

AR2501/ARS2501
THRU
AR2512/ARS2512

**HIGH VOLTAGE BUTTON
DIODES FOR AUTOMOTIVE**

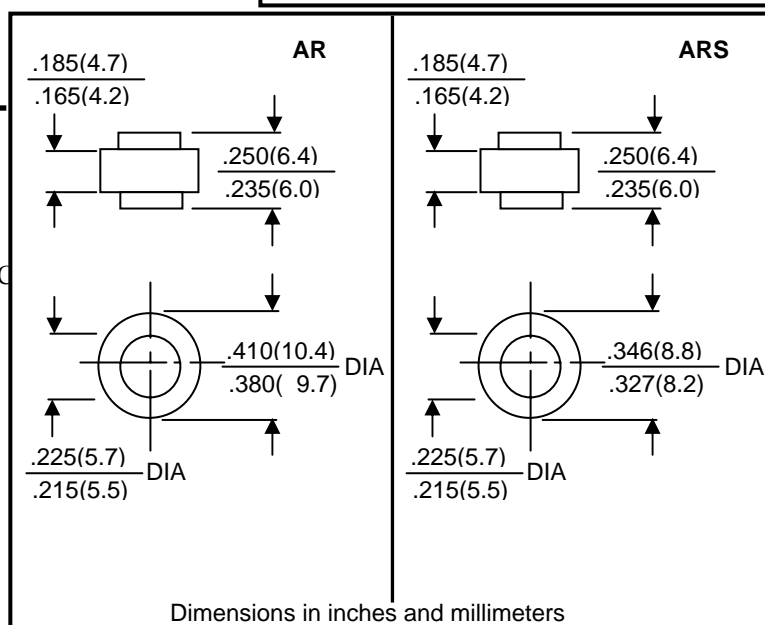
**VOLTAGE RANGE
100 TO 1200 VOLTS
CURRENT 25AMPS**

Features

- Low leakage
- Low forward voltage drop
- High current capability
- High forward surge current capability

Mechanical Data

- Case: transfer molded plastic
- Technology: vacuum soldered
- Polarity: color ring denotes cathode
- Lead: Plated lead, solderable per MIL-STD-202E method 208C
- Mounting position: Any
- Weight: AR 1.80 grams, ARS 1.60 grams



Maximum Ratings and Electrical Characteristics

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

| Parameters | Symbols | AR2501 | AR2502 | AR2504 | AR2506 | AR2508 | AR2510 | AR2512 | Units |
|---|-----------------|-------------|--------|--------|--------|--------|--------|--------|------------------|
| | | ARS250 | ARS250 | ARS250 | ARS250 | ARS250 | ARS251 | ARS251 | |
| Maximum repetitive peak reverse voltage | V_{RRM} | 100 | 200 | 400 | 600 | 800 | 1000 | 1200 | Volts |
| Maximum RMS voltage | V_{RMS} | 70 | 140 | 280 | 420 | 560 | 700 | 840 | Volts |
| Maximum DC blocking voltage | V_{DC} | 100 | 200 | 400 | 600 | 800 | 1000 | 1200 | Volts |
| Maximum Average rectified forward current at $T_C=110^\circ C$ | I_o | 25 | | | | | | | Amps |
| Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JE DEC Method) | I_{FSM} | 300 | | | | | | | Amps |
| Rating for fusing($t<8.3ms$) | I^2t | 374 | | | | | | | A ² S |
| Maximum instantaneous forward voltage drop at 35A | V_F | 1.0 | | | | | | | Volts |
| Maximum DC reverse current $T_A=25^\circ C$ at rated DC blocking voltage $T_A=150^\circ C$ | I_R | 5.0 | | | | | | | uA |
| Typical thermal resistance | $R_{\theta JC}$ | 1.0 | | | | | | | °C/W |
| Operating and storage temperature | T_J, T_{STG} | -65 to +175 | | | | | | | °C |

Notes: 1.Enough heatsink must be considered in application.

AR2501 THRU AR2512 ARS2501 THRU ARS2512

Ratings and Characteristic Curves

FIG.1-TYPICAL FORWARD CURRENT DERATING CURVE

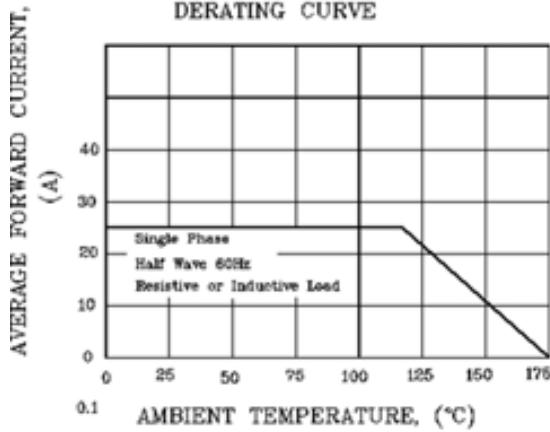


FIG.2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

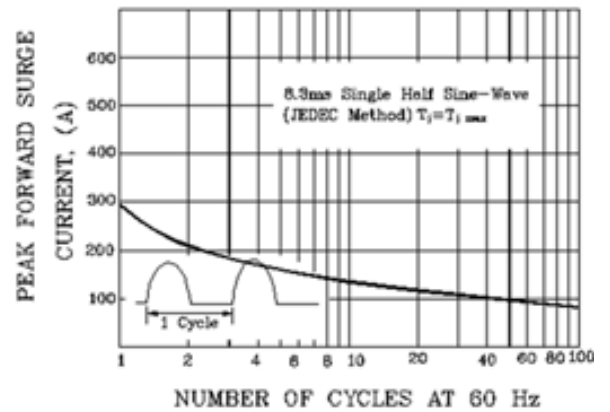


FIG.3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

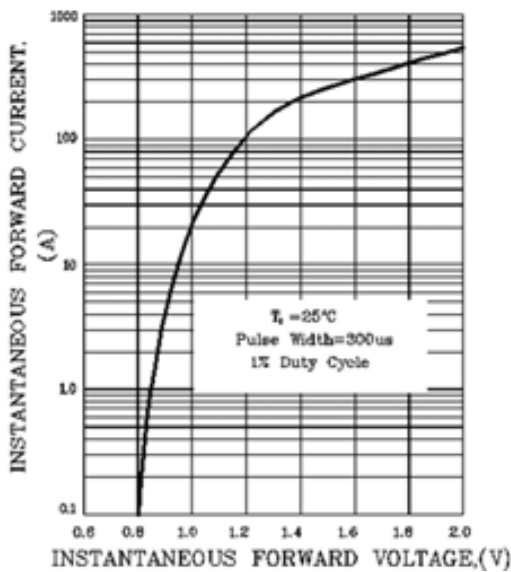


FIG.4- FORWARD POWER DISSIPATION

