



TAYCHIPST SURFACE MOUNT FAST RECOVERY RECTIFIER

RS2AB THRU RS2MB

50V-1000V 1.5A

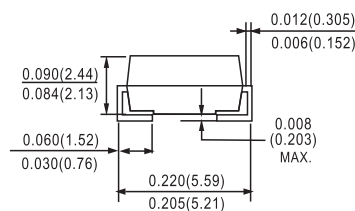
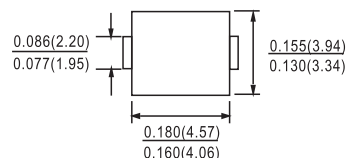
FEATURES

- Glass Passivated Die Construction
- Fast Recovery Time For High Efficiency
- Low Forward Voltage Drop and High Current Capability
- Surge Overload Rating to 50A Peak
- Ideally Suited for Automated Assembly
- Plastic Material: UL Flammability Classification Rating 94V-0

Mechanical Data

- Case: Molded Plastic
- Terminals: Solder Plated Terminal - Solderable per MIL-STD-202, Method 208
- Polarity: Cathode Band or Cathode Notch
- SMA Weight: 0.065 grams (approx.)
- SMB Weight: 0.09 grams (approx.)
- Mounting Position: Any
- Marking: Type Number

DO-214AA(SMB)



Dimensions in inches and (millimeters)

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Single phase, half wave, 60Hz, resistive or inductive load.

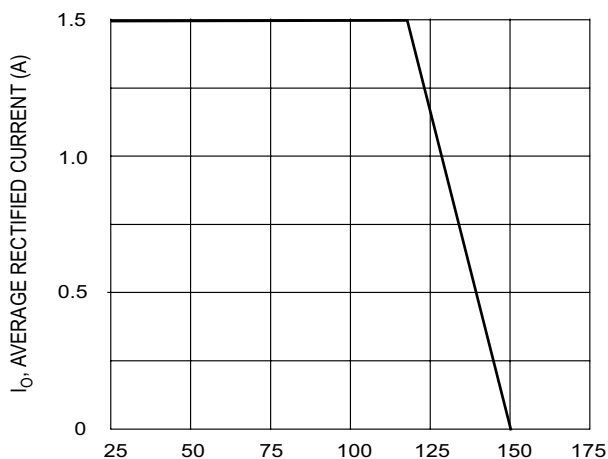
For capacitive load, derate current by 20%.

Characteristic	Symbol	RS2 A/AA	RS2 B/BA	RS2 D/DA	RS2 G/GA	RS2 J/JA	RS2 K/KA	RS2 M/MA	Unit
Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage	V_{RRM} V_{RWM} V_R	50	100	200	400	600	800	1000	V
RMS Reverse Voltage	$V_{R(RMS)}$	35	70	140	280	420	560	700	V
Average Rectified Output Current @ $T_T = 120^{\circ}\text{C}$	I_O	1.5							A
Non-Repetitive Peak Forward Surge Current 8.3ms Single half sine-wave Superimposed on Rated Load (JEDEC Method)	I_{FSM}	50							A
Forward Voltage @ $I_F = 1.5\text{A}$	V_{FM}	1.3							V
Peak Reverse Current @ $T_A = 25^{\circ}\text{C}$ at Rated DC Blocking Voltage @ $T_A = 125^{\circ}\text{C}$	I_{RM}	5.0 200							μA
Reverse Recovery Time (Note 3)	t_{rr}	150				250	500		ns
Typical Junction Capacitance (Note 2)	C_j	30							pF
Typical Thermal Resistance, Junction to Terminal (Note 1)	$R_{\theta JT}$	20							K/W
Operating and Storage Temperature Range	T_j, T_{STG}	-65 to +150							$^{\circ}\text{C}$

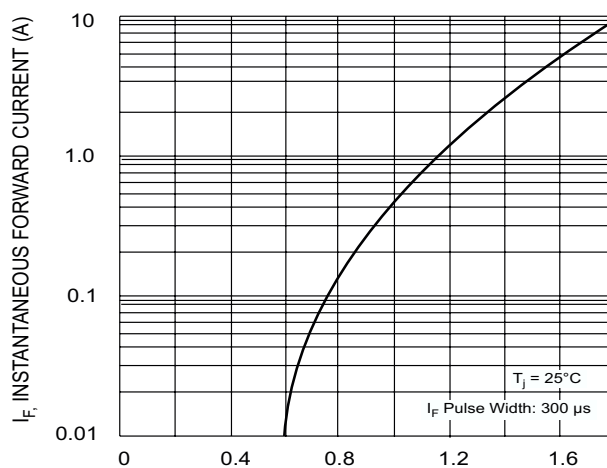
- Notes:
1. Thermal Resistance: Junction to terminal, unit mounted on PC board with 5.0 mm² (0.013 mm thick) copper pads as heat sink.
 2. Measured at 1.0MHz and applied reverse voltage of 4.0V DC.
 3. Reverse Recovery Test Conditions: $I_F = 0.5\text{A}$, $I_R = 1.0\text{A}$, $I_{rr} = 0.25\text{A}$. See Figure 5.

RATINGS AND CHARACTERISTIC CURVES

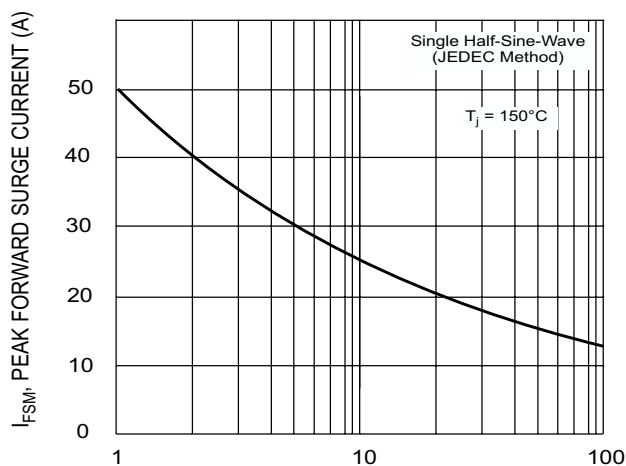
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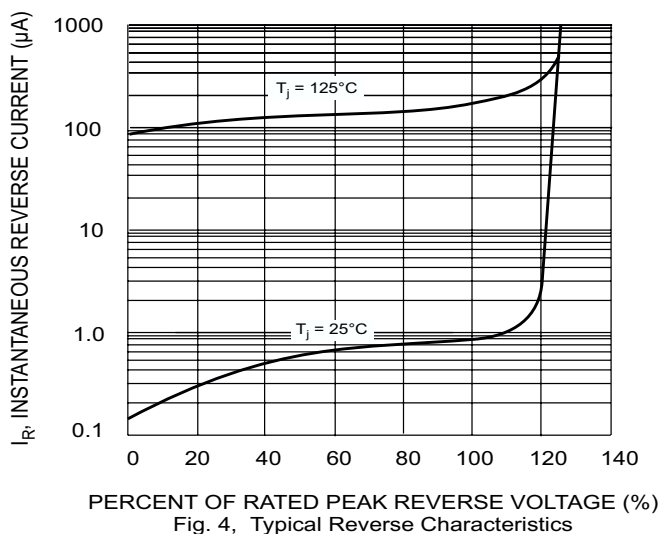
T_T , TERMINAL TEMPERATURE (°C)
Fig. 1 Forward Current Derating Curve



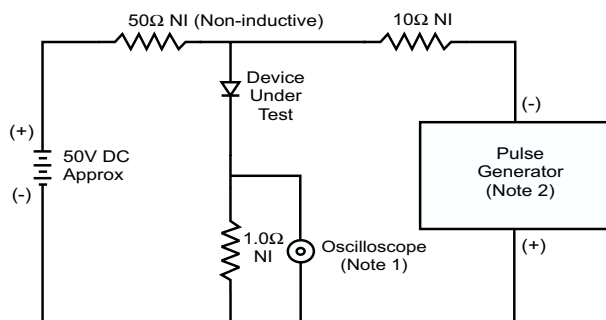
V_F , INSTANTANEOUS FORWARD VOLTAGE (V)
Fig. 2 Typical Forward Characteristics



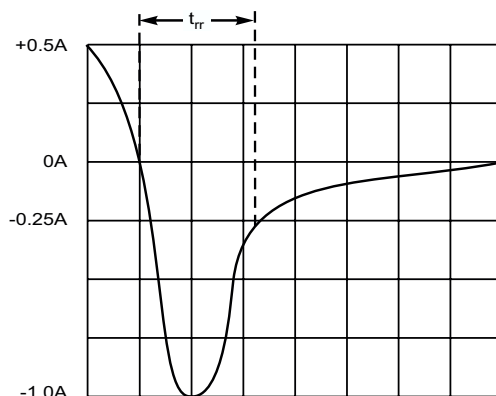
NUMBER OF CYCLES AT 60 Hz
Fig. 3 Forward Surge Current Derating Curve



PERCENT OF RATED PEAK REVERSE VOLTAGE (%)
Fig. 4, Typical Reverse Characteristics



Notes:
1. Rise Time = 7.0ns max. Input Impedance = 1.0MΩ, 22pF.
2. Rise Time = 10ns max. Input Impedance = 50Ω.



Set time base for 50/100 ns/cm

Fig. 5 Reverse Recovery Time Characteristic and Test Circuit