RS5A THRU RS5M

FAST RECOVERY RECTIFIER

Reverse Voltage: 50 to 1000 Volts
Forward Current:5.0Amperes

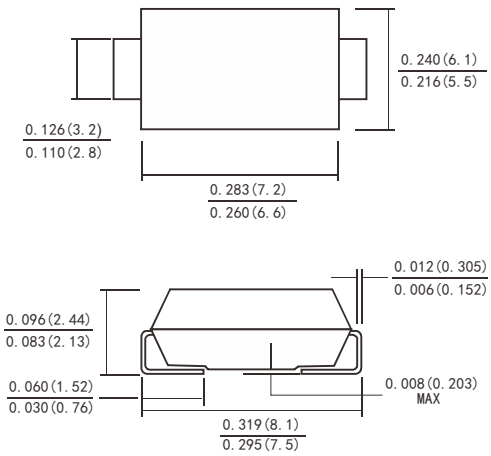
FEATURES

- Glass passivated cavity-free junction
- Ideal for surface mount automotive applications
- Ultrafast recovery time for high efficiency
- Built-in strain relief
- Easy pick and place
- Plastic package has Underwriters Laboratory Flammability
- Classification 94V-0
- Lead (Pb)-free component
- Component in accordance to RoHS 2002/95/EC and WEEE 2002/96/EC
- High temperature soldering guaranteed:260˚C/10 seconds at terminals

MECHANICAL DATA

- **Case:** JEDEC SMC(DO-214AB) molded plastic body
- **TerMINals:** solder plated ,solderable per MIL-STD-750,method 2026
- **Polarity:** color band denotes cathode end
- **Mounting Position:** Any
- **Weight:** 0.007ounce,0.2 gram

SMC(DO-214AB)



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%.)

	Symbols	RS5A	RS5B	RS5D	RS5G	RS5J	RS5K	RS5M	Units
Maximum Recurrent Peak Reverse Voltage	V_{RRM}	50	100	200	400	600	800	1000	Volts
Maximum RMS Voltage	V_{RMS}	35	70	140	280	420	560	700	Volts
Maximum DC Blocking Voltage	V_{DC}	50	100	200	400	600	800	1000	Volts
Maximum Average Forward Rectified Current 0.375"(9.5mm)lead length at T_A=55°C	$I_{(AV)}$	5.0							Amps
Peak Forward Surge Current 8.3ms single half sine-wave superimposed on rated load (JEDEC method)	I_{FSM}	200							Amps
Maximum Instantaneous Forward Voltage at 6.0A	V_F	1.3							Volts
Maximum DC Reverse Current at rated DC blocking voltage T_A=25°C	I_R	5.0							μA
Maximum DC Reverse Current at rated DC blocking voltage T_A=100°C	I_R	200							μA
Maximum reverse recovery time(Note1)	t_{rr}	150				250	500		ns
Typical junction capacitance(Note2)	C_J	100							pF
Operating junction and storage temperature range	T_J T_{STG}	-65 to+150							˚C

Note: 1.Test conditions: I_F=0.5A,I_R=1.0A,I_{RR}=0.25A.

2.Measured at 1MHz and applied reverse voltage of 4.0 Volts D.C.

Rating and Characteristic Curves (TA = 25°C Unless otherwise noted)

RS5A THRU RS5M

FIG.1-TYPICAL FORWARD CURRENT DERATING CURVE

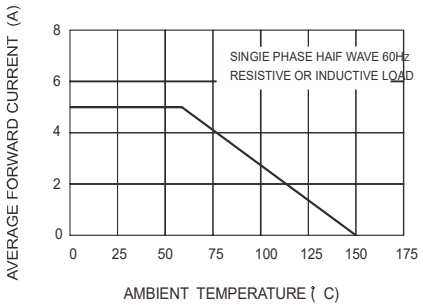


FIG.2-MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

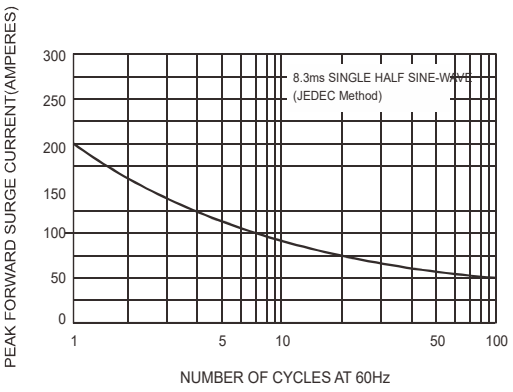


FIG.3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

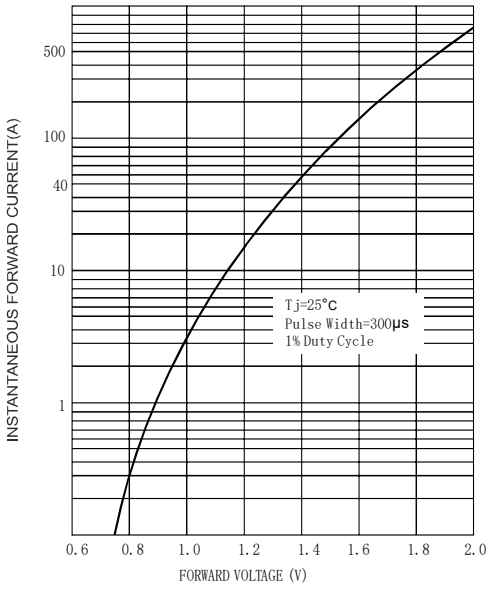


FIG.4-TYPICAL JUNCTION CAPACITANCE

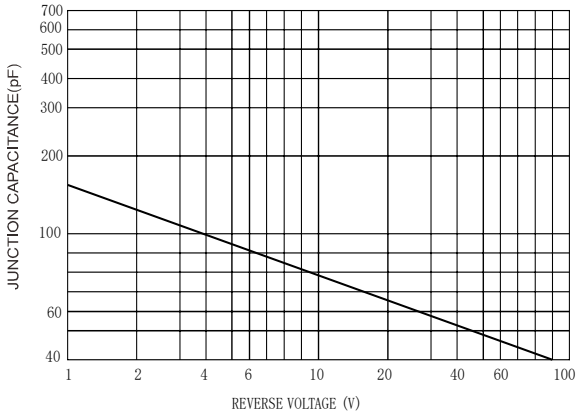
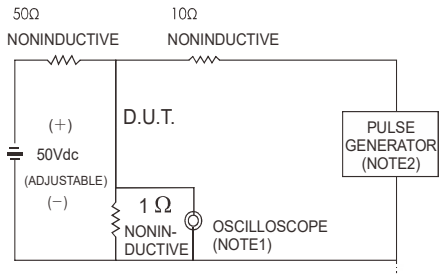
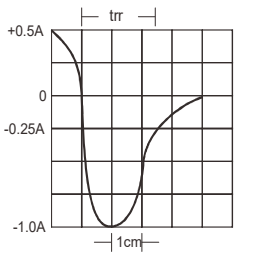


FIG.5-TEST CIRCUIT DIAGRAM AND REVERSE RECOVERY TIME CHARACTERISTIC



NOTES:1.Rise Time=7ns max. input Impedance=1 megohm 22pF
2.Rise Time=10ns max. source Impedance= 50 ohms



SET TIME BASE FOR 50/100 ns/cm