

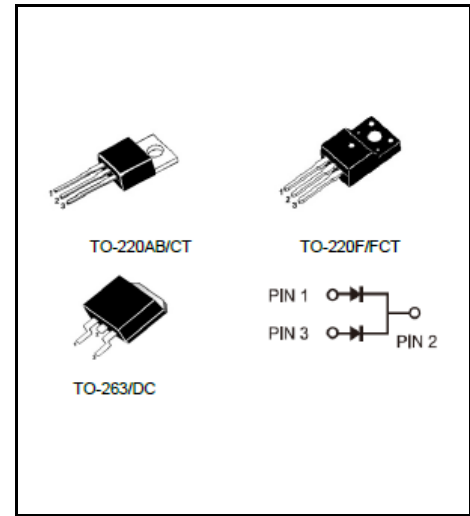
Trench MOS Barrier Schottky Rectifier
Reverse Voltage - 45 V
Forward Current - 20 A

FEATURES

- ◆Very low forward voltage
- ◆High current capability
- ◆High forward surge capability
- ◆Low power losses, High efficiency
- ◆Guarding for over voltage protection
- ◆Lead free in comply with EU RoHS 2011/65/EU directives

MECHANICAL DATA

- ◆Case: TO-220AB/CT TO-220F/FCT TO-263/DC
- ◆Solder bath temperature 275°C maximum, 10s per JESD22-106


Primary Characteristic

| | |
|--------------------------|--------------|
| I_o | 2*10A |
| V_{RRM} | 45V |
| I_{FSM} | 180A |
| V_F | 0.43V |
| T_J Max | 155°C |

Maximum Ratings (Per Leg) at Ta=25°C unless otherwise specified

| Parameter | Symbols | Value | Units |
|--|--|------------|-------------|
| Maximum Repetitive Peak Reverse Voltage | V_{RRM} | 45 | V |
| Maximum RMS voltage | V_{RMS} | 45 | V |
| Maximum DC Blocking Voltage | V_{DC} | 45 | V |
| Maximum Average Forward Rectified Current | Per Leg | 10 | A |
| | Total | 20 | |
| Peak Forward Surge Current, 8.3ms Single Half Sine-wave | I_{FSM} | 180 | A |
| Operating Temperature Range | T_J | -55 ~ +150 | °C |
| Storage Temperature Range | T_{STG} | -55 ~ +150 | °C |
| Typical Thermal Resistance ^(Note1) TO-220AB, TO-263 TO-220F | R_{θJA} R_{θJC} | 2/4 | °C/W |

Note1: Thermal resistance from Junction to case per leg mounted on heatsink.
Electrical Characteristics (Per Leg) unless otherwise specified

| Characteristics | Symbols | Value | | Units | |
|---|----------------------|----------|------|-------|-----------|
| | | Typ | Max | | |
| Forward Voltage Drop(Note2) at I _F =3A at I _F =5A at I _F =10A | V_F | TA=25°C | 0.34 | - | V |
| | | TA=125°C | 0.27 | - | |
| | | TA=25°C | 0.38 | - | |
| | | TA=125°C | 0.32 | - | |
| | | TA=25°C | 0.46 | 0.52 | |
| | | TA=125°C | 0.43 | - | |
| Maximum Reverse Current at V _R =45V | I_R | TA=25°C | 50 | 100 | uA |
| | | TA=125°C | 9 | - | mA |

Note2: Pulse test: 300 μs pulse width, 1 % duty cycle

RATINGS AND CHARACTERISTIC CURVES

FIG. 1 MAXIMUM FORWARD CURRENT DERATING CURVE

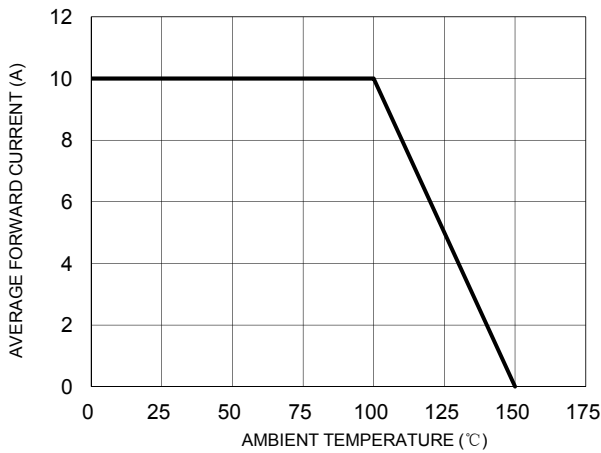


FIG. 2 MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT PER LEG

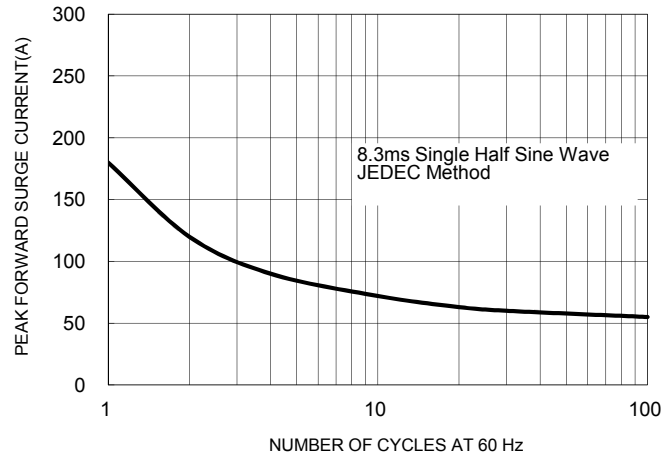


FIG. 3 TYPICAL FORWARD CHARACTERISTICS PER LEG

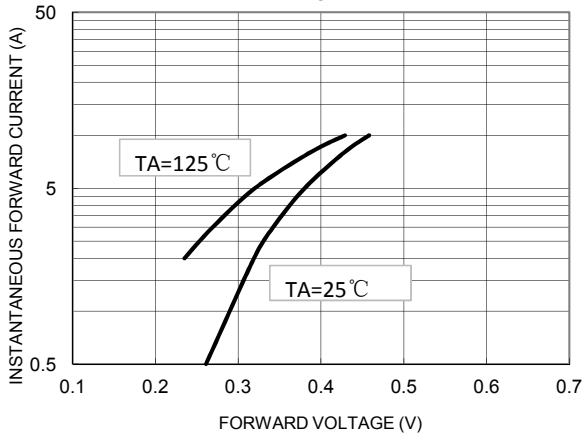
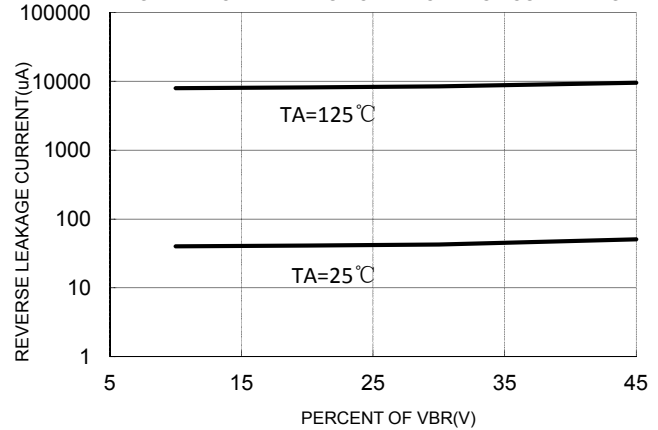
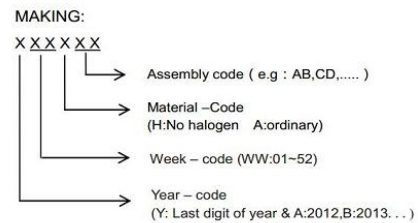


FIG. 4 TYPICAL REVERSE CHARACTERISTICS PER LEG



Marking on the body



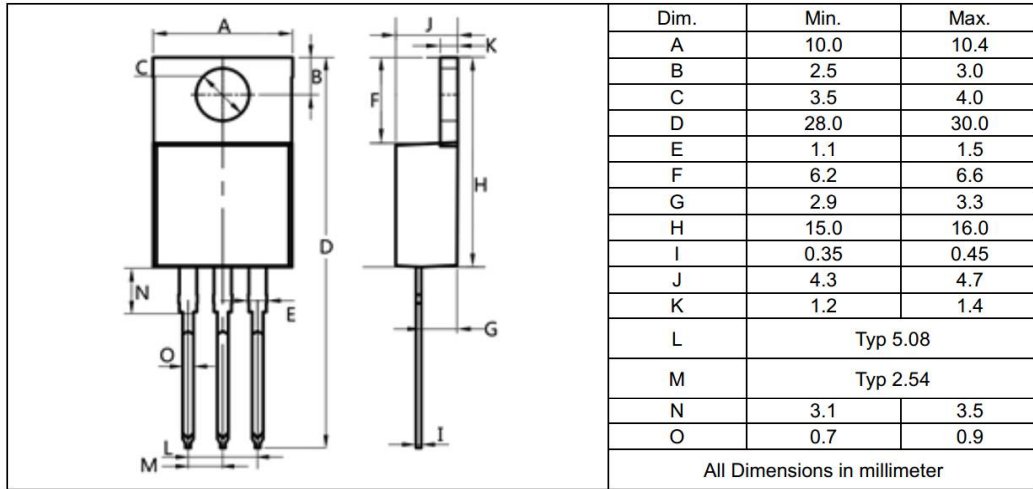
Ordering information

| Part Number | Package | Unit Weight | Base Quantity | Delivery mode |
|--------------|----------|---------------|----------------|----------------------------|
| SRT20L45CT | TO-220AB | 0.07oz(1.96g) | 50 pcs / tube | 1000pcs/box 5000pcs/carton |
| SRT20L45FCT | TO-220F | 0.06oz(1.74g) | 50 pcs / tube | 1000pcs/box 5000pcs/carton |
| SRT20L45DC | TO-263 | 0.04oz(1.16g) | 50 pcs / tube | 1000pcs/box 5000pcs/carton |
| SRT20L45DC-R | O-263 | 0.04oz(1.16g) | 800 pcs / reel | 800pcs/box4000pcs/carton |

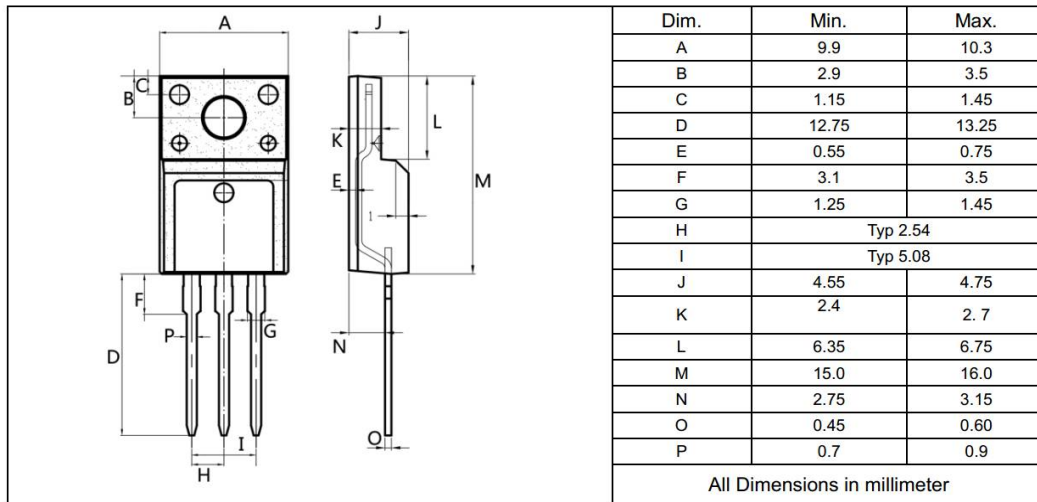
Note: For Halogen Free molding compound, add "H" suffix to part number above.

Package Outline Dimensions millimeters

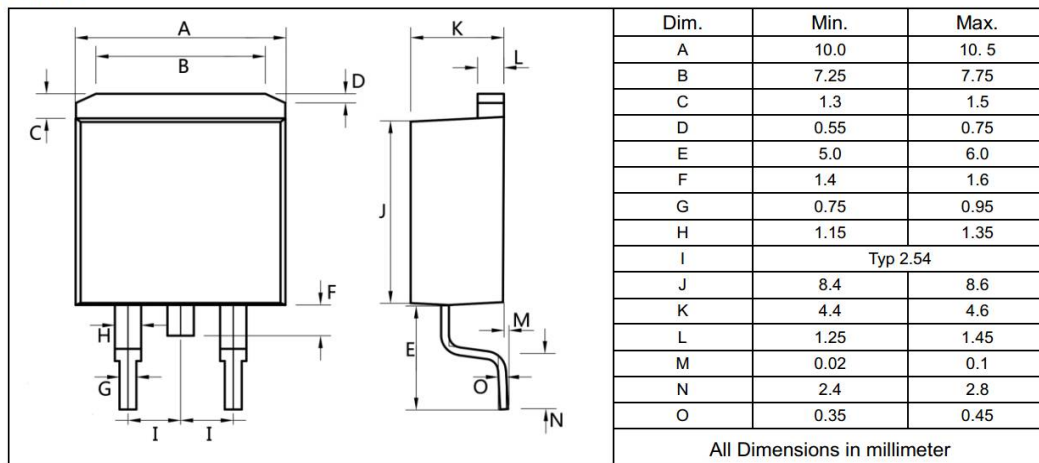
TO-220AB



TO-220F



TO-263



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[PDS1040Q-13](#) [B160BQ-13-F](#) [SDM05U20CSP-7](#) [B140S1F-7](#) [HSM560Je3/TR13](#)