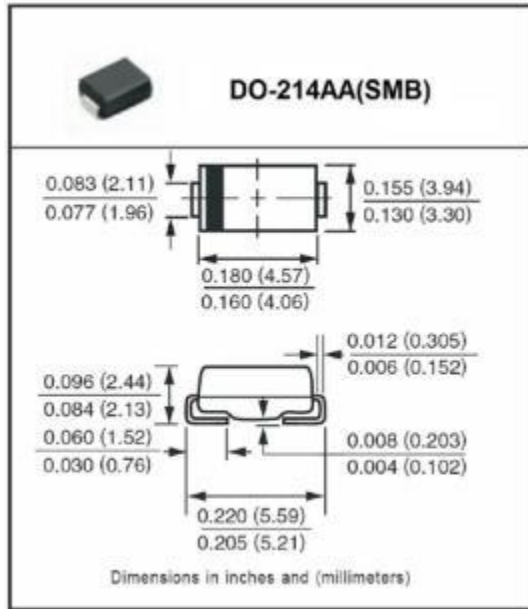


表面贴装瞬间抑制二极管
隔离电压30 V 峰值功
率600W

Surface Mount Transient Voltage Suppressors
Stand-off Voltage 30V Peak
Pulse Power 600W



特征 Features

- 表面安装应用 For surface mount applications
- 玻璃钝化芯片 Glass passivated junction
- 快速响应时间 Very fast response time
- 优良钳位能力 Excellent clamping capability
- 最高焊接温度 260°C/10 秒
- High temperature soldering guaranteed:
260°C/10 seconds at terminals
- 600W 峰值脉冲保护能力
600W peak pulse power capability
- 10/1000 μ s 波形, 重复率:0.01%
A 10/1000 μ s waveform, repetition rate (duty cycle):
0.01%
- 引线 and 管体皆符合 RoHS 标准。
Lead and body according with RoHS standard
- 符合 AEC-Q101 标准 AEC-Q101 qualified

机械数据 Mechanical Data

- 封装: 塑料封装 Case: Molded plastic body
- 端子: 焊料被镀 Terminals: Solder plated
- 极性: 色环端为负极 Polarity: Color band denotes cathode end
- 安装位置: 任意 Mounting Position: Any
- 重量 0.003盎司, 0.093克 Weight: 0.003 ounce, 0.093 gram

产品的双向应用 Devices for Bidirectional Applications

“BI” 为双向, 使用 “CA” 作后缀(如: P6SMB30CAQ) For bi-directional devices, use suffix CA (e.g. P6SMB30CAQ).

极限值和温度特性 $T_A = 25^\circ\text{C}$ 除非另有规定。

Maximum Ratings & Thermal Characteristics Ratings at 25°C ambient temperature unless otherwise specified.

Parameter	Symbol	Value	Unit
峰值脉最大冲功率 Peak pulse power dissipation with a 10/1000 μ s waveform ^(1, 2) (see fig. 1)	P_{PPM}	600	W
耗散功率 Power Dissipation on Infinite Heat Sink at $T_A = 50^\circ\text{C}$	$P_{M(AV)}$	5.0	W
最大峰值脉冲电流 Peak pulse current with a 10/1000 μ s waveform ⁽¹⁾	I_{PPM}	See Next Table	A
正向峰值浪涌电流 8.3ms 单一正弦半波 Peak forward surge current 8.3ms single half sine-wave uni-directional only ⁽³⁾	I_{FSM}	100	A
最大瞬时正向电压 Maximum Instantaneous Forward Voltage at 50A for Unidirectional Only (Note 4)	V_F	3.5/6.5	V
典型热阻 Typical thermal resistance ⁽³⁾	$R_{\theta JA}$ $R_{\theta JL}$	100 20	$^\circ\text{C/W}$
工作结温和存储温度 Operating junction and storage temperature range	T_J, T_{STG}	-55---+150	$^\circ\text{C}$

Notes:

1. Non-repetitive current pulse, per Fig.3 and derated above $T_A = 25^\circ\text{C}$ per Fig. 2.
2. Mounted on 5.0x5.0mm copper pad to each terminal.
3. Measured on 8.3ms single half sine wave or equivalent square wave for unidirectional device only.
4. $V_F < 3.5\text{V}$ for $V_{BR} < 200\text{V}$ and $V_F < 6.5\text{V}$ for $V_{BR} > 201\text{V}$.

P6SMB30CAQ

Surface Mount Transient Voltage Suppressors

Electrical Characteristics

[illegible]

For bidirectional type having VRWM of 10 volts and less, the IR limit is double.

For parts without A (VBR is + 10% and VC is 5% higher than with A parts).

Surface Mount Transient Voltage Suppressors

RATING AND CHARACTERISTIC CURVES

Figure 1 - Peak Pulse Power Rating

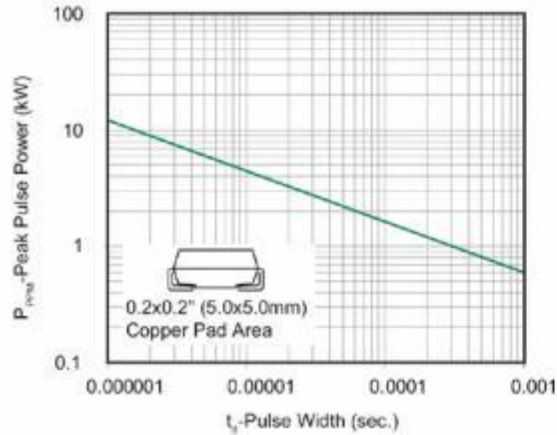


Figure 2 - Peak Pulse Power or Current Derating Curve vs Initial Junction Temperature

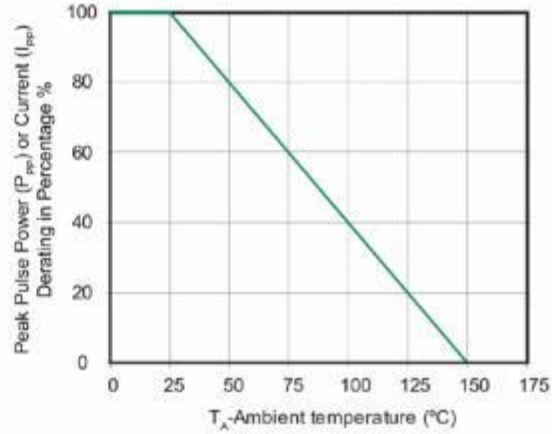


Figure 3 - Pulse Waveform

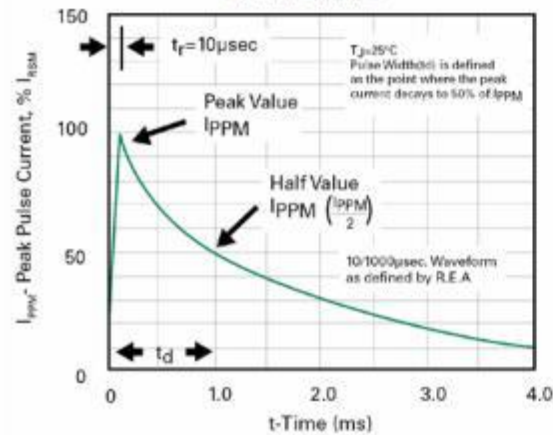


Figure 4 - Typical Junction Capacitance

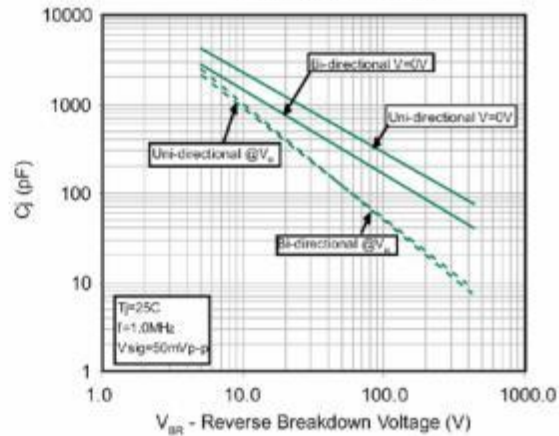


Figure 5 - Steady State Power Derating Curve

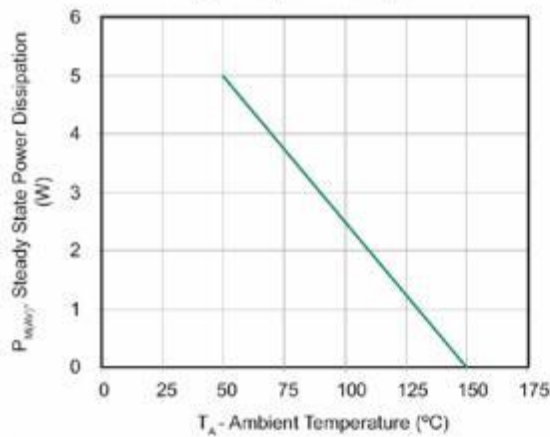
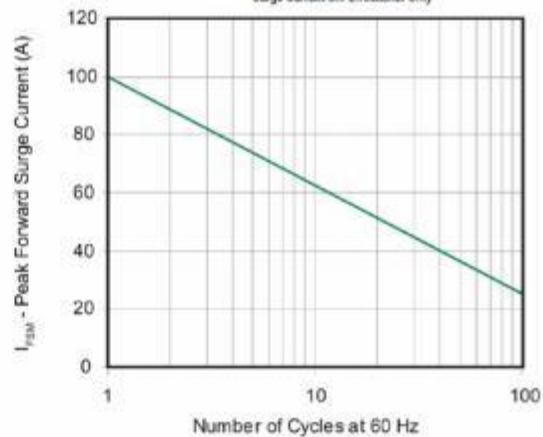
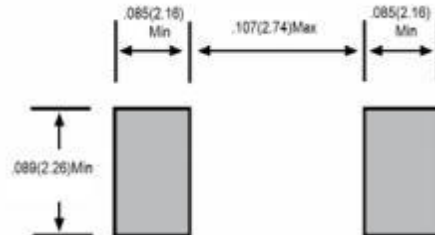


Figure 6 - Maximum Non-Repetitive Peak Forward Surge Current (Unidirectional Only)



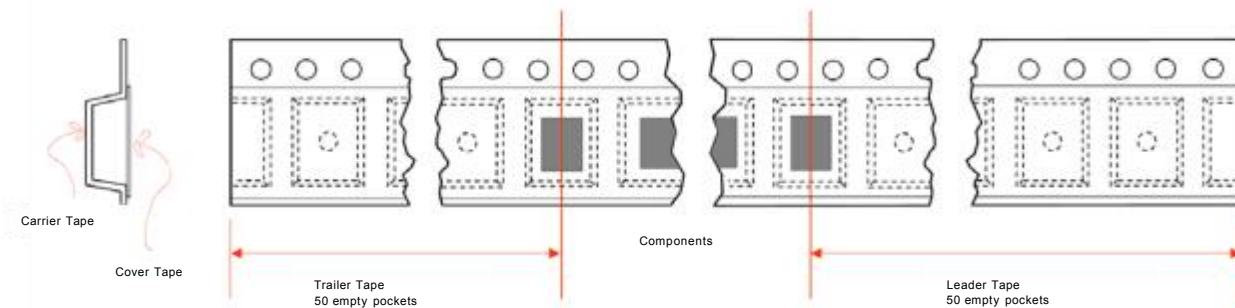
Mounting Pad Layout



Packing

Part number	Component Package	Quantity	Packaging Option
P6SMB30CAQ	DO-214AA SMB	3000	Tape & Reel – 12mm/13” tape

DO-214AA SMB Tape Leader and Trailer Configuration



Tape and Reel Specification

