

KI SEMICONDUCTOR

AR251/ARS251
THRU
AR256/ARS256

BUTTON DIODES

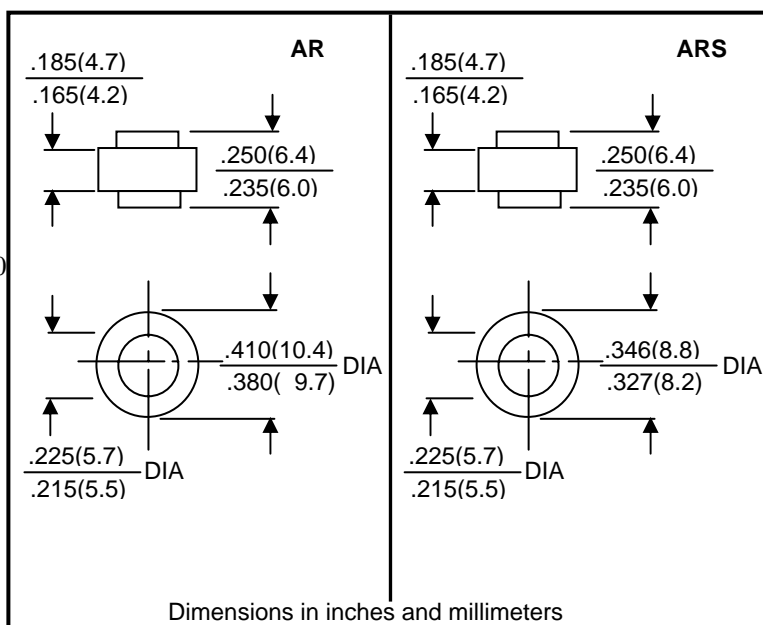
VOLTAGE RANGE
100 TO 600 VOLTS
CURRENT 25AMPS

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 20
- 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	AR251 ARS251	AR252 ARS252	AR253 ARS253	AR254 ARS254	AR256 ARS256	Units
Maximum repetitive peak reverse voltage	V_{RRM}	100	200	300	400	600	Volts
Maximum RMS voltage	V_{RMS}	70	140	210	280	420	Volts
Maximum DC blocking voltage	V_{DC}	100	200	300	400	600	Volts
Maximum Average rectified forward current at $T_C=110^\circ\text{C}$	I_o	25					Amps
Peak forward surge current 8.3mS single half sine-wave superimposed on rated load (JEDEC Method)	I_{FSM}	400					Amps
Rating for fusing($t<8.3\text{ms}$)	I^2t	664					A^2S
Maximum instantaneous forward voltage drop at 100A	V_F	1.1					Volts
Maximum DC reverse current $T_A=25^\circ\text{C}$ at rated DC blocking voltage $T_A=150^\circ\text{C}$	I_R	5.0 450					μA
Typical thermal resistance	$R_{\theta JC}$	1.0					$^\circ\text{C}/\text{W}$
Operating and storage temperature	T_J, T_{STG}	-65 to +175					$^\circ\text{C}$

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

AR251 THRU AR256 ARS251 THRU ARS256

Ratings and Characteristic Curves

FIG.1-TYPICAL FORWARD CURRENT DERATING CURVE

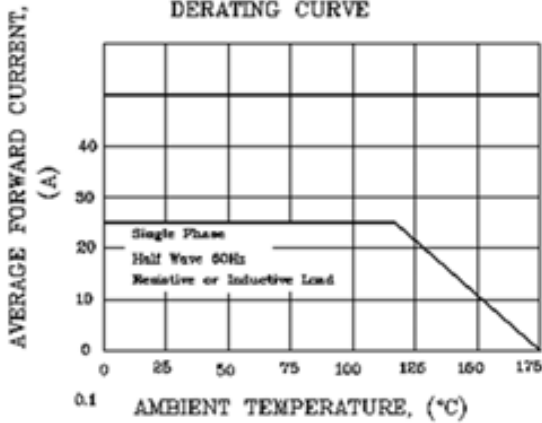


FIG.2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

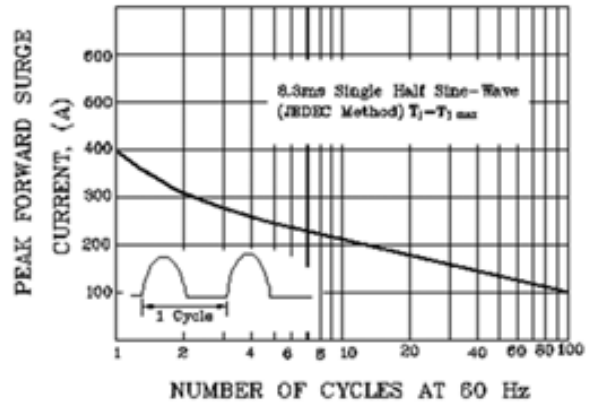


FIG.3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

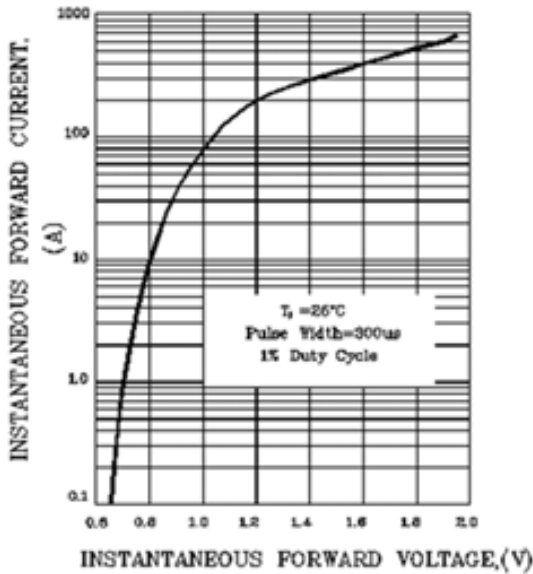


FIG.4- FORWARD POWER DISSIPATION

