

ARL3501 THRU ARL3512



HIGH VOLTAGE BUTTON DIODES FOR AUTOMOTIVE

Features

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

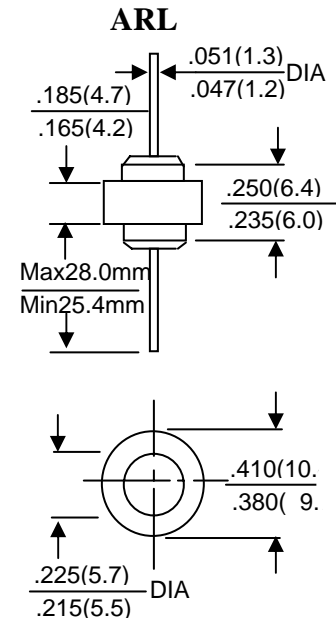
Mechanical Data

- Case: transfer molded plastic
- Technology: button with vacuum soldered
- Epoxy: UL94V-0 rate flame retardant
- Polarity: color ring denotes cathode
- Lead: Plated lead, solderable per MIL-STD-202E method 208C
- Mounting position: Any
- Weight: ARL 2.70 grams, ARSL 2.60 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%

**VOLTAGE RANGE
100 TO 1200 VOLTS
CURRENT 35AMPS**



Dimensions in inches and millimeters

Parameters	Symbols	ARL3501	ARL3502	ARL3504	ARL3506	ARL3508	ARL3510	ARL3512	Units
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	35							Amps
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JE DEC Method)	I_{FSM}	500							Amps
Rating for fusing ($t < 8.3ms$)	I^2t	395							A^2S
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							μA
Typical thermal resistance	$R_{\theta JC}$	1.0							$^\circ C/W$
Operating and storage temperature	T_J, T_{STG}	-65 to +175							$^\circ C$

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

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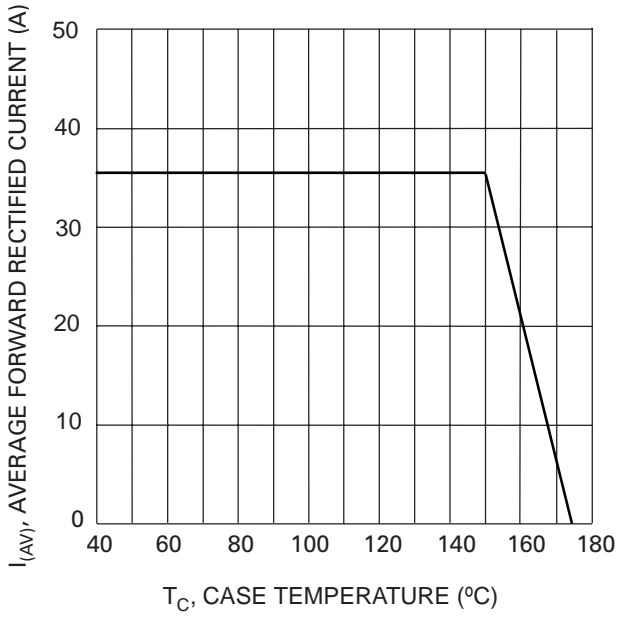


Fig. 1 Forward Current Derating Curve

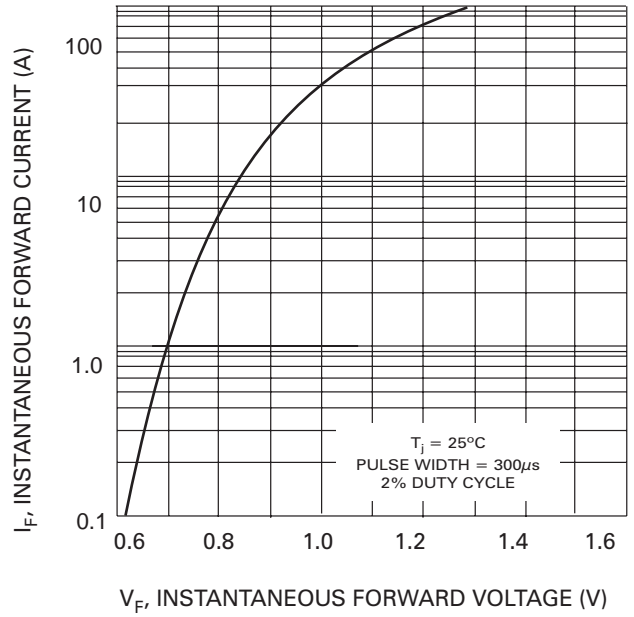


Fig. 2 Typical Forward Characteristics

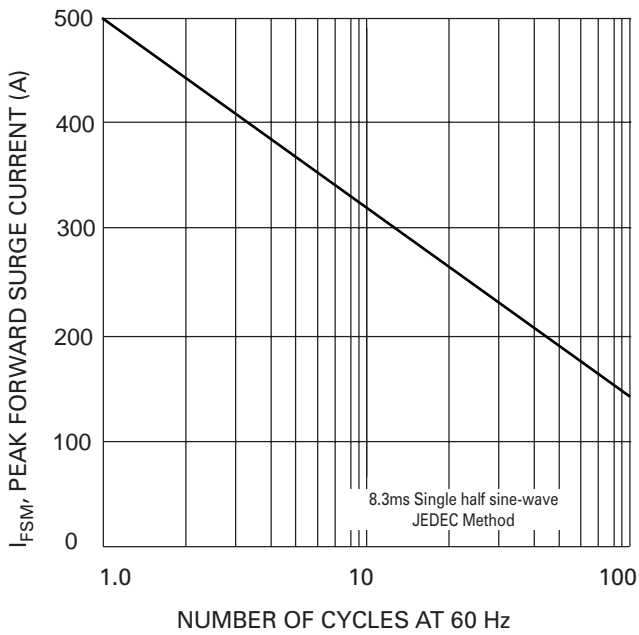


Fig. 3 Max Non-Repetitive Peak Fwd Surge Current

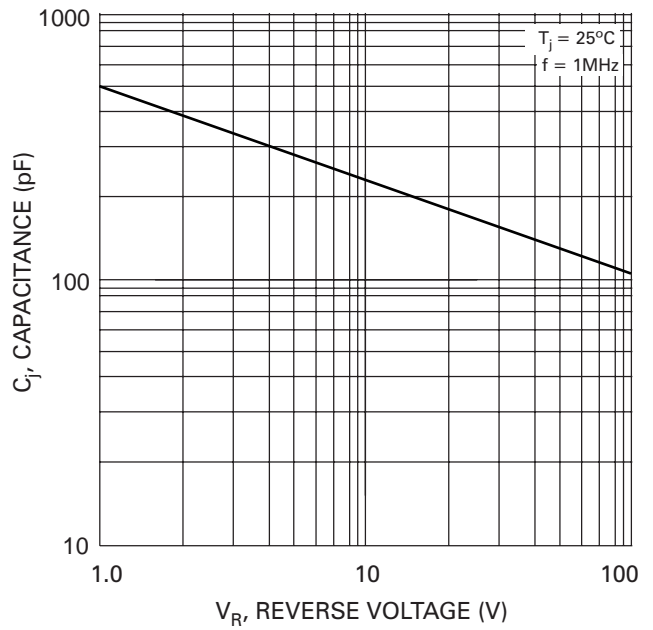


Fig. 4 Typical Junction Capacitance