25A Automotive Rectifiers

ARS

Features

- Low leakage
- Low forward voltage drop
- High current capability
- High forward surge current capacity
- RoHS Compliance

Mechanical Data

Case:	ARS, molded plastic body
Epoxy:	Plastic package has UL flammability classification 94V-0
Terminals:	Plated slug, solderable per MIL-STD-202, Method 208C
Polarity:	Color ring denotes cathode end
Weight:	0.064 ounces, 1.82 grams

Maximum Ratings and Electrical Characteristics *(T_A=25ºC unless noted otherwise)*

Symbol	Description	ARS 2505	ARS 251	ARS 252	ARS 254	ARS 256	ARS 258	Unit	Conditions
V_{RRM}	Maximum Repetitive Peak Reverse Voltage	50	100	200	400	600	800	V	
V_{RMS}	Maximum RMS Voltage	35	70	140	280	420	560	V	
V_{DC}	Maximum DC Blocking Voltage	50	100	200	400	600	800	V	
$I_{F(AV)}$	Maximum Average Forward Rectified Current	25						A	T_C=110° C
I_{FSM}	Peak Forward Surge Current	400						A	8.3ms single half sine-wave superimposed on rated load (JEDEC Method)
V_F	Forward Voltage	1.05						V	I_F=25A
I_R	Maximum DC Reverse Current at Rated DC Blocking Voltage	5.0						µA	T_A=25° C
		250							T_A=100° C

Symbol	Description	ARS 2505	ARS 251	ARS 252	ARS 254	ARS 256	ARS 258	Unit	Conditions
R_{thJC}	Typical Thermal Resistance	1.0						°C / W	
T_J, T_{STG}	Operating Junction and Storage Temperature Range	-65 to +175						° C	
	Polarity and Voltage Demotion Color Band	Red	Yellow	Silver	Orange	Green	Blue		

Note: (1) Enough heatsink must be considered in application.
(2) Single phase, half wave, 60Hz, resistive or inductive load.
(3) For capacitive load derate current by 20%.

Typical Characteristics Curves

Fig.1-Typical Forward Current Derating Curve

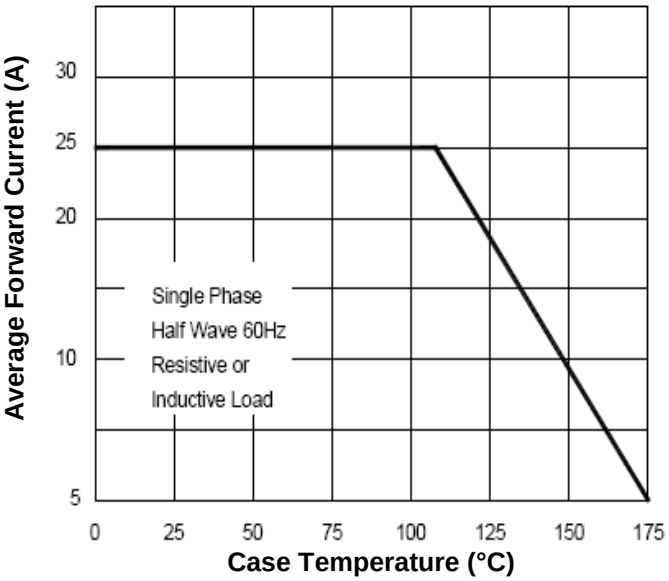


Fig.2-Max. Non-Repetitive Peak Forward Surge Current

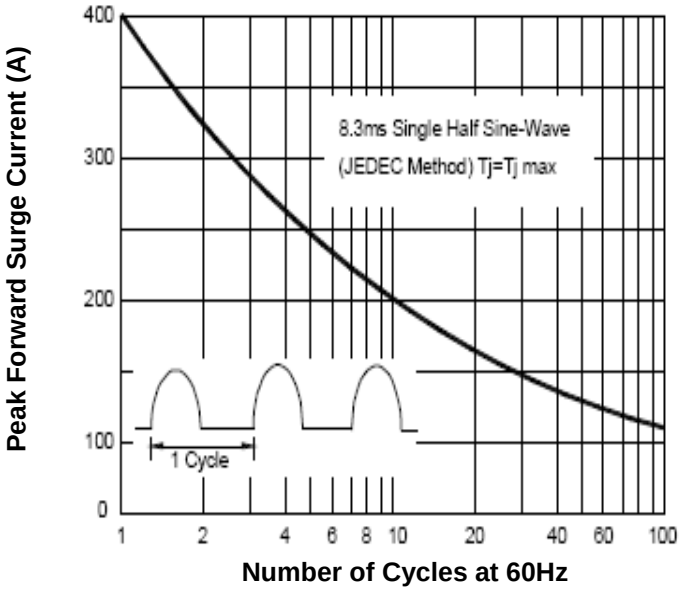


Fig.3- Typical Instantaneous Forward Characteristics

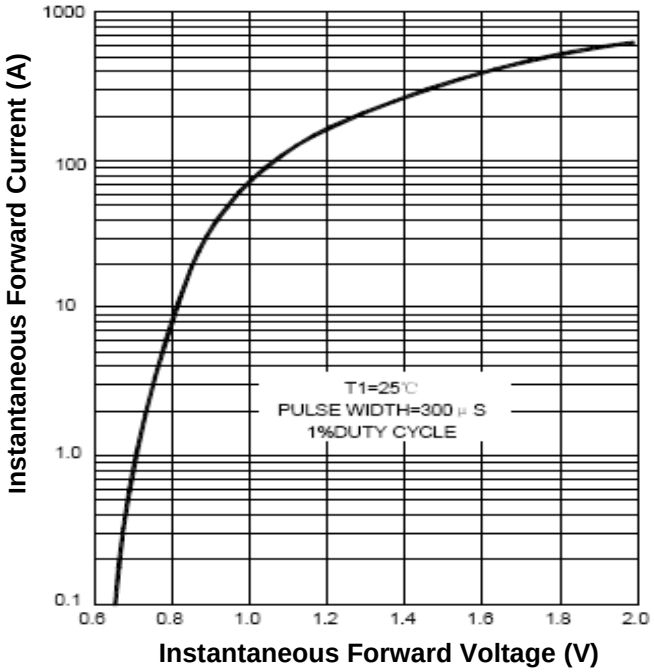
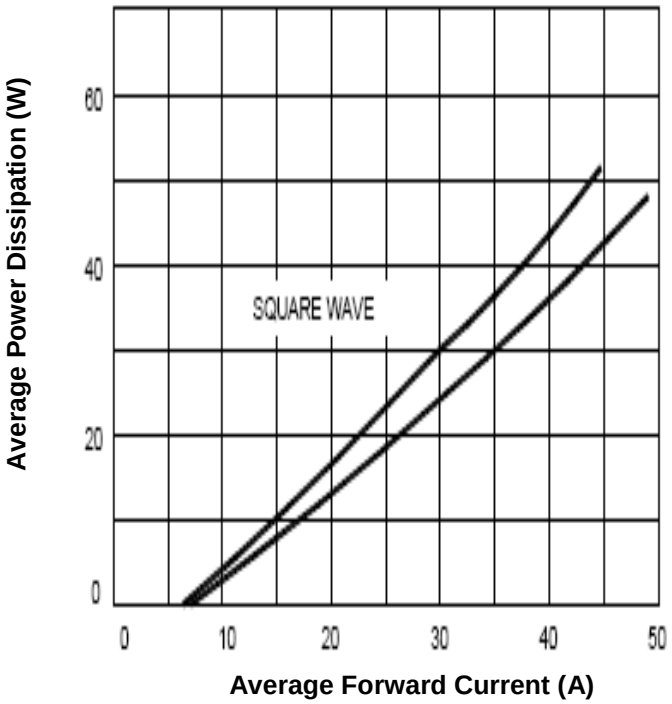
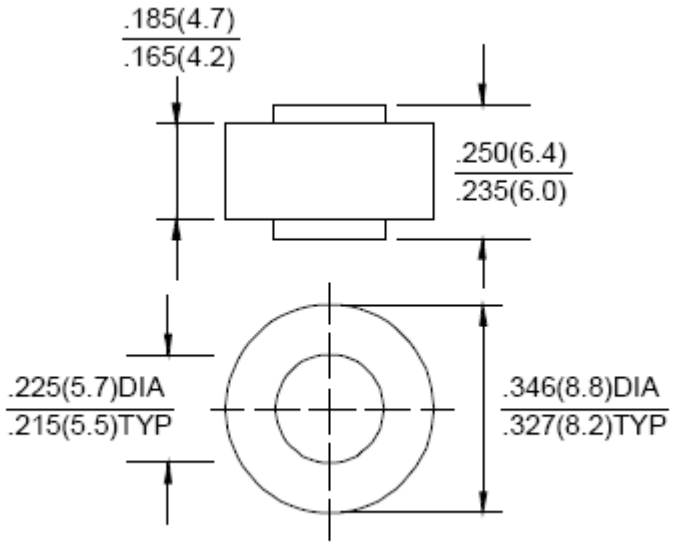


Fig.4-Forward Power Dissipation



Dimensions in inch (mm)



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