

MR2500 - MR2512

AUTOMOTIVE RECTIFIER DIODES

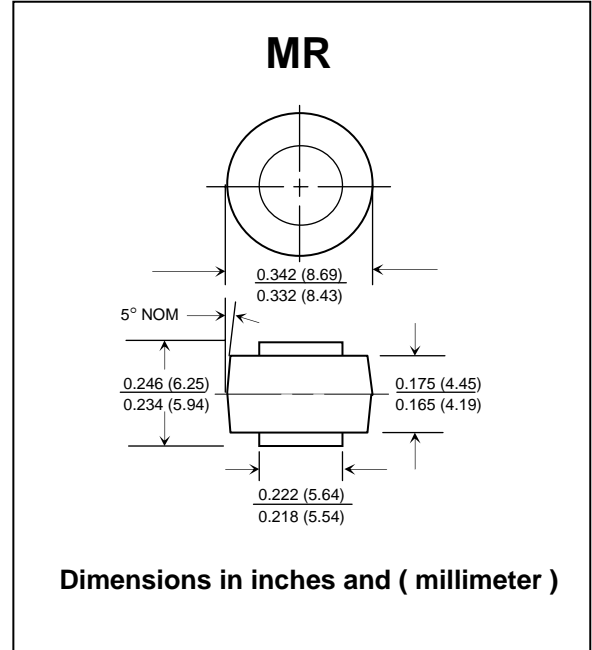
PRV : 50 - 1200 Volts
Io : 25 Amperes

FEATURES :

- * High current capability
- * High surge current capability
- * High reliability
- * Low reverse current
- * Low forward voltage drop
- * Pb / RoHS Free

MECHANICAL DATA :

- * Case : Molded plastic
- * Epoxy : UL94V-O rate flame retardant
- * Terminals : Terminal are readily solderable
- * Polarity : Cathode polarity band
- * Mounting position : Any
- * Weight : 1.624 grams



MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Rating at 25 °C ambient temperature unless otherwise specified
Single phase, half wave, 60 Hz, resistive or inductive load.
For capacitive load, derate current by 20%.

| RATING | SYMBOL | MR 2500 | MR 2501 | MR 2502 | MR 2504 | MR 2506 | MR 2508 | MR 2510 | MR 2512 | UNIT |
|---|-----------------|---------------|---------|---------|---------|---------|---------|---------|---------|--------------|
| Maximum Repetitive Peak Reverse Voltage | V_{RRM} | 50 | 100 | 200 | 400 | 600 | 800 | 1000 | 1200 | V |
| Maximum RMS Voltage | V_{RMS} | 35 | 70 | 140 | 280 | 420 | 560 | 700 | 840 | V |
| Maximum DC Blocking Voltage | V_{DC} | 50 | 100 | 200 | 400 | 600 | 800 | 1000 | 1200 | V |
| Average Rectified Forward Current $T_c = 150^\circ C$ | $I_{F(AV)}$ | 25 | | | | | | | | A |
| Peak Forward Surge Current Single half sine wave superimposed on rated load (JEDEC Method) | I_{FSM} | 400 | | | | | | | | A |
| Maximum Forward Voltage at $I_F = 25 A$ | V_F | 1.0 | | | | | | | | V |
| Maximum DC Reverse Current $T_a = 25^\circ C$ at rated DC Blocking Voltage $T_a = 100^\circ C$ | I_R | 5.0 | | | | | | | | μA |
| | $I_{R(H)}$ | 1.0 | | | | | | | | mA |
| Thermal Resistance (Note 1) | $R_{\theta JC}$ | 0.8 | | | | | | | | $^\circ C/W$ |
| Junction Temperature Range | T_J | - 65 to + 175 | | | | | | | | $^\circ C$ |
| Storage Temperature Range | T_{STG} | - 65 to + 175 | | | | | | | | $^\circ C$ |

Note : (1) Thermal resistance from junction to case. Single side cooled.

RATING AND CHARACTERISTIC CURVES (MR2500 - MR2512)

FIG.1 - DERATING CURVE FOR OUTPUT RECTIFIED CURRENT

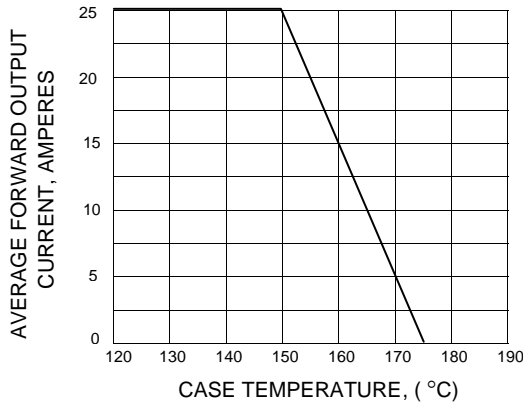


FIG.2 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

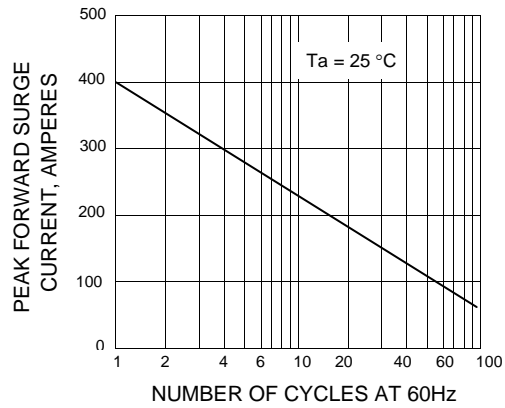


FIG.3 - TYPICAL FORWARD CHARACTERISTICS

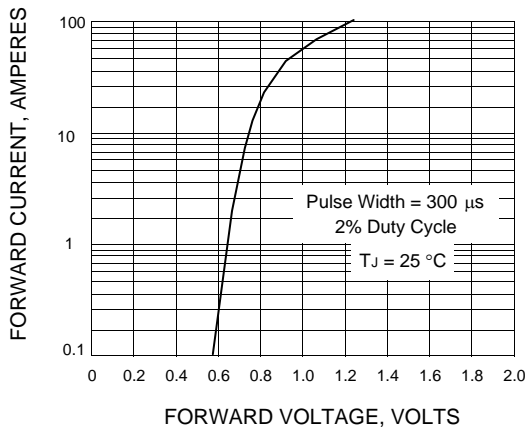


FIG.4 - TYPICAL REVERSE CHARACTERISTICS

