



BUTTON AUTOMOTIVE RECTIFIER

ARL1505 THRU ARL156

VOLTAGE RANGE 50 to 600 Volts

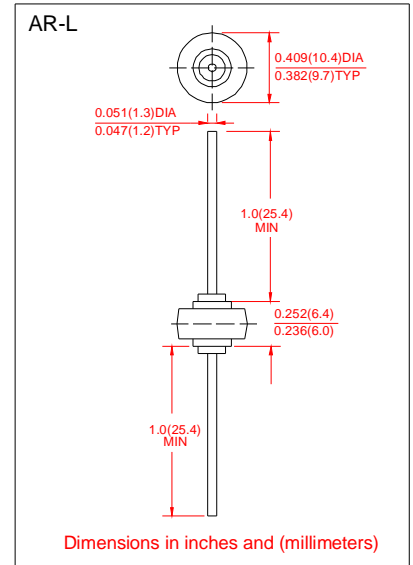
CURRENT 15.0 Amperes

FEATURES

- Low Leakage
- Low forward voltage drop
- High current capability
- High forward surge current capacity

MECHANICAL DATA

- Technology: Cell with vacuum soldered
- Case: transfer molded plastic
- Epoxy: UL94V-0 rate flame retardant
- Lead: Plated lead , solderable per MIL-STD-202E method 208C
- Polarity: Color ring denotes cathode end
- Mounting Position: any
- Weight: 0.083 ounces, 2.32 grams



MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

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

| | SYMBOLS | ARL1505 | ARL151 | ARL152 | ARL154 | ARL156 | UNIT |
|--|-----------------|---------------|--------|--------|--------|--------|---------------------------|
| Maximum Repetitive Peak Reverse Voltage | V_{RRM} | 50 | 100 | 200 | 400 | 600 | Volts |
| Maximum RMS Voltage | V_{RMS} | 35 | 70 | 140 | 280 | 420 | Volts |
| Maximum DC Blocking Voltage | V_{DC} | 50 | 100 | 200 | 400 | 600 | Volts |
| Maximum Average Forward Rectified Current, At $T_c=110^\circ\text{C}$ | I_O | 15.0 | | | | | Amps |
| Peak Forward Surge Current 3.3mS single half sine wave superimposed on Rated load (JEDEC method) | I_{FSM} | 300 | | | | | Amps |
| Rating for fusing ($t < 8.3\text{ms}$) | I^2t | 374 | | | | | A^2S |
| Maximum instantaneous Forward Voltage at 80A | V_F | 1.1 | | | | | Volts |
| Maximum DC Reverse Current at Rated $T_A=25^\circ\text{C}$ | I_R | 5.0 | | | | | UA |
| DC Blocking Voltage per element $T_A=100^\circ\text{C}$ | | 250 | | | | | |
| Typical Thermal Resistance | $R_{\theta JC}$ | 1.0 | | | | | $^\circ\text{C}/\text{W}$ |
| Operating and Storage Temperature Range | T_J, T_{STG} | (-65 to +175) | | | | | $^\circ\text{C}$ |
| Polarity and voltage demotion color band | | Red | Yellow | Silver | Green | Green | |

Notes:

1. Enough heatsink must be considered in application.



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RATINGS AND CHARACTERISTIC CURVES ARL1505 THRU ARL156

FIG.1 TYPICAL FORWARD CURRENT DERATING CURVE

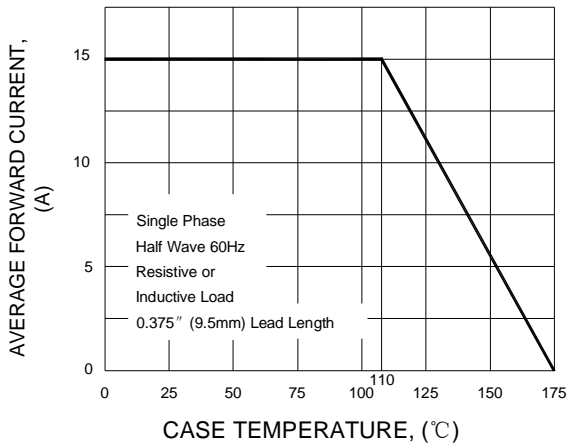


FIG.2 MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

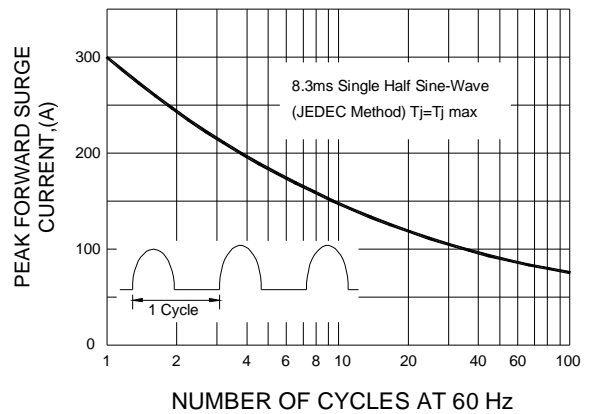


FIG.3 TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

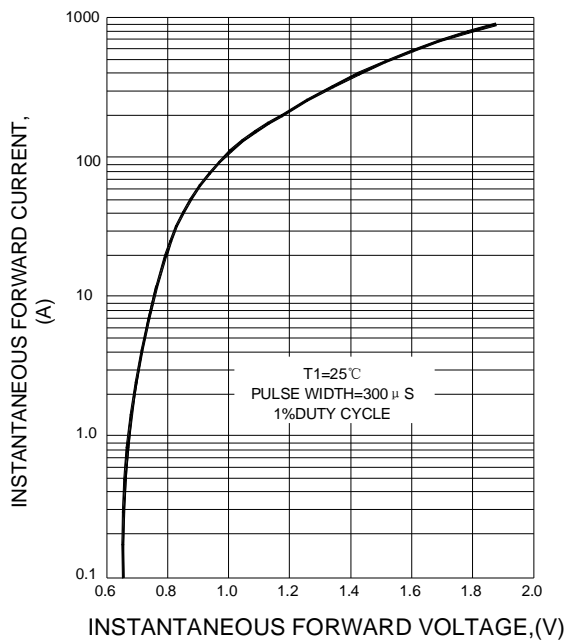


FIG.4 FORWARD POWER DISSIPATION

