# HSM6T10(C)A

Transient Voltage Suppressor

## Features

- 800W Peak Pulse Power Dissipation
- Uni- and Bi-Directional Versions Available
  Excellent Clamping Capability
- Glass Passivated Die Construction
- Low inductance
- Fast Response Time
- Plastic Material: UL Flammability Classification
  Rating 94V-0




SMB
(DO-214AA)

## Mechanical Data

- Case: SMB Molded plastic body
- Terminals: Solderable per MIL-STD-750,Method 2026

## Applications

- I/O interface
- AC/DC power supply
- Low frequency signal transmission line
  (RS232,RS485,etc.)

## Maxmim Ratings (Ta=25°C unless otherwise noted)

| | | | |
|---|---|---|---|
| Peak pulse power dissipation at 10/1000μs waveform (Note1, Note2, Fig.1) | $P_{PPM}$ | 800 | W |
| Peak pulse current | $I_{PP}$ | 41.7 | A |
| Steady state power dissipation at $T_A$=50℃ (Fig.5) | $P_{M(AV)}$ | 1 | W |
| Peak forward surge current, 8.3ms single half sine-wave superimposed on rated load, (JEDEC Method) (Note3, Fig.6) | $I_{FSM}$ | 100 | A |
| Operating junction and Storage Temperature Range. | $T_J$,$T_{STG}$ | -55 to +150 | °C |
| Typical thermal resistance junction to lead | $R_{\theta JL}$ | 30 | °C/W |
| Typical thermal resistance junction to ambient | $R_{\theta JA}$ | 100 | °C/W |

Notes:1. Non-repetitive current pulse, per Fig.3 and derated above $T_A$=25℃ per Fig.2.
2. Mounted on 5.0mm×5.0mm (0.03mm thick) copper pads to each terminal.
3. 8.3ms single half sine-wave, or equivalent square wave, duty cycle=4 pulses per minutes maximum.

## Electrical Characteristics (Ta=25°C)

| Part Number | | Device Marking Code | | Reverse Stand- Off Voltage | Breakdown Voltage @$I_T$ | Test Current | Maximum Clamping Voltage @$I_{PP}$ | Peak Pulse Current | Reverse Leakage @$V_{RWM}$ |
|---|---|---|---|---|---|---|---|---|---|
| Unidirectional | Bidirectional | UNI | BI | $V_{RWM}$(V) | $V_{BR}$(V) | $I_T$(mA) | $V_C$(V) | $I_{PP}$(A) | $I_R$(μA) |
| HSM6T10A | HSM6T10CA | KT | AT | 8.5 | 9.44-10.40 | 1 | 14.4 | 41.7 | 20 |

## Ratings and Characteristic Curves ($T_A$=25℃ unless otherwise noted)

Figure 1. Peak Pulse Power Rating Curve

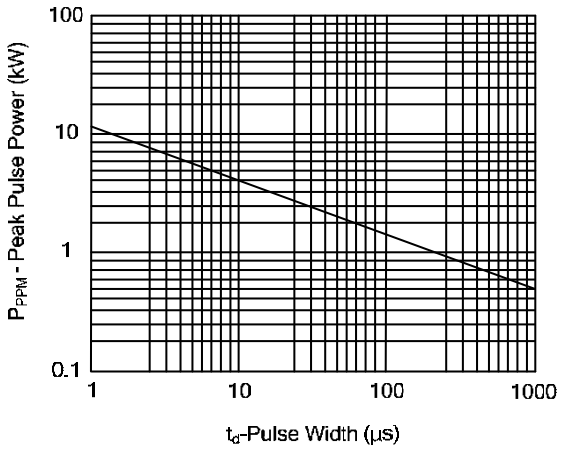



Figure 2. Pulse Derating Curve

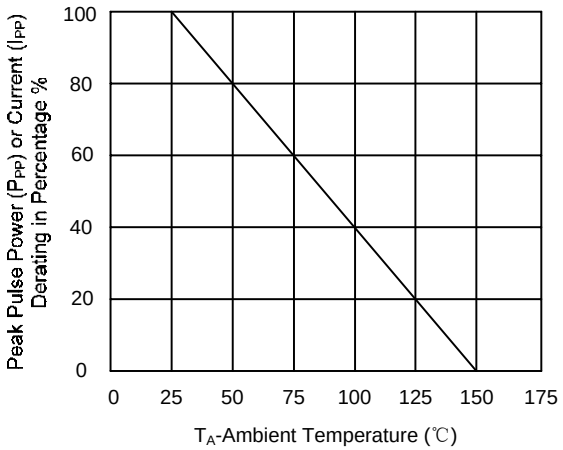



Figure 3. Pulse Waveform

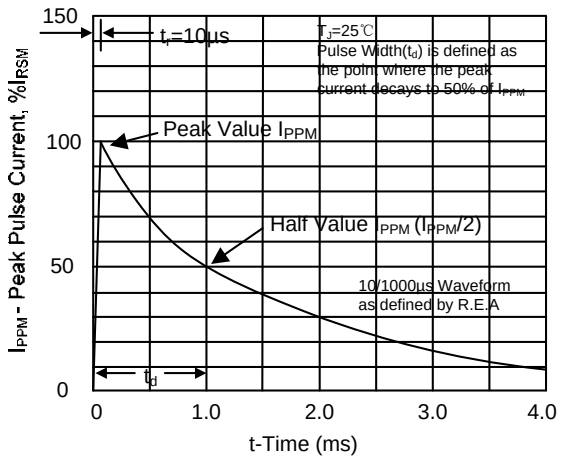



Figure 4. Typical Junction Capacitance

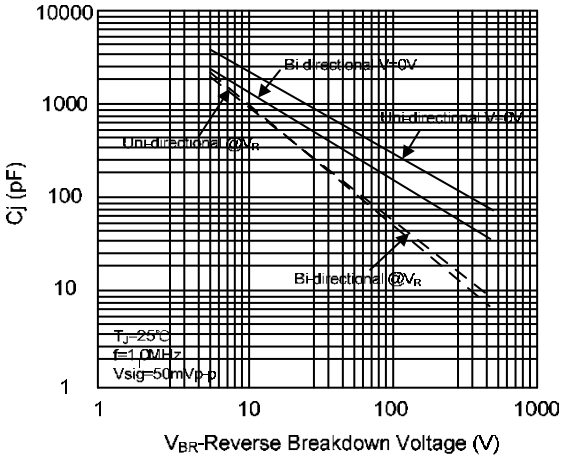



Figure 5. Steady State Power Dissipation Derating Curve

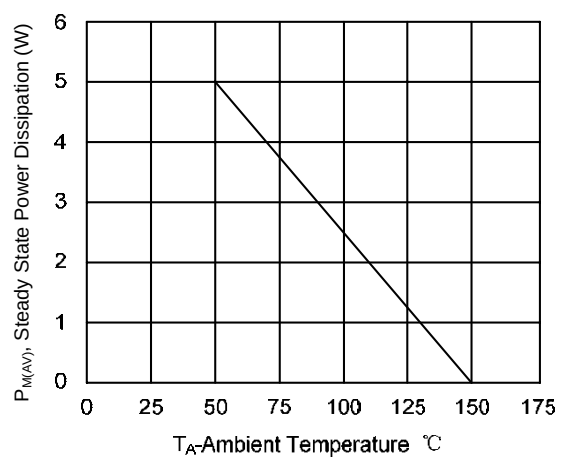
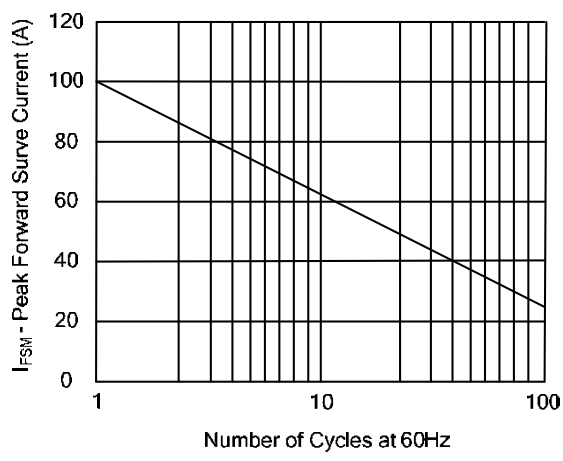
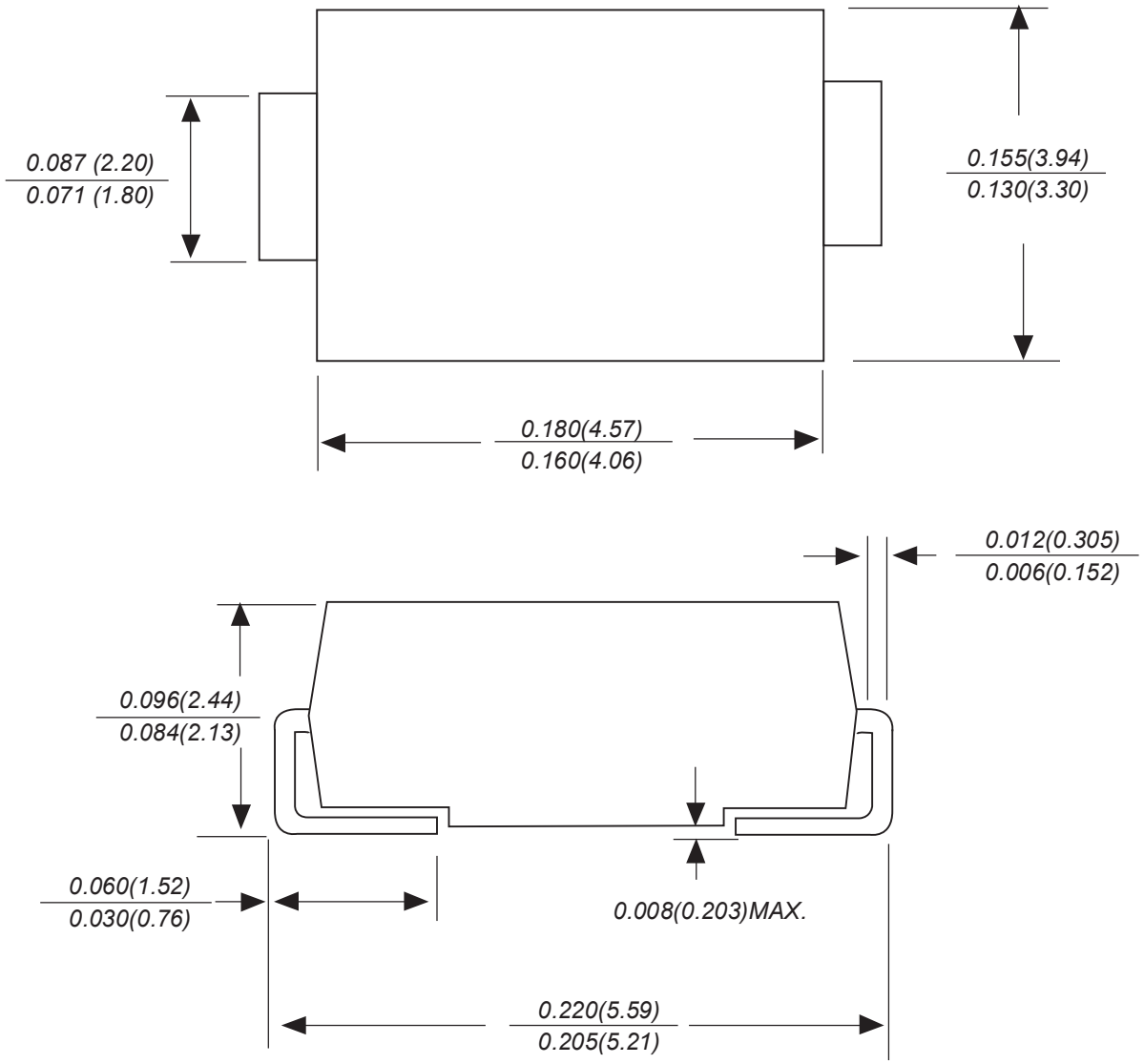



Figure 6. Maximum Non-Repetitive Forward Surge Current Uni-Directional Only



## Package Outline Dimensions

SMB(DO-214AA)




*Dimensions in inches and (millimeters)*

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## HXY MOSFET:

CH440G IRLML2244TRPBF-HXY S3D08065E TPD1E0B04DPYR 1SMB5934B BD237STU C4D08120E-TR ISL28133FHZ-T7 TPS7A0533PDBZR-HXY 1SMB5930BT3G 2N7002-HXY C3M0040120D DMPH6250SQ-13 DSC06065 IDL10G65C5XUMA2 MSC040SMA120B4 PTVSHC3D5VU HBAS40-05LT1G MJD127G SGM3798YG/TR TLV74318PDBVR-HXY S4D15120H C6D06065Q-TR AOD403-HXY SG3525-HXY SS5150 E4D10120A ISL28233FUZ-T7 MUR1040FCT Si2323DS-T1-E3-HXY