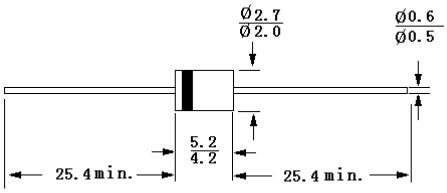
FR101S THRU FR107S

FAST RECOVERY RECTIFIERS
Reverse Voltage – 50 to 1000 Volts
Forward Current – 1.0 Ampere

A-405



Dimensions in mm

Features

- High Current Capability
- Fast switching for high efficiency
- Exceeds Environmental Standards of MIL-S-19500/228
- 1 ampere operation at T_A = 55°C with no thermal runaway
- Low Leakage.

Mechanical Data

- **Case:** Molded plastic, A-405
- **Lead:** Axial leads, solderable per MIL-STD-202, method 208 guaranteed.
- **Polarity:** Color band denotes cathode end
- **Mounting Position:** Any

Absolute Maximum Ratings and Characteristics

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

	Symbols	FR 101S	FR 102S	FR 103S	FR 104S	FR 105S	FR 106S	FR 107S	Units
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
Average forward rectified current .375" (9.5mm) lead length at T_A = 55 °C	$I_{(AV)}$	1							Amp
Peak forward surge current 8.3mS single half sine-wave superimposed on rated load (JEDEC method)	I_{FSM}	30							Amps
Maximum forward voltage at 1A DC and 25°C	V_F	1.3							Volts
Maximum reverse current T_A = 25℃	I_R	5							μA
at rated DC blocking voltage T_A = 100℃		500							
Maximum reverse recovery time (Note 1)	T_{rr}	150				250	500		nS
Typical junction capacitance (Note 2)	C_J	12							pF
Typical thermal resistance (Note3)	$R_{\theta JA}$	67							℃/W
Operating and storage temperature range	T_J ,T_S	-55 to +150							℃

1) Reverse recovery test conditions: I_F = 0.5A, I_R = 1A, I_{rr} = 0.25A.

2) Measured at 1MH_Z and applied reverse voltage of 4 VDC .

3) Thermal resistance junction to ambient and form junction to lead at 0.375" (9.5mm) lead length P.C.B. mounted.

SEMTECH ELECTRONICS LTD.

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