



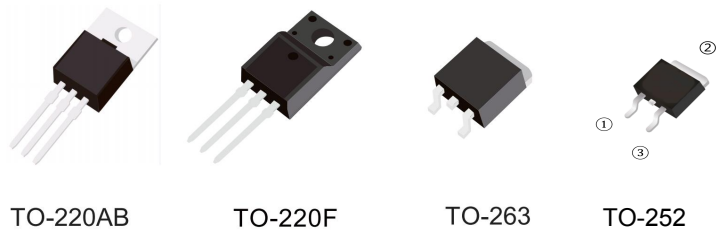
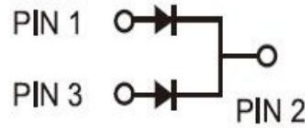
Schottky Diodes
Reverse Voltage-40to200v
Forward current-20A

Features

- Schottky chip
- Ideal for surface mounted applications
- Low forward voltage drop, Low power loss, high efficiency
- Plastic Case Material has UL Flammability

Mechanical Data

- Package: TO-220AB, TO-220F, TO-263, TO-252
- Terminals: Tin Plated leads, solderable per Mil-STD-750 Method 2026
- Polarity: As marked
- Molding compound meets UL 94 V-0 flammability rating, ROHS-compliant



Maximum Ratings (Ta=25°C Unless otherwise)

| Type Number | SYMBOL | MBR 2040 | MBR 2060 | MBR 20100 | MBR 20150 | MBR 20200 | Umit |
|--|------------------|-----------|----------|-----------|-----------|-----------|------------------|
| Maximum Recurrent Peak Reverse Voltage | V_{RRM} | 40 | 60 | 100 | 150 | 200 | V |
| Maximum RMS Voltage | V_{RMS} | 28 | 42 | 70 | 105 | 140 | V |
| Maximum DC Blocking Voltage | V_{DC} | 40 | 60 | 100 | 150 | 200 | V |
| Maximum Average Forward Rectified Current at TL = 100 °C | $I_{Q(AV)}$ | 20.0 | | | | | A |
| Peak Forward Surge Current 8.3ms Single half-sine-wave superimposed on rated load (JEDEC Method) on rated | IFSM | 130.0 | | | | | A |
| Forward Surge Current (Non-repetitive) @1ms, square wave, 1 cycle, Tj=25°C | | 260.0 | | | | | A |
| Current squared time @1ms≤t≤8.3ms Tj=25°C, Rating of per diode | I^2t | 70 | | | | | A ² S |
| Maximum Forward Voltage at 10.0A DC | V_{FM} | 0.6 | 0.75 | 0.85 | 0.9 | 0.95 | V |
| Maximum Reverse Current TA = 25°C | IR | 0.2 | | 0.1 | | | mA |
| at Rated DC Blocking Voltage TA = 100°C | | 50 | | 20 | | | mA |
| Typical Junction Capacitance | CJ | 400 | | 300 | | | pF |
| Typical Thermal Resistance TO-220AB, TO-263 | R _{QJC} | 2.0 | | | | | °C/W |
| TO-220F | | 4.0 | | | | | |
| TO-252 | | 5.0 | | | | | |
| Operating Junction Temperature Range | T _J | -55to+150 | | | | | °C |
| Storage Temperature Range | T _{STG} | -55to+150 | | | | | °C |



FIG. 1 MAXIMUM AVERAGE FORWARD CURRENT DERATING

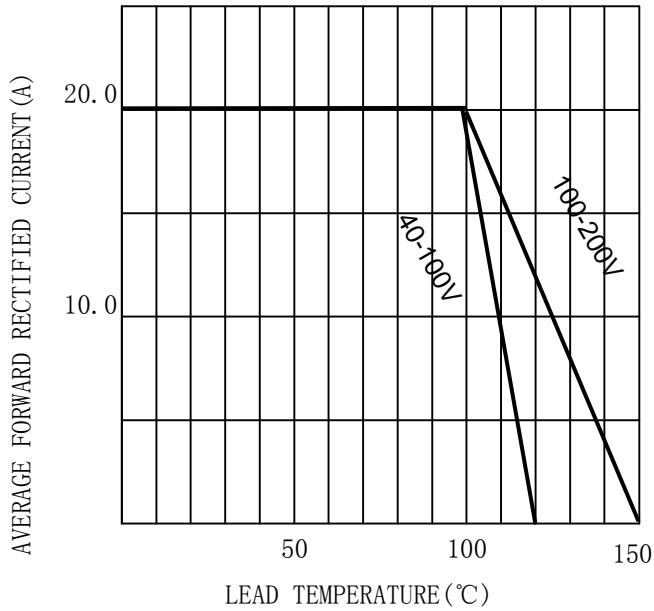


FIG. 2 TYPICAL FORWARD CHARACTERISTICS

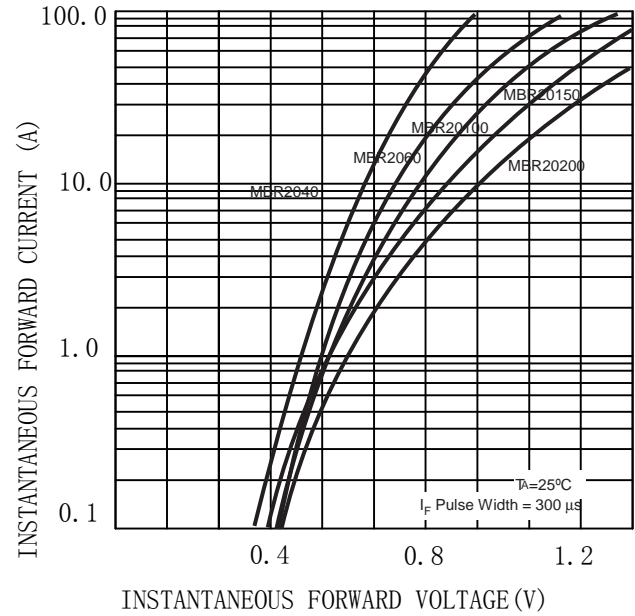


FIG. 3 MAXIMUM NON-REPEITIVE SURGE CURRENT

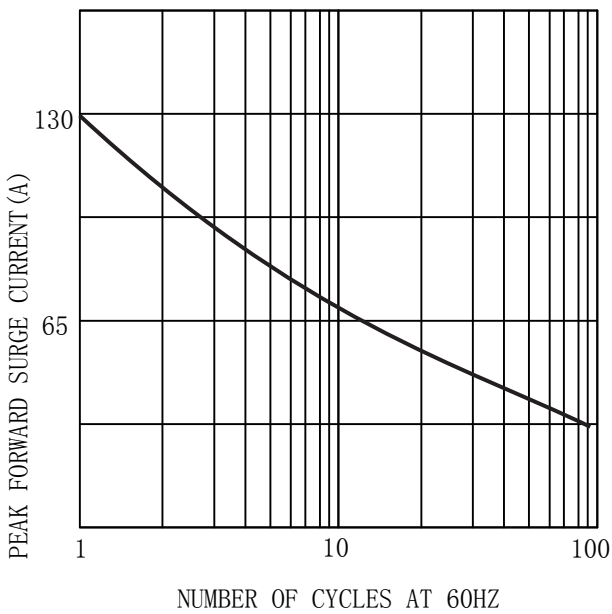
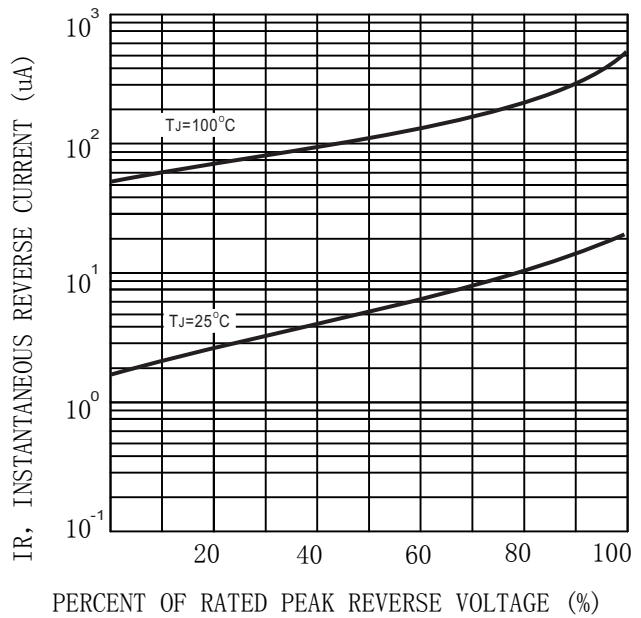


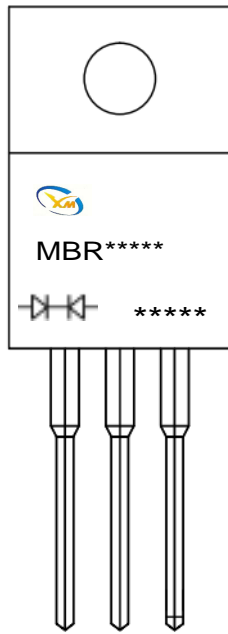
FIG. 4 TYPICAL REVERSE CHARACTERISTICS (per element)





MARKING INFORMATION

TO-220AB/CT



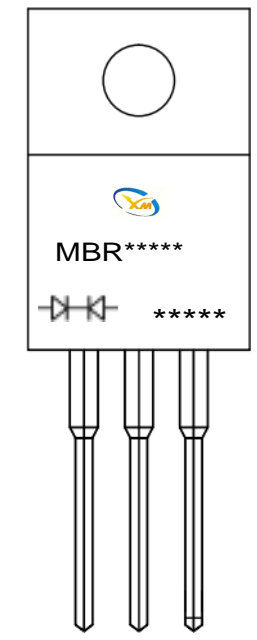
= Polar line

= Logo

***** = Date Code Marking

MBR***** = Marking Code

TO-220F/FCT



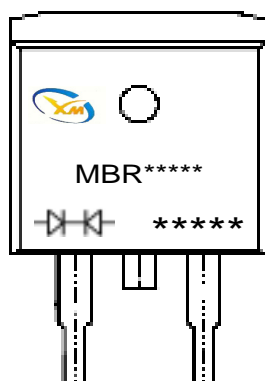
= Polar line

= Logo

***** = Date Code Marking

MBR***** = Marking Code

TO-263/CS
TO-252/DS



= Polar line

= Logo

***** = Date Code Marking

MBR***** = Marking Code



Package Outline Dimensions millimeters

| TO-220AB/CT | | | | | |
|-------------|--------|------|-------|-------|------|
| DIM | INCHES | | MM | | NOTE |
| | min | max | min | max | |
| A | — | 0.41 | — | 10.30 | |
| B | 0.33 | 0.34 | 8.30 | 8.70 | |
| C | 0.18 | 0.19 | 4.50 | 4.90 | |
| D | 0.57 | 0.60 | 14.60 | 15.20 | |
| E | 0.53 | 0.56 | 13.50 | 14.10 | |
| a | 0.10 | 0.10 | 2.45 | 2.65 | |
| b | — | 0.16 | — | 4.10 | |
| c | 0.03 | 0.04 | 0.72 | 0.92 | |
| d | 0.01 | 0.02 | 0.30 | 0.50 | |
| e | — | 0.15 | — | 3.80 | ∅ |
| f | 0.05 | 0.06 | 1.20 | 1.40 | |

| TO-220F/FCT | | | | | |
|-------------|--------|------|-------|-------|------|
| DIM | INCHES | | MM | | NOTE |
| | min | max | min | max | |
| A | — | 0.41 | — | 10.30 | |
| B | 0.61 | 0.64 | 15.60 | 16.20 | |
| C | 0.18 | 0.19 | 4.50 | 4.90 | |
| D | 0.26 | 0.28 | 6.60 | 7.00 | |
| E | 0.50 | 0.53 | 12.80 | 13.40 | |
| a | 0.10 | 0.10 | 2.45 | 2.65 | |
| b | — | 0.16 | — | 4.10 | |
| c | 0.03 | 0.04 | 0.72 | 0.92 | |
| d | 0.02 | 0.02 | 0.40 | 0.60 | |
| e | — | 0.15 | — | 3.80 | ∅ |
| f | 0.09 | 0.11 | 2.40 | 2.80 | |

| TO-263/CS | | | | | |
|-----------|--------|------|------|-------|------|
| DIM | INCHES | | MM | | NOTE |
| | min | max | min | max | |
| A | — | 0.41 | — | 10.30 | |
| B | 0.33 | 0.34 | 8.30 | 8.70 | |
| C | 0.18 | 0.19 | 4.50 | 4.90 | |
| D | 0.38 | 0.39 | 9.60 | 10.00 | |
| E | 0.21 | 0.22 | 5.30 | 5.70 | |
| a | 0.10 | 0.10 | 2.45 | 2.65 | |
| b | — | 0.16 | — | 4.10 | |
| c | 0.03 | 0.04 | 0.72 | 0.92 | |
| d | 0.01 | 0.02 | 0.30 | 0.50 | |
| e | 0.05 | 0.06 | 1.20 | 1.40 | |



| TO-252DS | | | | | |
|----------|--------|------|-----|------|------|
| DIM | INCHES | | MM | | NOTE |
| | min | max | min | max | |
| A | 0.25 | 0.27 | 6.3 | 6.9 | |
| B | 0.23 | 0.25 | 5.8 | 6.4 | |
| C | 0.08 | 0.10 | 2.1 | 2.5 | |
| D | 0.35 | 0.43 | 9.0 | 11.0 | |
| E | 0.21 | 0.22 | 5.3 | 5.5 | |
| a | 0.08 | 0.10 | 2.1 | 2.5 | |
| b | 0.06 | 0.06 | 1.4 | 1.6 | |
| c | 0.02 | 0.03 | 0.6 | 0.8 | |
| d | 0.02 | 0.02 | 0.4 | 0.6 | |
| e | 0.02 | 0.02 | 0.4 | 0.6 | |

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