38.9	131.1	2
5KP 26A	5KP 26CA	26.0	28.90	31.90	5	42.1	121.1	2
5KP 28A	5KP 28CA	28.0	31.10	34.40	5	45.4	112.3	2
5KP 30A	5KP 30CA	30.0	33.30	36.80	5	48.4	105.4	2
5KP 33A	5KP 33CA	33.0	36.70	40.60	5	53.3	95.7	2
5KP 36A	5KP 36CA	36.0	40.00	44.20	5	58.1	87.8	2
5KP 40A	5KP 40CA	40.0	44.40	49.10	5	64.5	79.1	2
5KP 43A	5KP 43CA	43.0	47.80	52.80	5	69.4	73.5	2
5KP 45A	5KP 45CA	45.0	50.00	55.30	5	72.7	70.2	2

Part Number		VR	V _{BR} @ I _T		I _T	V _{CL} @ I _{pp}	IPP	IR @VR
(Uni)	(Bi)	(V)	Min (V)	Max (V)	(mA)	(V)	(A)	(uA)
5KP 48A	5KP 48CA	48.0	53.30	58.90	5	77.4	65.9	2
5KP 51A	5KP 51CA	51.0	56.70	62.70	5	82.4	61.9	2
5KP 54A	5KP 54CA	54.0	60.00	66.30	5	87.1	58.6	2
5KP 58A	5KP 58CA	58.0	64.40	71.20	5	93.6	54.5	2
5KP 60A	5KP 60CA	60.0	66.70	73.70	5	96.8	52.7	2
5KP 64A	5KP 64CA	64.0	71.10	78.60	5	103.0	49.5	2
5KP 70A	5KP 70CA	70.0	77.80	86.00	5	113.0	45.1	2
5KP 75A	5KP 75CA	75.0	83.30	92.10	5	121.0	42.1	2
5KP 78A	5KP 78CA	78.0	86.70	95.80	5	126.0	40.5	2
5KP 85A	5KP 85CA	85.0	94.40	104.00	5	137.0	37.2	2
5KP 90A	5KP 90CA	90.0	100.00	111.00	5	146.0	34.9	2
5KP 100A	5KP 100CA	100.0	110.00	123.00	5	162.0	31.5	2
5KP 110A	5KP 110CA	110.0	122.00	135.00	5	177.0	28.8	2
5KP 120A	5KP 120CA	120.0	133.00	147.00	5	193.0	26.4	2
5KP 130A	5KP 130CA	130.0	144.00	159.00	5	209.0	24.4	2
5KP 150A	5KP 150CA	150.0	167.00	185.00	5	243.0	21.0	2
5KP 160A	5KP 160CA	160.0	178.00	197.00	5	259.0	19.7	2
5KP 170A	5KP 170CA	170.0	189.00	209.00	5	275.0	18.5	2
5KP 180A	5KP 180CA	180.0	200.00	221.00	5	292.0	17.5	2
5KP 190A	5KP 190CA	190.0	211.00	233.00	5	310.0	16.5	2
5KP 200A	5KP 200CA	200.0	222.00	246.00	5	329.2	15.5	2
5KP 210A	5KP 210CA	210.0	233.00	258.00	5	349.5	14.6	2
5KP 220A	5KP 220CA	220.0	244.00	270.00	5	371.1	13.7	2
5KP 250A	5KP 250CA	250.0	277.00	306.00	5	425.0	12.0	2

Notes: For bidirectional type having VR of 10V and less, the IR limit is double.

Ratings and Characteristic Curves ($T_A = 25^\circ\text{C}$ unless otherwise noted)

Figure 1. Peak Pulse Power Rating Curve

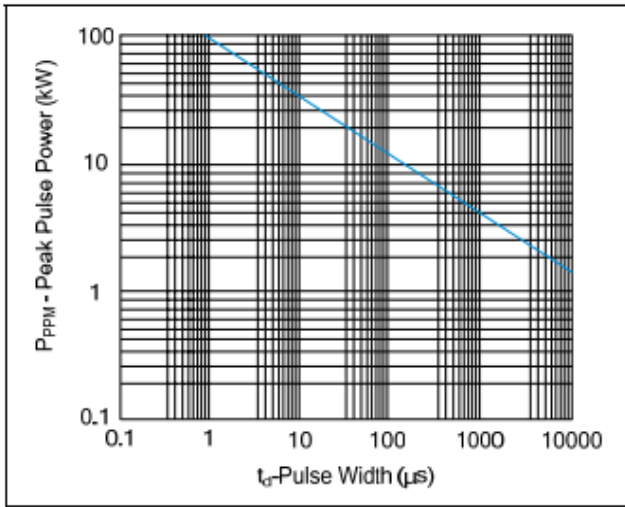


Figure 4. Typical Junction Capacitance

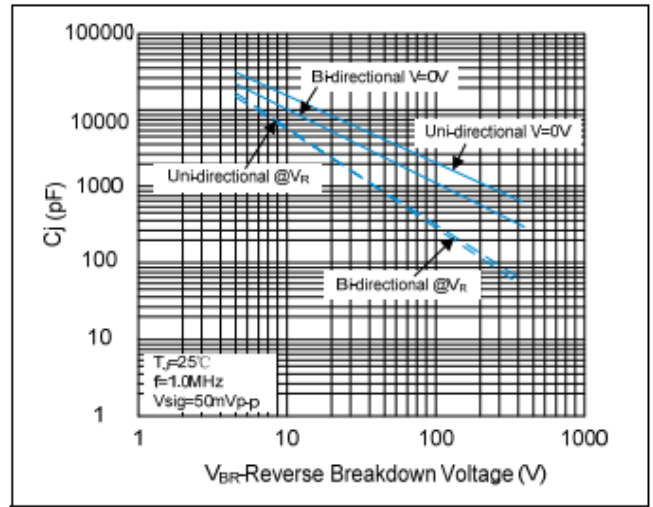


Figure 2. Pulse Derating Curve

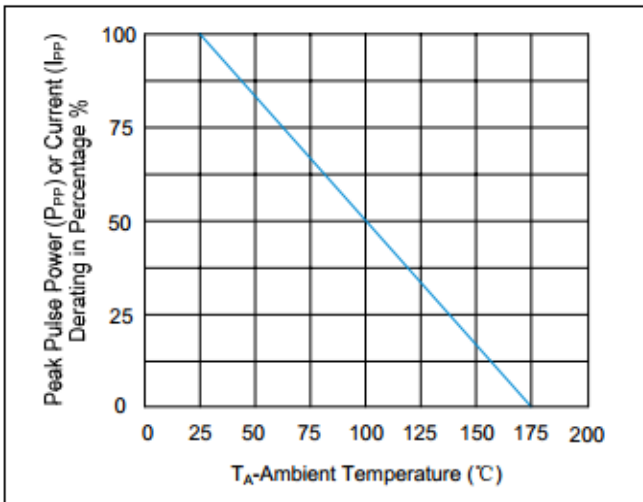


Figure 5. Steady State Power Dissipation Derating Curve

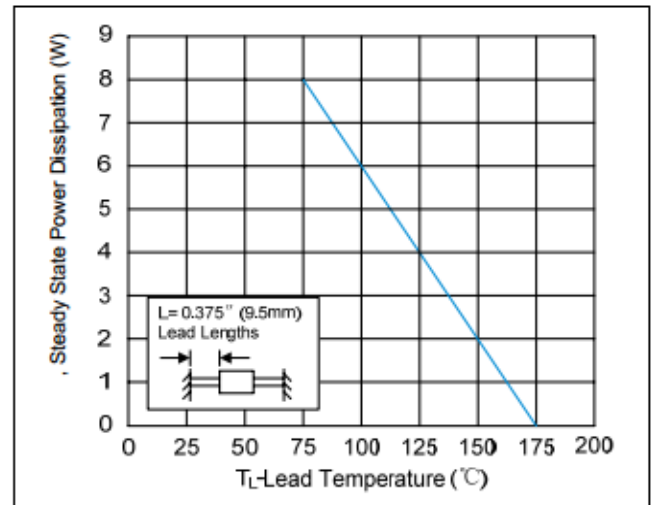


Figure 3. Pulse Waveform

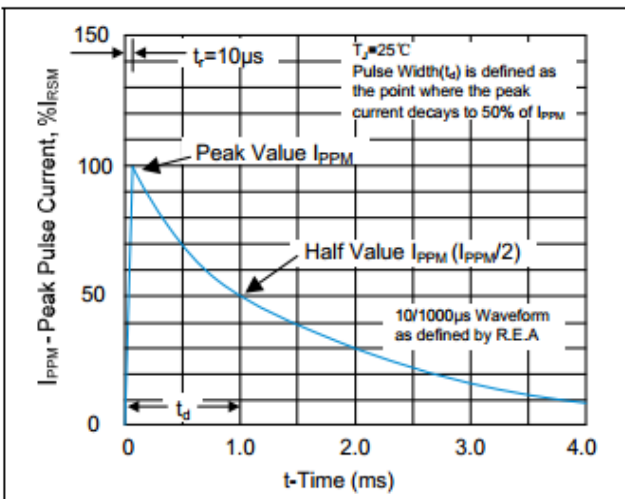
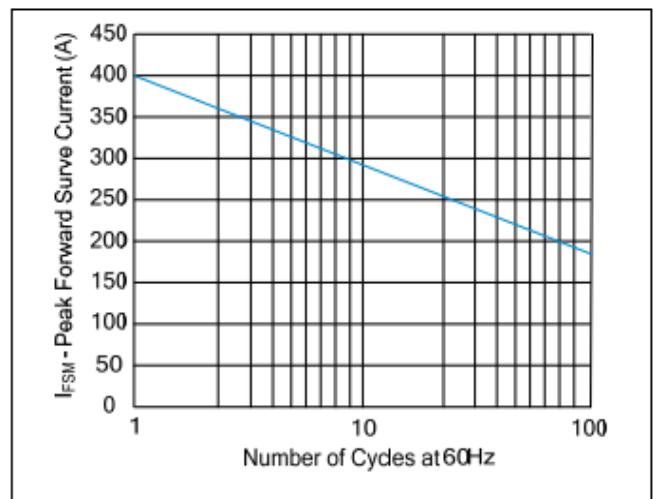
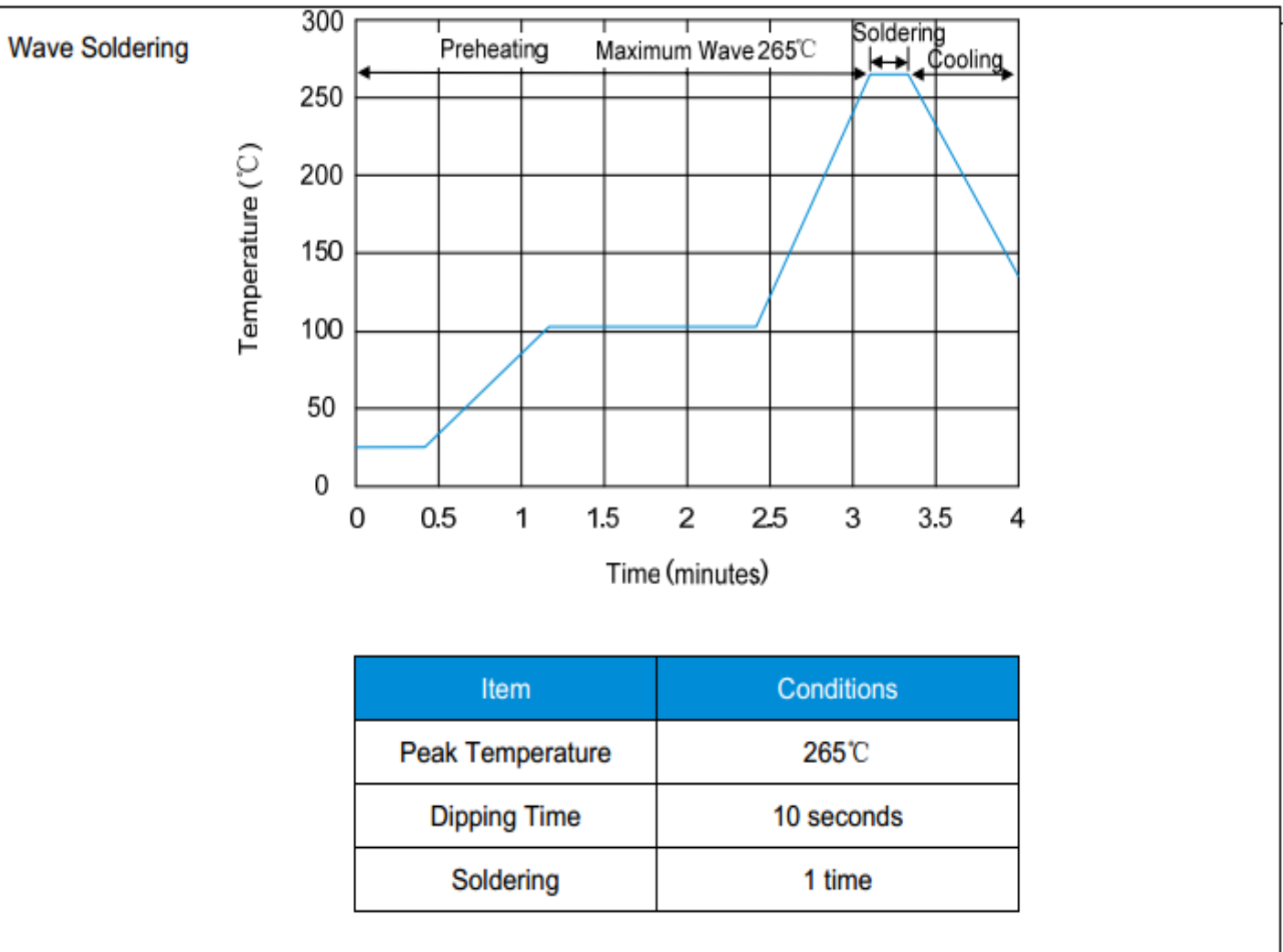


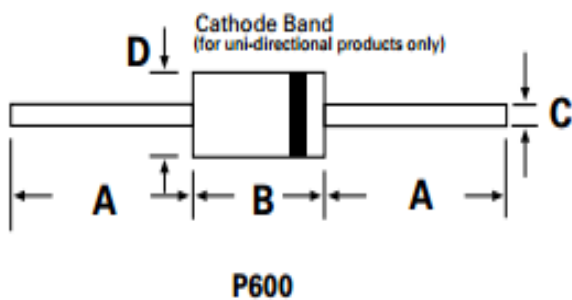
Figure 6. Maximum Non-Repetitive Forward Surge Current Uni-Directional Only



Recommended Soldering Conditions

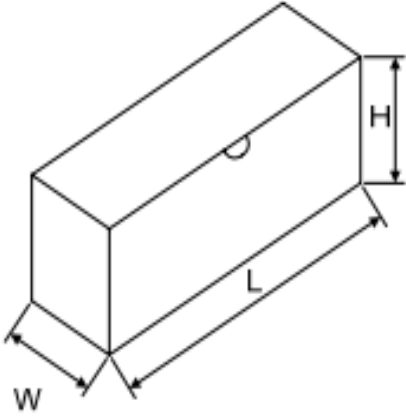


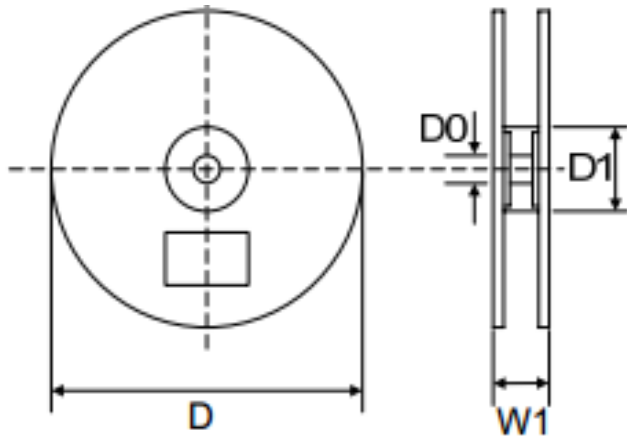
Dimensions



Dimensions	Inches		Millimeters	
	Min	Max	Min	Max
A	1.000	-	25.4	-
B	0.340	0.360	8.60	9.1
C	0.048	0.052	1.22	1.32
D	0.340	0.360	8.6	9.1

Packaging

<p>BOX</p> 	L	255.0±5.0
	W	77.0±5.0
	H	115.0±5.0
	Quantity: 300 PCS	

<p>REEL</p> 	D	Φ 330.0±3.0
	D0	Φ 16.4±2.0
	D1	Φ 86.0±2.0
	W1	76.0±3.0
	Quantity: 800 PCS	

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