

SURFACE MOUNT FAST RECOVERY RECTIFIER

RS07A THRU RS07M

VOLTAGE RANGE
CURRENT

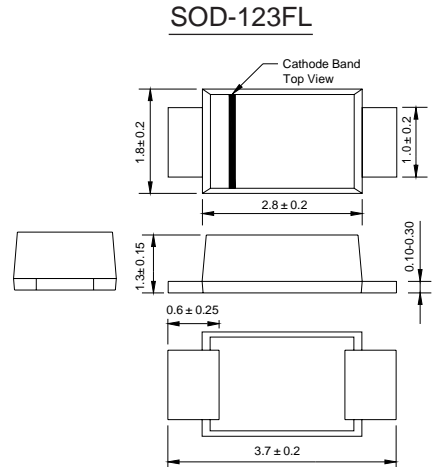
50 to 1000 Volts
0.7 Ampere

FEATURES

- Glass passivated device
- Ideal for surface mounted applications
- Low reverse leakage
- Metallurgically bonded construction
- High temperature soldering guaranteed:
260°C/10 seconds, 0.375" (9.5mm) lead length,
5 lbs. (2.3kg) tension

MECHANICAL DATA

- Case: JEDEC SOD-123FL molded plastic body over passivated chip
- Terminals : Solderable per MIL-STD-750,
Method 2026
- Polarity : Color band denotes cathode end
- Mounting Position : Any
- Weight : 0.0007 ounce, 0.02 grams



Dimensions in millimeters

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

- Ratings at 25°C ambient temperature unless otherwise specified.
- Single phase half-wave 60Hz, resistive or inductive load, for capacitive load current derate by 20%.

	SYMBOLS	RS07A	RS07B	RS07D	RS07G	RS07J	RS07K	RS07M	UNITS
		RA	RB	RD	RG	RJ	RK	RM	
Maximum repetitive 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 at $T_A=65^\circ\text{C}$ (NOTE 1)	$I_{(AV)}$	0.7							Amp
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method) $T_L=25^\circ\text{C}$	I_{FSM}	25.0							Amps
Maximum instantaneous forward voltage at 0.7A	V_F	1.15							Volts
Maximum DC reverse current $T_A=25^\circ\text{C}$ at rated DC blocking voltage $T_A=125^\circ\text{C}$	I_R	10.0 50.0							μA
Maximum reverse recovery time (NOTE 2)	t_{rr}	150				250	500		ns
Typical junction capacitance (NOTE 3)	C_J	4							pF
Typical thermal resistance (NOTE 4)	$R_{\theta JA}$	180							K/W
Operating junction and storage temperature range	T_J, T_{STG}	-55 to +150							$^\circ\text{C}$

- Note:**
1. Averaged over any 20ms period.
 2. Measured with $I_F=0.5\text{A}$, $I_R=1\text{A}$, $I_{rr}=0.25\text{A}$.
 3. Measured at 1MHz and applied reverse voltage of 4.0V D.C.
 4. Thermal resistance junction to ambient, 6.0 mm² copper pads to each terminal.



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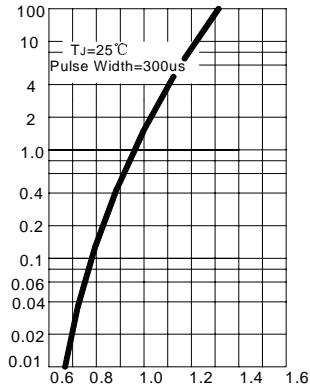
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FIG.1 – TYPICAL FORWARD CHARACTERISTIC

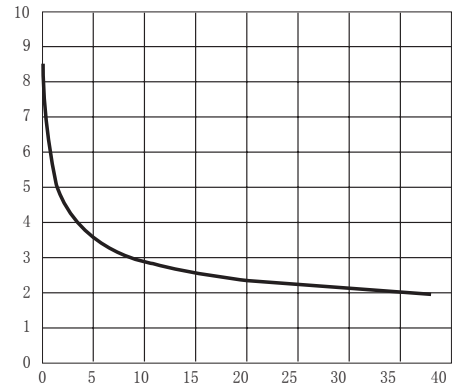
INSTANTANEOUS FORWARD CURRENT
AMPERES



INSTANTANEOUS FORWARD VOLTAGE, V

FIG.2 – TYPICAL JUNCTION CAPACITANCE

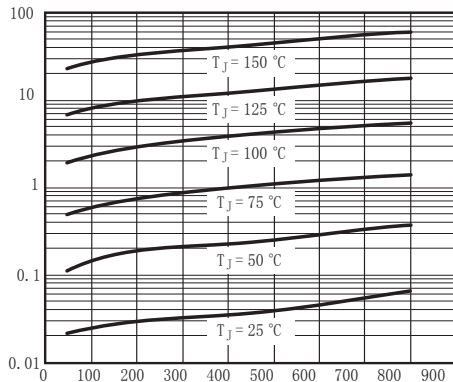
CAPACITANCE, pF



REVERSE VOLTAGE, VOLTS

FIG.3 – TYPICAL INSTANTANEOUS REVERSE CHARACTERISTICS

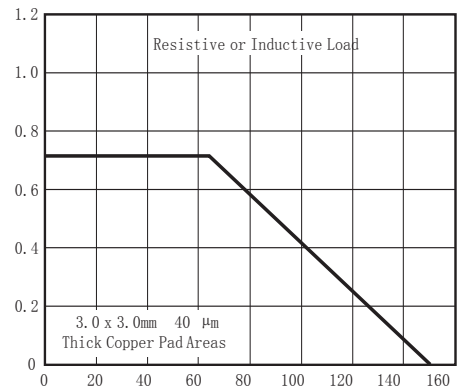
INSTANTANEOUS REVERSE CURRENT
 μ AMPERES



INSTANTANEOUS REVERSE VOLTAGE, V

FIG.4 – FORWARD DERATING CURVE

AVERAGE FORWARD CURRENT,
AMPERES



AMBIENT TEMPERATURE, $^\circ\text{C}$