

MDE Semiconductor, Inc.

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1-800-831-4881 Email: sales@mdesemiconductor.com Web: www.mdesemiconductor.com

BIDIRECTIONAL THYRISTOR SURGE SUPPRESSOR SERIES

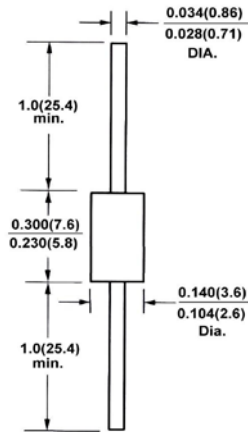
SURFACE MOUNT SMB AND AXIAL LEAD DO-15

FEATURES

- UL94V-0 Flammability Classification
- ESD Protection >40 kilovolts
- Low Capacitance for T1/E1 Trunk and Line Card Application
- High Surge Current Capability(See Electrical Characteristics)**

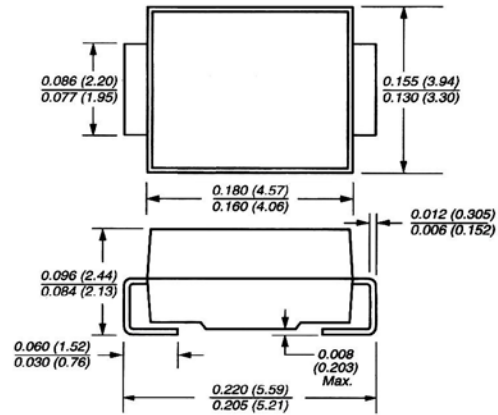
- Peak Off-State Voltage from 58 to 300 volts
- Meet IEC100-4-4 & -5 Industry Requirement
- Provides Protection in Accordance with FCC Part 68,UL1459,Bellcore 1089,ITU-TK. 20 & K. 21

DO-204AC (DO-15)



MECHANICAL DATA

DO-214AA (SMB J-Bend)



MECHANICAL DATA

Case: JEDEC DO-15 Molded plastic over passivated junction

Terminals: Tin Plated Axial leads, solderable per

MIL-STD-750, Method 2026

Mounting Position: Any

Weight: 0.015 ounce, 0.4 gram

Case: JEDEC DO214AA. Molded plastic over glass passivated junction

Terminal: Solder plated, solderable per MIL-STD-750, Method 2026

Standard Packaging: 12mm tape (EIA STD RS-481)

Weight: 0.003 ounce, 0.093 gram

| MDE PART NUMBER | MARKING CODE FOR AXIAL DO-15 PACKAGE | MARKING CODE FOR SMB PACKAGE | REPETITIVE PEAK OFF-STAGE VOLTAGE VDRM VOLTS | SWITCHING VOLTAGE @ 100V/us Vs VOLTS | MINIMUM HOLDING CURRENT dl/dt=1A/ms IH mA | SWITCHING CURRENT Is mA | SURGE RATINGS IPP 10x1000 μS Amps | ON-STAGE CURRENT IT A | TYPICAL CAPACITANCE @50V,1MHz pF |
|-----------------|--------------------------------------|------------------------------|--|--------------------------------------|---|-------------------------|-----------------------------------|-----------------------|----------------------------------|
| P0640SA | P0640SAL | GC | 58 | 77 | 150 | 800 | 50 | 1 | 60 |
| P0720SA | P0720SAL | GD | 65 | 88 | 150 | 800 | 50 | 1 | 60 |
| P0800SA | P0800SAL | GE | 75 | 98 | 150 | 800 | 50 | 1 | 60 |
| P1100SA | P1100SAL | GF | 90 | 130 | 150 | 800 | 50 | 1 | 60 |
| P1300SA | P1300SAL | GG | 120 | 160 | 150 | 800 | 50 | 1 | 40 |
| P1500SA | P1500SAL | GH | 140 | 180 | 150 | 800 | 50 | 1 | 40 |
| P1800SA | P1800SAL | GI | 160 | 220 | 150 | 800 | 50 | 1 | 40 |
| P2300SA | P2300SAL | GJ | 190 | 260 | 150 | 800 | 50 | 1 | 30 |
| P2600SA | P2600SAL | GK | 220 | 300 | 150 | 800 | 50 | 1 | 30 |
| P3100SA | P3100SAL | GL | 275 | 350 | 150 | 800 | 50 | 1 | 30 |
| P3500SA | P3500SAL | GM | 300 | 400 | 150 | 800 | 50 | 1 | 30 |
| P4000SA | P4000SAL | GO | 360 | 450 | 150 | 800 | 35 | 1 | 30 |

Maximum Off-State Current @ V_{DRM} : 5μA

Maximum On-State Voltage @ I_T : 5volts

For AXIAL devices,use suffix L (e.g. P3100AL) electrical charactics apply in both AXIAL and Surface Mounted Devices.

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BIDIRECTIONAL THYRISTOR SURGE SUPPRESSOR SERIES

SURFACE MOUNT SMB AND AXIAL LEAD DO-15

| MDE PART NUMBER | MARKING CODE FOR AXIAL DO-15 PACKAGE | MARKING CODE FOR SMB PACKAGE | REPETITIVE PEAK OFF-STAGE VOLTAGE VDRM VOLTS | SWITCHING VOLTAGE @100V/us Vs VOLTS | MINIMUM HOLDING CURRENT dl/dt=1A/ms IH mA | SWITCHING CURRENT Is mA | SURGE RATINGS IPP 10x1000 μS Amps | ON-STAGE CURRENT IT A | TYPICAL CAPACITANCE @50V,1MHz pF |
|-----------------|--------------------------------------|------------------------------|--|-------------------------------------|---|-------------------------|-----------------------------------|-----------------------|----------------------------------|
| P0640SB | P0640SBL | GP | 58 | 77 | 150 | 800 | 80 | 1 | 100 |
| P0720SB | P0720SBL | GQ | 65 | 88 | 150 | 800 | 80 | 1 | 100 |
| P0800SB | P0800SBL | GR | 75 | 98 | 150 | 800 | 80 | 1 | 100 |
| P1100SB | P1100SBL | GS | 90 | 130 | 150 | 800 | 80 | 1 | 100 |
| P1300SB | P1300SBL | GT | 120 | 160 | 150 | 800 | 80 | 1 | 70 |
| P1500SB | P1500SBL | GU | 140 | 180 | 150 | 800 | 80 | 1 | 70 |
| P1800SB | P1800SBL | GV | 160 | 220 | 150 | 800 | 80 | 1 | 70 |
| P2300SB | P2300SBL | GW | 190 | 260 | 150 | 800 | 80 | 1 | 50 |
| P2600SB | P2600SBL | GX | 220 | 300 | 150 | 800 | 80 | 1 | 50 |
| P3100SB | P3100SBL | GY | 275 | 350 | 150 | 800 | 80 | 1 | 40 |
| P3500SB | P3500SBL | GZ | 300 | 400 | 150 | 800 | 80 | 1 | 40 |
| P4000SB | P4000SBL | GN | 360 | 400 | 150 | 800 | 80 | 1 | 40 |
| P0640SC | P0640SCL | HC | 58 | 77 | 150 | 800 | 100 | 1 | 100 |
| P0720SC | P0720SCL | HD | 65 | 88 | 150 | 800 | 100 | 1 | 100 |
| P0800SC | P0800SCL | HE | 75 | 98 | 150 | 800 | 100 | 1 | 100 |
| P1100SC | P1100SCL | HF | 90 | 130 | 150 | 800 | 100 | 1 | 100 |
| P1300SC | P1300SCL | HG | 120 | 160 | 150 | 800 | 100 | 1 | 70 |
| P1500SC | P1500SCL | HH | 140 | 180 | 150 | 800 | 100 | 1 | 70 |
| P1800SC | P1800SCL | HI | 160 | 220 | 150 | 800 | 100 | 1 | 70 |
| P2300SC | P2300SCL | HJ | 190 | 260 | 150 | 800 | 100 | 1 | 50 |
| P2600SC | P2600SCL | HK | 220 | 300 | 150 | 800 | 100 | 1 | 50 |
| P3100SC | P3100SCL | HL | 275 | 350 | 150 | 800 | 100 | 1 | 40 |
| P3500SC | P3500SCL | HM | 300 | 400 | 150 | 800 | 100 | 1 | 40 |
| P4000SC | P4000SCL | HS | 360 | 450 | 150 | 800 | 100 | 1 | 40 |

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BIDIRECTIONAL THYRISTOR SURGE SUPPRESSOR SERIES RATINGS AND CHARACTERISTIC CURVES

Fig.1 Pulse Wave Form Example

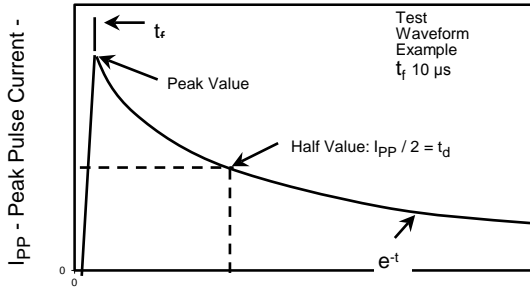


Fig.2 Typical Peak Off-State Current Vs Junction Temperature

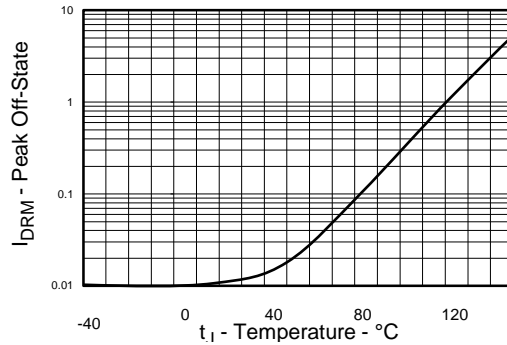


Fig.3 Typical On-State Current

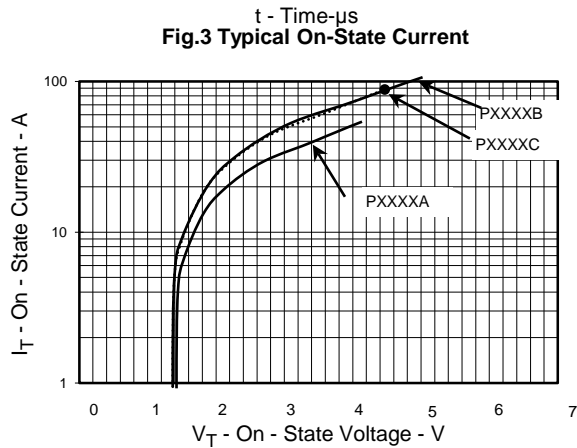


Fig.4 Typical Holding Current Vs

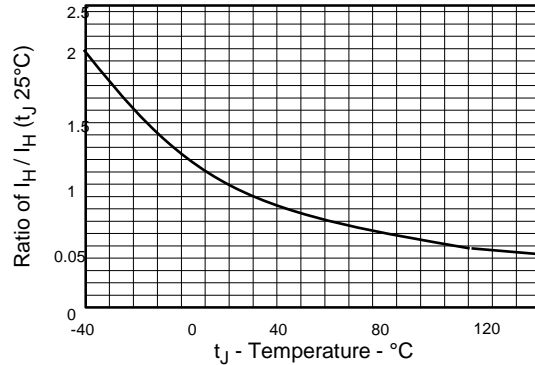


Fig.5 Typical normalized V_S Vs Junction Temperature

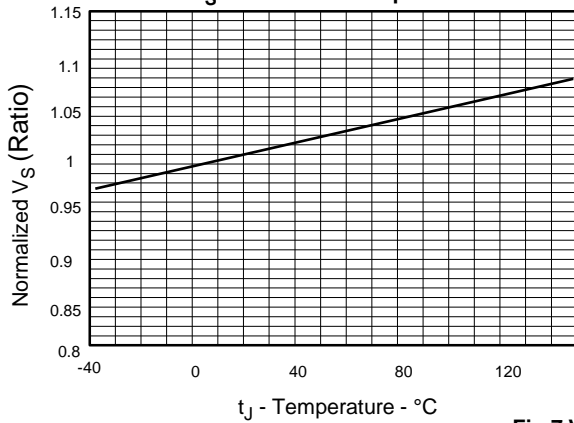


Fig.6 On-State Current Vs Surge Current Duration

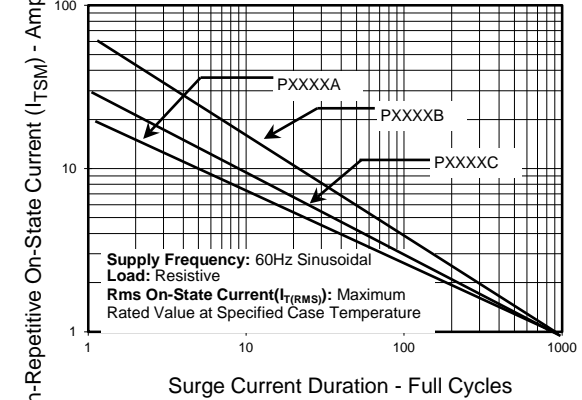


Fig.7 V - I Characteristics Curve

