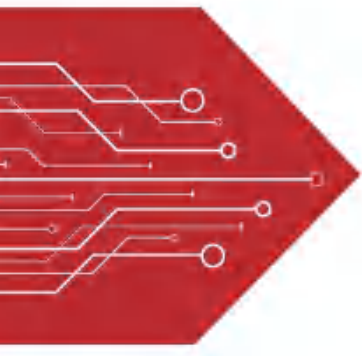


MSKSEMI

SEMICONDUCTOR



ESD



TVS



TSS



MOV



GDT



PLED

Product data sheet

FEATURES

- Low forward voltage
- High current capability
- High forward surge capability
- Low power losses, High efficiency
- Guarding for over voltage protection

APPLICATIONS

Low VF Schottky barrier rectifier are designed for high frequency, miniature switched mode power supplies such as adapters ,lighting and on-board DC/DC conerters

| Primary Characteristic | |
|------------------------|-------|
| I_O | 2*10A |
| V_{RRM} | 100V |
| I_{FSM} | 250A |
| V_F | 0.68V |
| T_{Jmax} | 150°C |
| Assembly code | AL |

MECHANICAL DATA

- **Case:** Molded plastic
- **Polarity:** As marked
- **Mounting Position:** Any
- **Molded Plastic:** UL Flammability Classification Rating 94V-0
- Lead free in compliance with EU RoHS 2011/65/EU directive
- Solder bath temperature 275°C maximum, 10s per JESD 22-B106

| Maximum Ratings (Per Leg) at Ta=25°C unless otherwise specified | | | |
|-----------------------------------------------------------------|-----------------|-------------|------|
| Characteristics | Symbol | Value | Unit |
| Maximum Repetitive Peak Reverse Voltage | V_{RRM} | 100 | V |
| Working Peak Reverse Voltage | V_{RWM} | 100 | V |
| Maximum DC Blocking Voltage | V_{DC} | 100 | V |
| Maximum Average Forward Rectified Current | I_O | Per Leg | 10 |
| | | Total | 20 |
| Peak Forward Surge Current, 8.3 ms Single Half Sine-wave | I_{FSM} | 250 | A |
| Operating Temperature Range | T_J | 150 | °C |
| Storage Temperature Range | T_{STG} | -40 to +150 | °C |
| Typical Thermal Resistance(Note 1) | $R_{\theta JC}$ | | |
| TO-220AB, TO-263, TO-252 | | 2 | °C/W |
| TO-220F | | 4 | |

Note1: Thermal resistance from Junction to case per leg mounted on heatsink.

| Electrical Characteristics (Per Leg) unless otherwise specified | | | | | |
|-----------------------------------------------------------------|----------|--------|-------|------|------|
| Characteristics | | Symbol | Value | | Unit |
| Forward Voltage Drop(Note2) | | V_F | Typ. | Max. | V |
| at $I_F=3A$ | TA=25°C | | 0.69 | - | |
| | TA=125°C | | 0.60 | - | |
| at $I_F=5A$ | TA=25°C | | 0.74 | - | |
| | TA=125°C | | 0.61 | - | |
| at $I_F=10A$ | TA=25°C | | 0.82 | 0.85 | |
| | TA=125°C | | 0.68 | - | |
| Maximum Reverse Current at $V_R=100V$ | TA=25°C | | I_R | 1.5 | |
| | TA=125°C | | 1 | - | mA |

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

SCHOTTKY BARRIER RECTIFIER



TO-220AB/CT



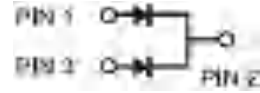
TO-220F/FCT



TO-263/DC

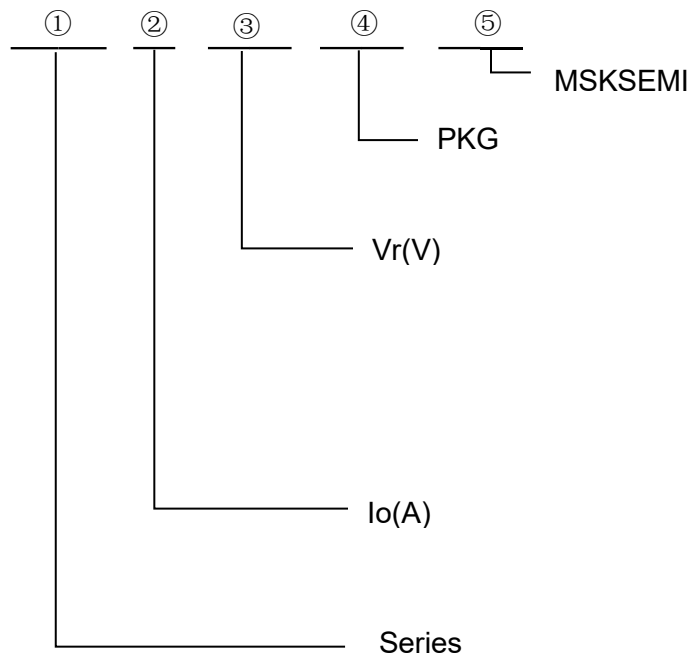


TO-252/CS



P/N Information

MBR 20 100 XXX -MS



| ① | ② | ③ | ④ | ⑤ |
|----|--------|--------|----|---------|
| 系列 | 平均整流电流 | 直流反向耐压 | 封装 | MSKSEMI |

RATINGS AND CHARACTERISTIC CURVES

FIG.1 MAXIMUM FORWARD CURRENT DERATING CURVE

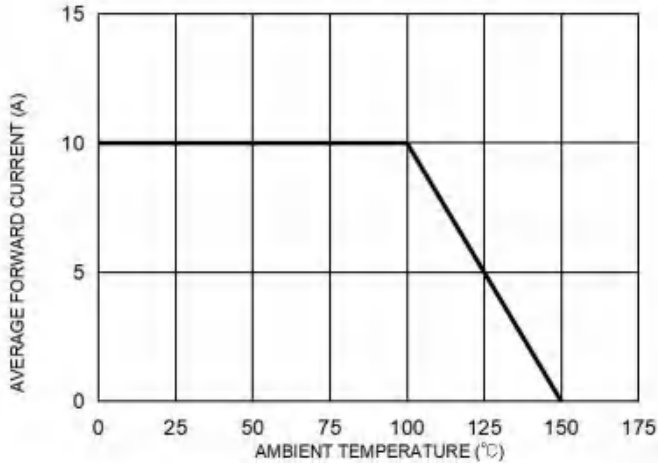


FIG. 2 MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT PER LEG

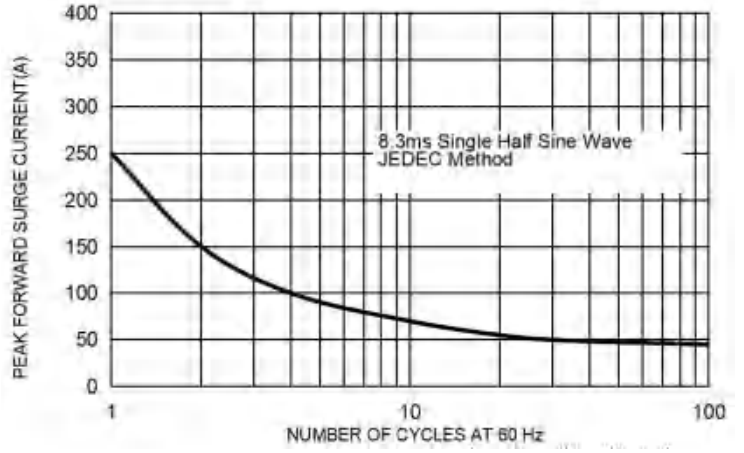


FIG. 3 TYPICAL FORWARD CHARACTERISTICS PER LEG

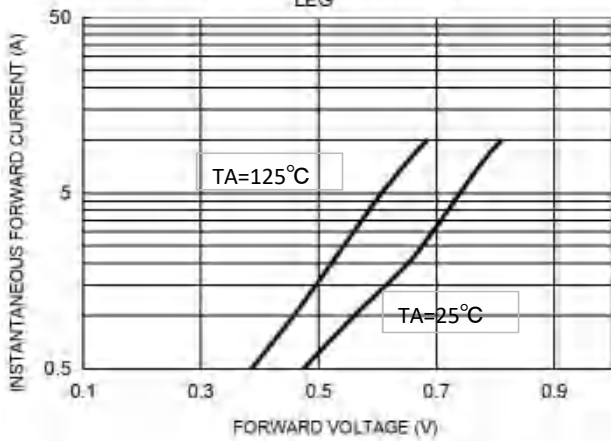
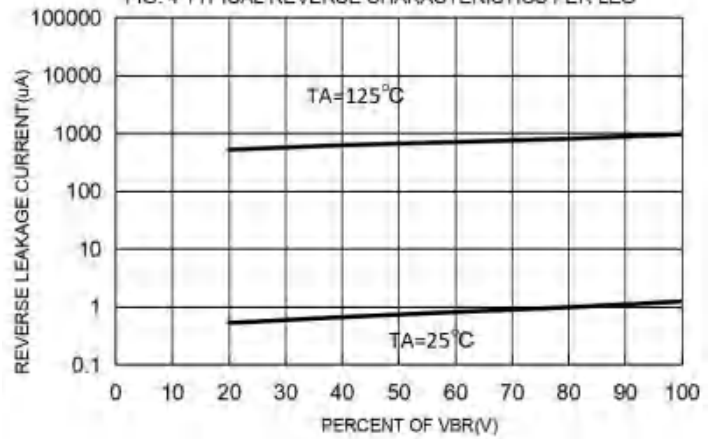
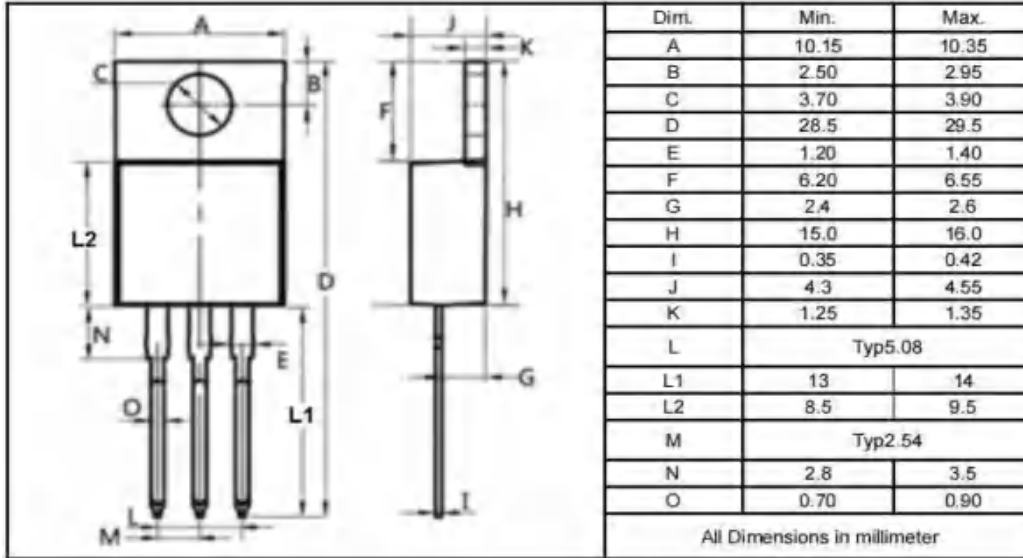


FIG. 4 TYPICAL REVERSE CHARACTERISTICS PER LEG



Package Outline Dimensions millimeters

TO-220AB

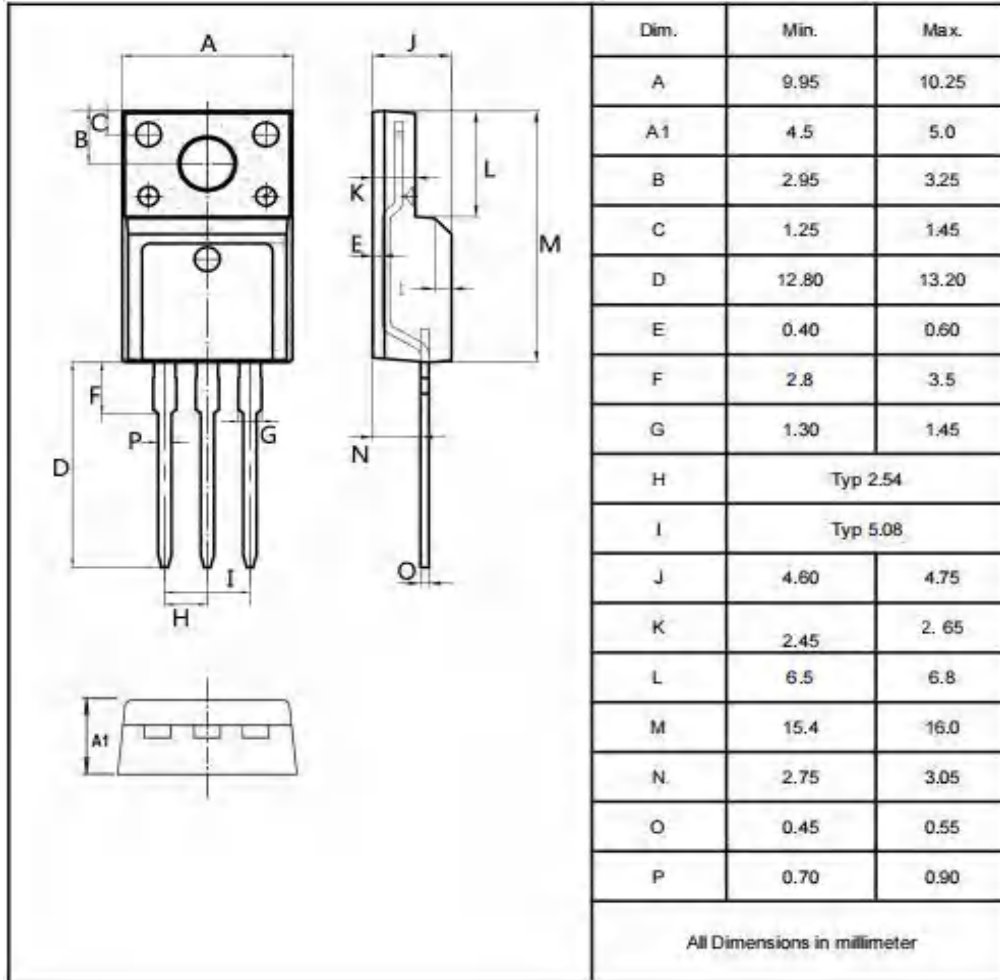


REEL SPECIFICATION

| P/N | PKG | QTY |
|---------------|----------|------------------------|
| MBR20100CT-MS | TO-220AB | 50pcs/tube 1000pcs/box |

Package Outline Dimensions millimeters

TO-220F

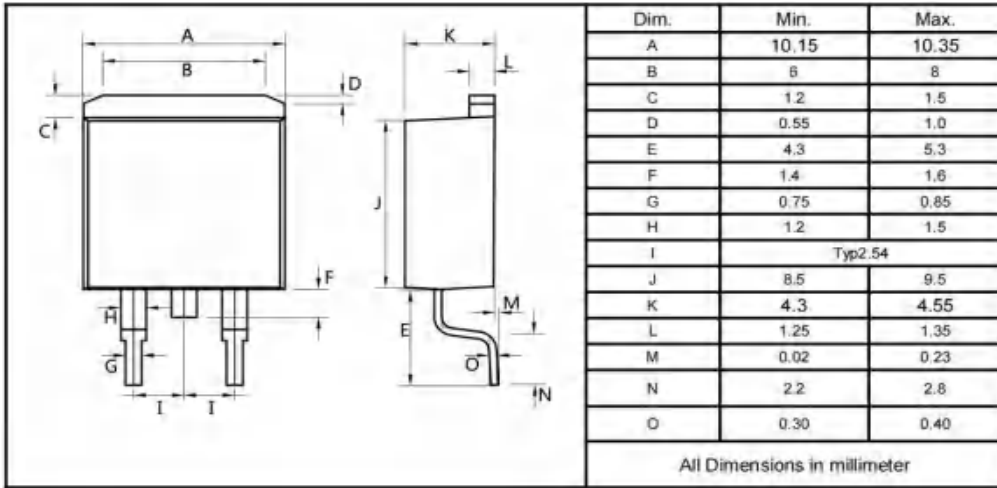


REEL SPECIFICATION

| P/N | PKG | QTY |
|----------------|---------|------------------------|
| MBR20100FCT-MS | TO-220F | 50pcs/tube 1000pcs/box |

Package Outline Dimensions millimeters

TO-263



REEL SPECIFICATION

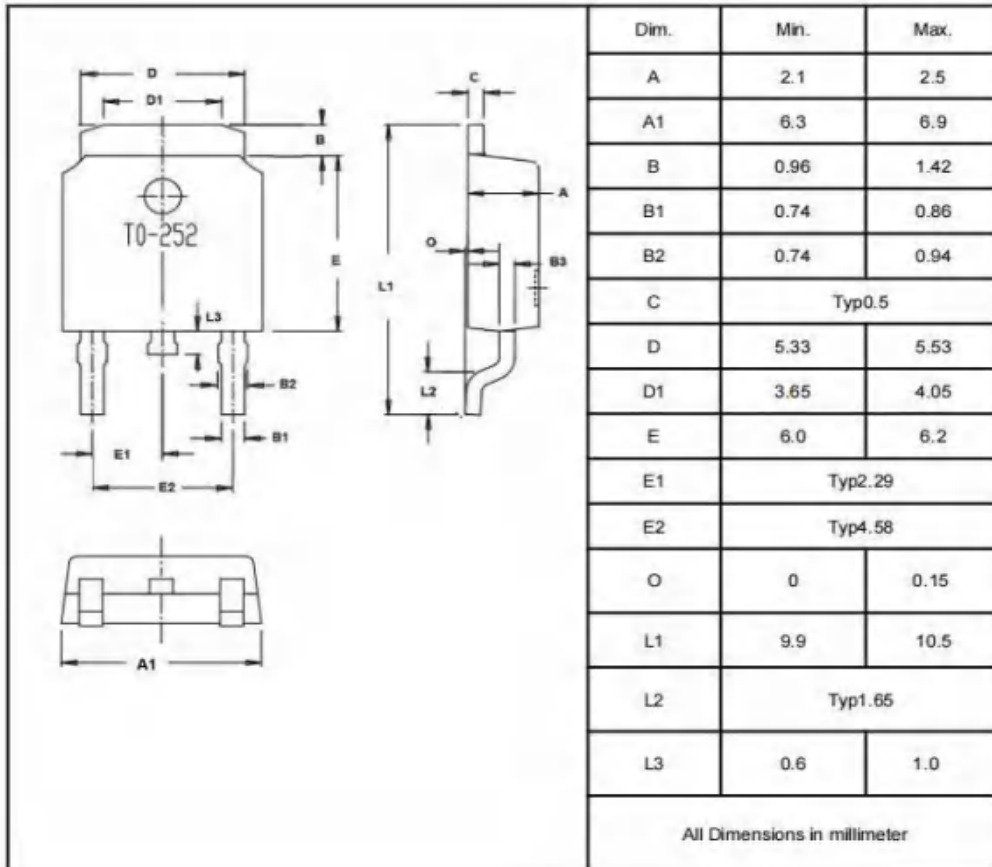
| P/N | PKG | QTY |
|---------------|--------|------------------------|
| MBR20100DC-MS | TO-263 | 50pcs/tube 1000pcs/box |

REEL SPECIFICATION

| P/N | PKG | QTY |
|-----------------|--------|--------|
| MBR20100DC-R-MS | TO-263 | 800pcs |

Package Outline Dimensions millimeters

TO-252



REEL SPECIFICATION

| P/N | PKG | QTY |
|---------------|--------|------|
| MBR20100CS-MS | TO-252 | 2500 |

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