



瞬变电压抑制二极管 Transient Voltage Suppressor Diodes

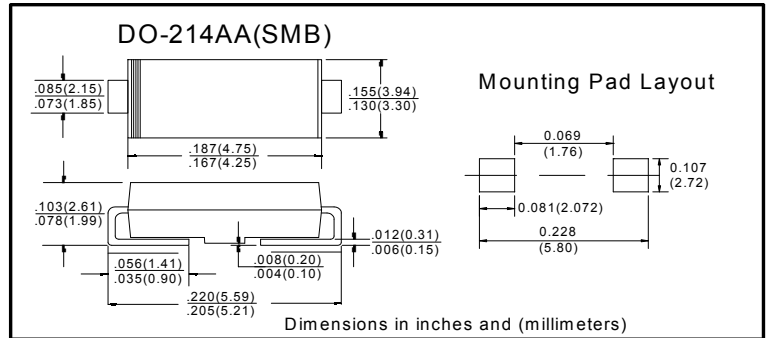
■特征 Features

- P_{PP} 600W
- V_{BR} 5.0V-440V

■用途 Applications

- 箝位电压用 Clamping Voltage

■外形尺寸和印记 Outline Dimensions and Mark



■极限值（绝对最大额定值）

Limiting Values (Absolute Maximum Rating)

参数名称 Item	符号 Symbol	单位 Unit	条件 Conditions	最大值 Max
最大损耗功率(1)(2) Peak power dissipation	P _{PPM}	W	在10/1000us 波形下测试 with a 10/1000us waveform	600
最大脉冲电流(1) Peak pulse current	I _{PPM}	A	在10/1000us 波形下测试 with a 10/1000us waveform	见下面表格 See Next Table
最大正向浪涌电流(2) Peak forward surge current	I _{FSM}	A	8.3ms正弦半波, 仅单向型 8.3 ms single half sine-wave unidirectional only	100
工作结温和存储温度范围 Operating junction and storage temperature range	T _J , T _{STG}	°C		-55 to +150

■电特性（T_a=25°C 除非另有规定）

Electrical Characteristics (T_a=25°C Unless otherwise specified)

参数名称 Item	符号 Symbol	单位 Unit	条件 Conditions	最大值 Max
最大瞬间正向电压 Maximum instantaneous forward Voltage	V _F	V	在50A下测试, 仅单向型 at 50A for unidirectional only	3.5
典型热阻 Thermal resistance	R _{θJL}	°C/W	结到引线 junction to lead	20
	R _{θJA}	°C/W	结到环境 junction to ambient	100

备注: Notes:

- (1) 不重复脉冲电流, 如图3, 在T_A= 25°C下功率降额曲线见如图2。
Non-repetitive current pulse, per Fig. 3 and derated above T_A= 25°C per Fig.2.
- (2) 每个端子安装在 0.2 x 0.2" (5.0 x 5.0 mm)铜焊盘上
Mounted on 0.2 x 0.2" (5.0 x 5.0 mm) copper pads to each terminal



P6SMB SERIES

■电性参数 (T_A=25°C 除非另有规定)

Electrical Characteristics (T_A =25°C unless otherwise noted)

产品型号 (单向) Part Number (Uni)	产品型号 (双向) Part Number (Bi)	击穿电压 V _{BR} @I _T Breakdown Voltage V _{BR} @I _T			最大反向漏电流 I _R @V _{WM} Maximum Reverse Leakage I _R ⁽³⁾ (μA)	最大工作电压 V _{RWM} Working Peak Reverse Voltage V _{RWM} (V)	最大反向浪涌 电流 IPP Maximum Reverse Surge Current IPP ⁽²⁾ (A)	最大箝位电压 Maximum Clamping Voltage V _c @ I _{PP} (V)
		最小 Min(V)	最大 Max (V)	测试电流 I _T ⁽¹⁾ (mA)				
P6SMB6.8A	P6SMB6.8CA	6.46	7.14	10	1000	5.8	57.1	10.5
P6SMB7.5A	P6SMB7.5CA	7.13	7.88	10	500	6.4	53.1	11.3
P6SMB8.2A	P6SMB8.2CA	7.79	8.61	10	200	7.0	49.6	12.1
P6SMB9.1A	P6SMB9.1CA	8.65	9.56	1	50	7.8	44.7	13.4
P6SMB10A	P6SMB10CA	9.50	10.50	1	10	8.6	41.3	14.5
P6SMB11A	P6SMB11CA	10.45	11.55	1	5	9.4	38.4	15.6
P6SMB12A	P6SMB12CA	11.40	12.60	1	5	10.2	35.9	16.7
P6SMB13A	P6SMB13CA	12.35	13.65	1	5	11.1	32.9	18.2
P6SMB15A	P6SMB15CA	14.25	15.75	1	5	12.8	28.3	21.2
P6SMB16A	P6SMB16CA	15.20	16.80	1	5	13.6	26.6	22.5
P6SMB18A	P6SMB18CA	17.10	18.90	1	5	15.3	23.8	25.2
P6SMB20A	P6SMB20CA	19.00	21.00	1	5	17.1	21.6	27.7
P6SMB22A	P6SMB22CA	20.90	23.10	1	5	18.8	19.6	30.6
P6SMB24A	P6SMB24CA	22.80	25.20	1	5	20.5	18.1	33.2
P6SMB27A	P6SMB27CA	25.65	28.35	1	5	23.1	16.0	37.5
P6SMB30A	P6SMB30CA	28.50	31.50	1	5	25.6	14.5	44.4
P6SMB33A	P6SMB33CA	31.35	34.65	1	5	28.2	13.1	45.7
P6SMB36A	P6SMB36CA	34.20	37.80	1	5	30.8	12.0	49.9
P6SMB39A	P6SMB39CA	37.05	40.95	1	5	33.3	11.1	53.9
P6SMB43A	P6SMB43CA	40.85	45.15	1	5	36.8	10.1	59.3
P6SMB47A	P6SMB47CA	44.65	49.35	1	5	40.2	9.2	64.8
P6SMB51A	P6SMB51CA	48.45	53.55	1	5	43.6	8.5	70.1
P6SMB56A	P6SMB56CA	53.20	58.80	1	5	47.8	7.8	77.0
P6SMB62A	P6SMB62CA	58.90	65.10	1	5	53.0	7.0	85.0
P6SMB68A	P6SMB68CA	64.60	71.40	1	5	58.1	6.5	92.0
P6SMB75A	P6SMB75CA	71.25	78.75	1	5	64.1	5.8	103.0
P6SMB82A	P6SMB82CA	77.90	86.10	1	5	70.1	5.3	113.0
P6SMB91A	P6SMB91CA	86.45	95.35	1	5	77.8	4.8	125.0
P6SMB100A	P6SMB100CA	95.00	105.00	1	5	85.5	4.3	137.0
P6SMB110A	P6SMB110CA	104.50	115.50	1	5	94.0	3.9	152.0
P6SMB120A	P6SMB120CA	114.00	126.00	1	5	102.0	3.6	165.0
P6SMB130A	P6SMB130CA	123.50	136.50	1	5	111.0	3.3	179.0
P6SMB150A	P6SMB150CA	142.50	157.50	1	5	128.0	2.9	207.0
P6SMB160A	P6SMB160CA	152.00	168.00	1	5	136.0	2.7	219.0
P6SMB170A	P6SMB170CA	161.50	178.50	1	5	145.0	2.5	234.0
P6SMB180A	P6SMB180CA	171.00	189.00	1	5	154.0	2.4	246.0



■ 电性参数 (T_A =25℃ 除非另有规定)

Electrical Characteristics (T_A =25℃ unless otherwise noted)

产品型号 (单向) Part Number (Uni)	产品型号 (双向) Part Number (Bi)	击穿电压 V _{BR} @I _T Breakdown Voltage V _{BR} @I _T			最大反向漏电流 I _R @V _{WM} Maximum Reverse Leakage I _R ⁽³⁾ (μA)	最大工作电压 V _{RWM} Working Peak Reverse Voltage V _{RWM} (V)	最大反向浪涌 电流 IPP Maximum Reverse Surge Current IPP ⁽²⁾ (A)	最大箝位电压 Maximum Clamping Voltage V _c @ I _{PP} (V)
		最小 Min(V)	最大 Max (V)	测试电 流 I _T ⁽¹⁾ (mA)				
P6SMB200A	P6SMB200CA	190.00	210.00	1	5	171.0	2.2	274.0
P6SMB220A	P6SMB220CA	209.00	231.00	1	5	185.0	1.8	328.0
P6SMB250A	P6SMB250CA	237.50	262.50	1	5	214.0	1.7	344.0
P6SMB300A	P6SMB300CA	285.00	315.00	1	5	256.0	1.4	414.0
P6SMB350A	P6SMB350CA	332.50	367.50	1	5	299.3	1.2	482.0
P6SMB380A	P6SMB380CA	361.00	399.00	1	5	324.9	1.1	524.4
P6SMB400A	P6SMB400CA	380.00	420.00	1	5	342.0	1.1	548.0
P6SMB440A	P6SMB440CA	418.00	462.00	1	5	376.2	1.0	607.2
P6SMB500A	P6SMB500CA	475.00	525.00	1	5	427.5	0.8	690.0
P6SMB520A	P6SMB520CA	494.00	546.00	1	5	444.6	0.8	717.6
P6SMB550A	P6SMB550CA	522.50	577.50	1	5	470.3	0.8	759.0
P6SMB600A	P6SMB600CA	570.00	630.00	1	5	513.0	0.7	828.0

备注: Notes:

(1) 脉冲测试: t_p≤50ms Pulse test: t_p≤50ms

(2) 浪涌电流波形, 如图3, 功率降额曲线如图2。

Surge current waveform per Fig. 3 and derated per Fig.2.

(3) 对于双向型, V_{WM}在10V及10V以下, I_R值加倍

For bi-directional types having V_{WM} of 10 V and less, the I_R limit is doubled



■特性曲线（典型） Characteristics(Typical)

图1: 最大脉冲功率曲线

FIG1: Peak Pulse Power Rating Curve

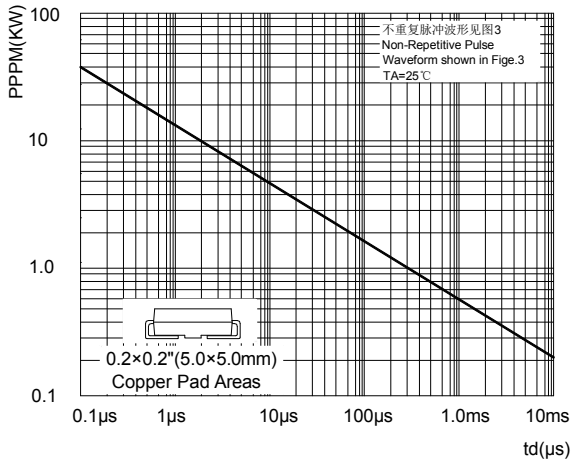


图2: 脉冲功率或电流与结温关系

FIG2: Pulse Power or Current vs. Initial Junction Temperature

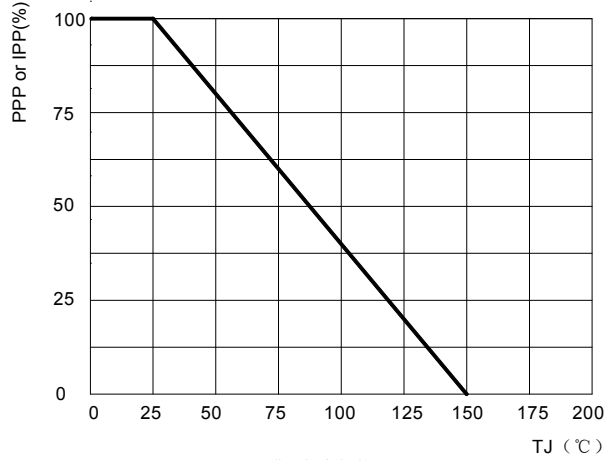


图3: 脉冲波形

FIG3: Pulse Waveform

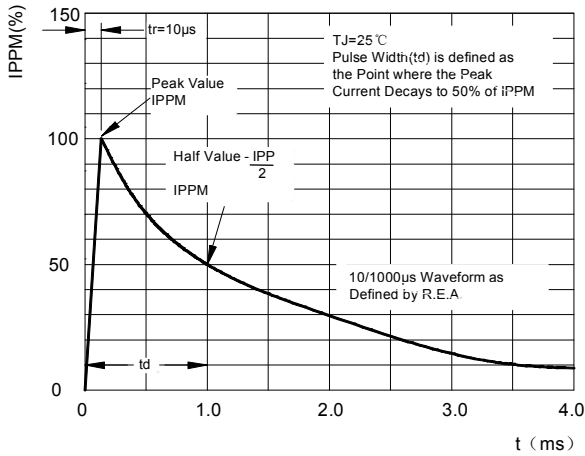


图4: 典型瞬态热阻

FIG4: Typical Transient Thermal Impedance

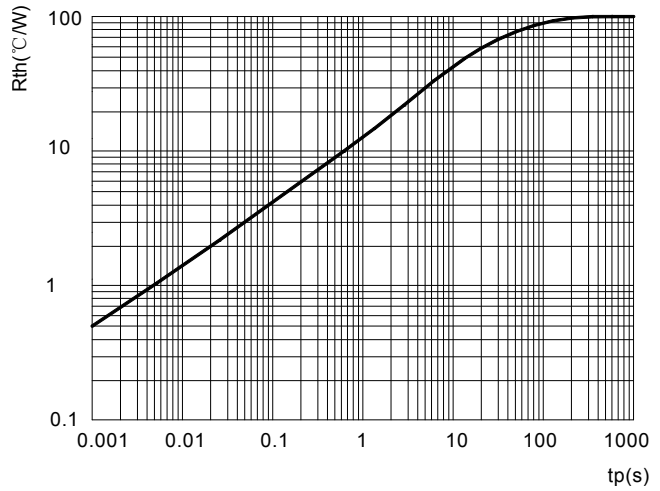
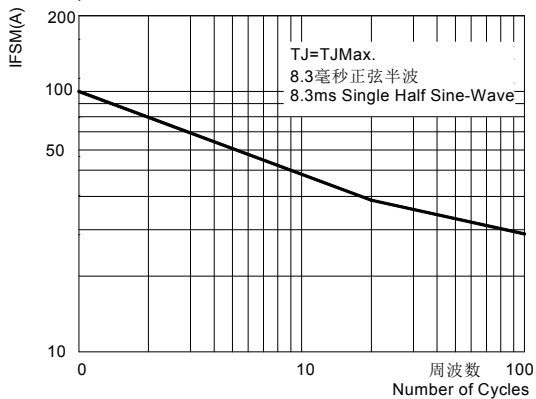


图5: 最大不重复浪涌电流

FIG5: Maximum Non-Repetitive Surge Current



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