

MSKSEMI

SEMICONDUCTOR



ESD



TVS



TSS



MOV



GDT



PLED

Product data sheet



SMB

Features

- Low capacitance
- Cannot be damaged by voltage
- Will not fatigue
- Eliminate voltage overshoot
- Glass passivated junction
- Halogen free and RoHS compliant

Mechanical Data

- CASE: SMB(DO-214AA) Molded Plastic
- UL Flammability Classification Rating 94V0
- Mounting Position:Any

Maximum Ratings & Thermal Characteristics

(Ratings at 25°C ambient temperature unless otherwise specified.)

| Parameter | Symbol | Value | Units | Remarks |
|--|-----------------|------------|-------|---------------|
| Peak Pulse Voltage | V_{PP} | 6000 | V | 10/700us |
| Peak Pulse Current | I_{PP} | 100 | A | 10/1000u s |
| Peak Pulse Current | I_{PK} | 400 | A | 8/20us |
| Peak One-cycle Surge Current | I_{TSM} | 30 | A | 60Hz |
| Rate of Rise of Current | di/dt | 500 | A/us | |
| Typical Thermal Resistance Junction to Lead | $R_{\theta JL}$ | 20 | °C/W | |
| Typical Thermal Resistance Junction to Ambient | $R_{\theta JA}$ | 100 | °C/W | |
| Operating Temperature Range | T_J | -40 to 150 | °C | |
| Storage Temperature Range | T_{STG} | -55 to 150 | °C | |

Electrical Characteristics

(Ratings at 25 °C ambient temperature unless otherwise specified).

| Part Number | Marking | V _s @100KV/S V MAX | I _{S_LMT} mA | V _T @ I _T V MAX | I _T A | I _D @ V _D uA MAX | V _D V | C _O @1MHz,2V _{DC} pF TYP | I _H mA MIN |
|-------------|--------------|-------------------------------------|--------------------------|---|---------------------|--|---------------------|--|-----------------------------|
| P0080SC-MS | E-8C XXXX | 25 | 500 | 4 | 2.2 | 5 | 6 | 105 | 40 |
| P0220SC-MS | P02C XXXX | 30 | 500 | 4 | 2.2 | 5 | 15 | 105 | 40 |
| P0300SC-MS | P03C XXXX | 40 | 500 | 4 | 2.2 | 5 | 25 | 100 | 40 |
| P0640SC-MS | P06C XXXX | 77 | 800 | 4 | 2.2 | 5 | 58 | 95 | 120 |
| P0720SC-MS | P07C XXXX | 88 | 800 | 4 | 2.2 | 5 | 65 | 95 | 120 |
| P0900SC-MS | P09C XXXX | 98 | 800 | 4 | 2.2 | 5 | 75 | 95 | 120 |
| P1100SC-MS | P11C XXXX | 130 | 800 | 4 | 2.2 | 5 | 90 | 90 | 120 |
| P1300SC-MS | P13C XXXX | 160 | 800 | 4 | 2.2 | 5 | 120 | 90 | 120 |
| P1500SC-MS | P15C XXXX | 180 | 800 | 4 | 2.2 | 5 | 140 | 85 | 120 |
| P1800SC-MS | P18C XXXX | 220 | 800 | 4 | 2.2 | 5 | 170 | 80 | 120 |
| P2300SC-MS | P23B XXXX | 260 | 800 | 4 | 2.2 | 5 | 190 | 75 | 120 |
| P2600SC-MS | P26C XXXX | 300 | 800 | 4 | 2.2 | 5 | 220 | 70 | 120 |
| P3100SC-MS | P31C XXXX | 350 | 800 | 4 | 2.2 | 5 | 275 | 65 | 120 |
| P3500SC-MS | P35C XXXX | 400 | 800 | 4 | 2.2 | 5 | 320 | 60 | 120 |
| P4500SC-MS | P45C XXXX | 550 | 800 | 4 | 2.2 | 5 | 400 | 45 | 120 |

Ratings and Characteristic Curves

(Ratings at 25°C ambient temperature unless otherwise specified).

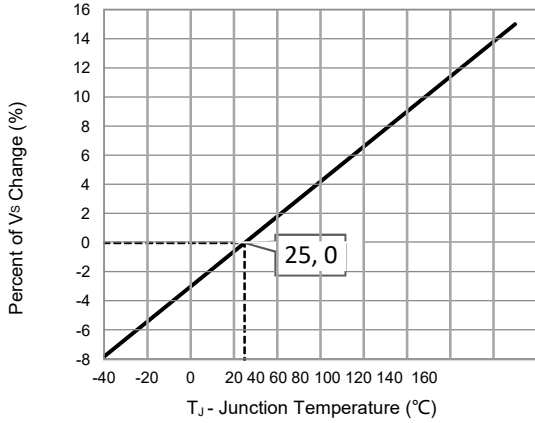


Fig. 1 - Peak Pulse Current Rating

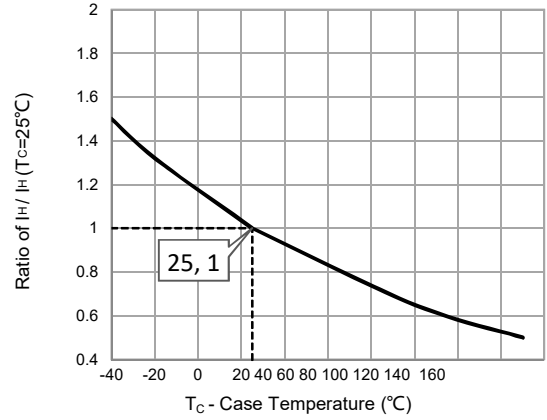


Fig. 2 - Normalized DC Holding Current vs. Case Temperature

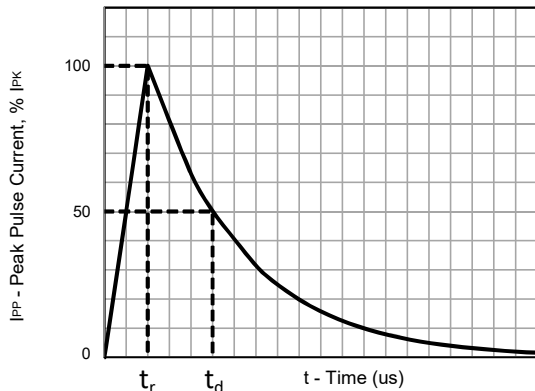


Fig. 3 - tr/td us Pulse Waveform

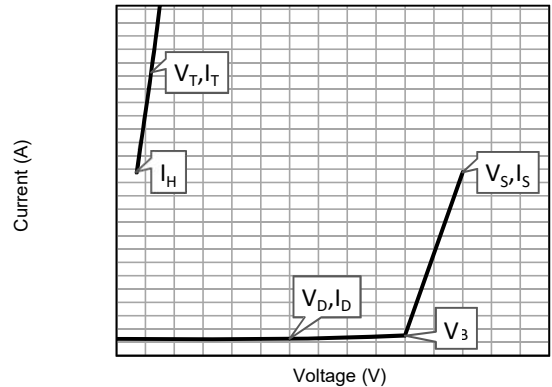


Fig. 4 - VI Curve

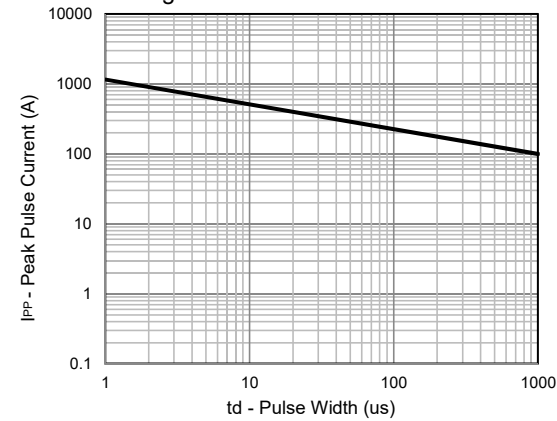


Fig. 5 - Peak Pulse Current Rating

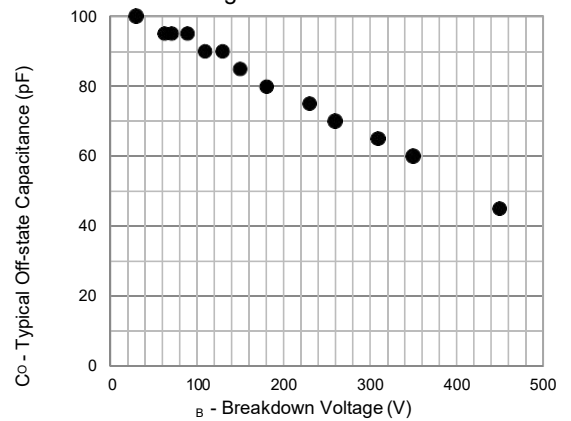
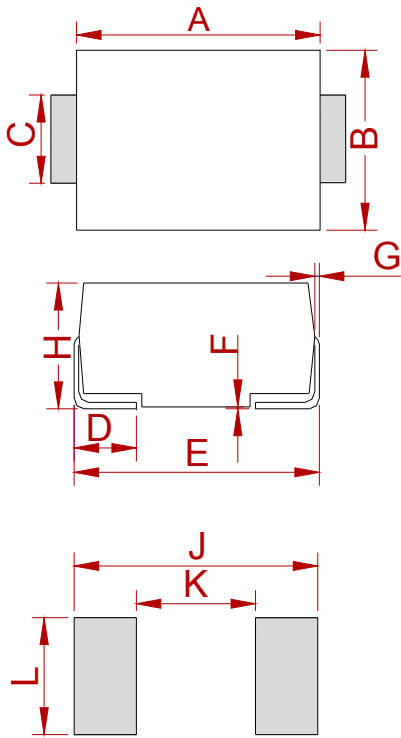


Fig. 6 - Typical Off-state Capacitance

PACKAGE MECHANICAL DATA



DO-214AA (SMB)

| Ref. | Dimensions | | | |
|------|-------------|-------|--------|-------|
| | Millimeters | | Inches | |
| | Min. | Max. | Min. | Max. |
| A | 4.25 | 4.75 | 0.167 | 0.187 |
| B | 3.30 | 3.94 | 0.130 | 0.155 |
| C | 1.85 | 2.21 | 0.073 | 0.087 |
| D | 0.76 | 1.52 | 0.030 | 0.060 |
| E | 5.08 | 5.59 | 0.200 | 0.220 |
| F | 0.051 | 0.203 | 0.002 | 0.008 |
| G | 0.15 | 0.31 | 0.006 | 0.012 |
| H | 2.11 | 2.44 | 0.083 | 0.096 |
| J | 6.80 | | 0.270 | |
| K | | 2.60 | | 0.100 |
| L | 2.40 | | 0.090 | |

REEL SPECIFICATION

| P/N | PKG | QTY |
|------------|-----|------|
| PxxxxSC-MS | SMB | 3000 |

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