



ARS50A thru ARS50M

HIGH CURRENT AUTOMOBILE RECTIFIER

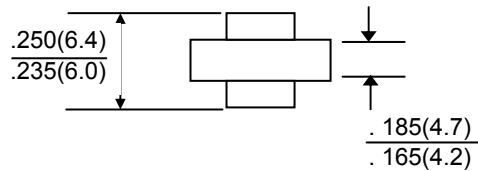
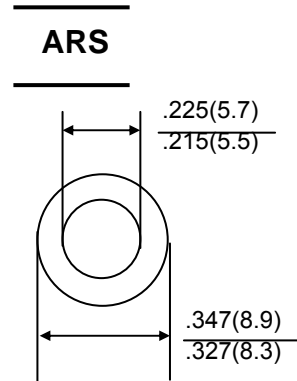
REVERSE VOLTAGE - 50 to 1000Volts
FORWARD CURRENT - 50 Amperes

FEATURES

- Utilizing viod-free molded plastic technique
- Low power loss
- High Surge Capability
- High temperature soldering guaranteed:
265°C/10S

MECHANICAL DATA

- Terminals: Plated axial terminals solderable per
MIL STD-202E, Method 208C
- Case: Molded with UL-94 Class V-O recognized
flame retardant epoxy
- Polarity: Color ring denotes cathode



Dimensions in inches and (millimeters)

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%

| CHARACTERISTICS | SYMBOL | ARS50A | ARS50B | ARS50D | ARS50G | ARS50J | ARS50K | ARS50M | UNIT |
|--|-------------------|-------------|--------|--------|--------|--------|--------|--------|------|
| Maximum Recurrent Peak Reverse Voltage | V _{RRM} | 50 | 100 | 200 | 400 | 600 | 800 | 1000 | V |
| Maximum RMS Voltage | V _{RMS} | 35 | 70 | 140 | 280 | 420 | 560 | 700 | V |
| Maximum DC Blocking Voltage | V _{DC} | 50 | 100 | 200 | 400 | 600 | 800 | 1000 | V |
| Maximum Average Forward Rectified Current @T _A =55 °C | I _(AV) | 50 | | | | | | | A |
| Peak Forward Surge Current 8.3ms Single Half Sine-Wave Super Imposed on Rated Load | I _{FSM} | 600 | | | | | | | A |
| Maximum Instantaneous Forward Voltage (at Rated Forward Current) | V _F | 1.1 | | | | | | | V |
| Maximum DC Reverse Current @T _A =25°C at Rated DC Bolcking Voltage @T _A =150°C | I _R | 10 1000 | | | | | | | uA |
| Typical Junction Capacitance Element (Note1) | C _J | 300 | | | | | | | pF |
| Typical Thermal Resistance (Note2) | R _{θJA} | 1.0 | | | | | | | °C/W |
| Operating Temperature Range | T _J | -55 to +150 | | | | | | | °C |
| Storage Temperature Range | T _{STG} | -55 to +150 | | | | | | | °C |
| Polarity and voltage denotation color ring | | Red | Yellow | Silver | Orange | Green | Blue | Violet | |

NOTES:1.Measured at 1.0 MHz and applied reverse voltage of 4.0V DC.

2.Thermal resistance from junction of ambient.

3.The typical data above is for reference only(典型值仅供参考).

RATING AND CHARACTERISTIC CURVES

ARS50A thru ARS50M



FIG. 1 – FORWARD CURRENT DERATING CURVE

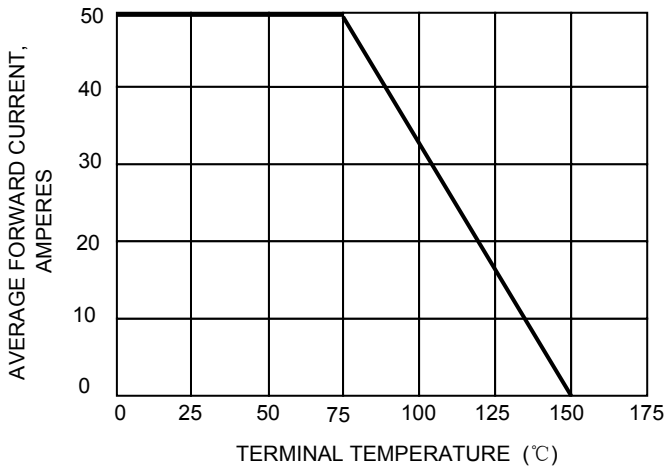


FIG.2- NON-REPETITIVE PEAK FORWARD SURGE CURRENT

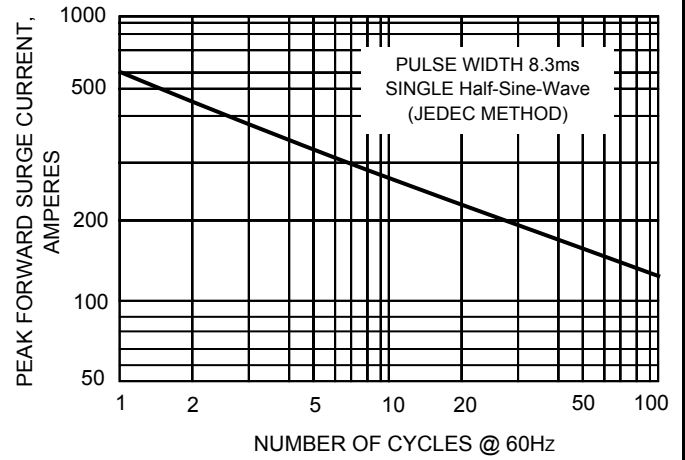


FIG.3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

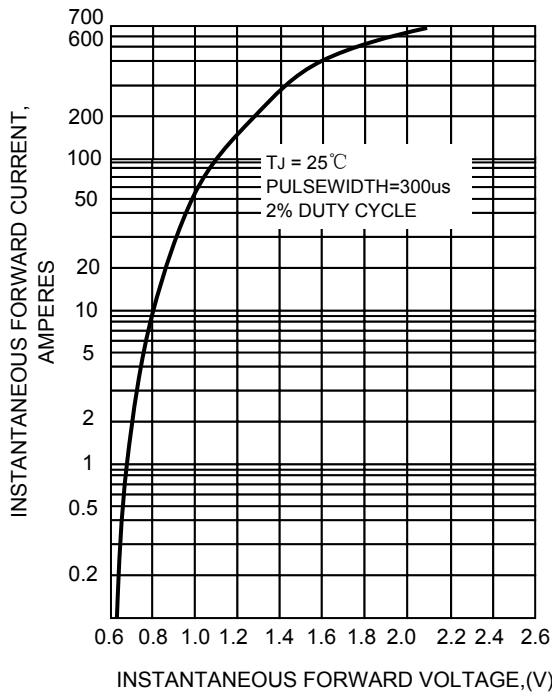


FIG.4-TYPICAL REVERSE CHARACTERISTICS

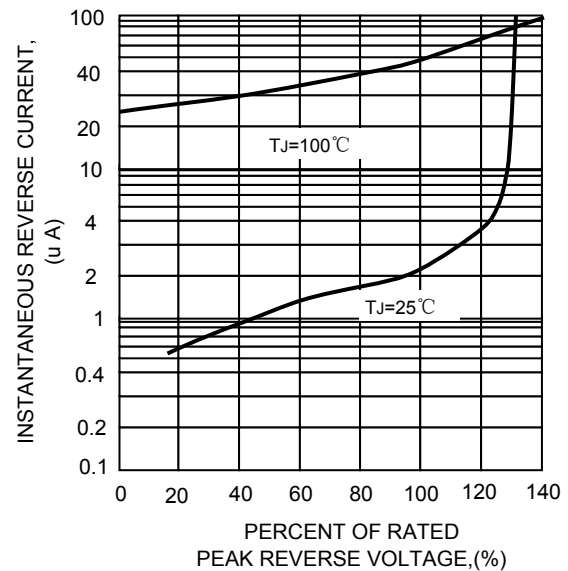
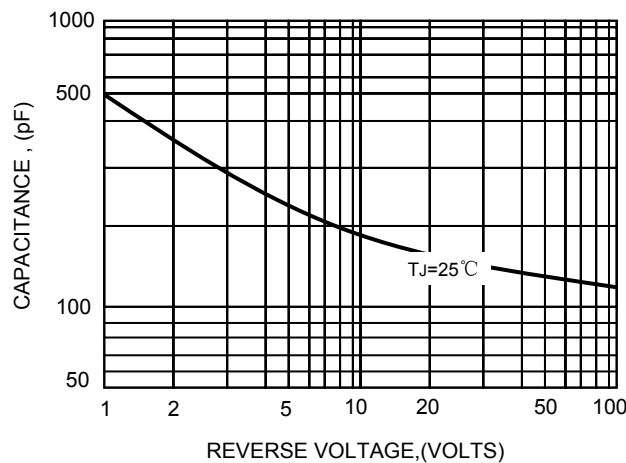


FIG.5-TYPICAL JUNCTION CAPACITANCE



The cruve graph is for reference only, can't be the basis for judgment(曲线图仅供参考)!



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