



# WEET Technology Company Limited

## FAST RECOVERY RECTIFIER

FR101 THRU FR107

VOLTAGE RANGE

50 to 1000 Volts

CURRENT

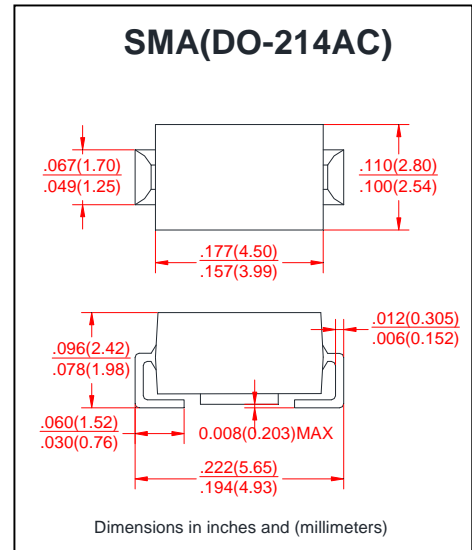
1.0 Ampere

### FEATURES

- Fast switching for high efficiency
- Low forward voltage drop
- Low leakage current
- High forward surge capability

### MECHANICAL DATA

- Case: SMA mold plastic
- Epoxy: UL94V-0 rate flame retardant
- Polarity: Indicated by cathode band
- Lead: Solder plated, solderable per MIL-STD-750 method 2026
- Mounting position: Any



### 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 derate current by 20%

	SYMBOLS	FR101	FR102	FR103	FR104	FR105	FR106	FR107	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
Maximum Average Forward Rectified Current at $T_A=55^\circ\text{C}$	$I_{(AV)}$	1.0							Amps
Peak Forward Surge Current 8.3mS single half sine-wave superimposed on rated load (JEDEC method)	$I_{FSM}$	35							Amps
Maximum Instantaneous Forward Voltage at 1.0A	$V_F$	1.3							Volts
Maximum DC Reverse Current at Rated DC Blocking Voltage	$T_A = 25^\circ\text{C}$	2.0							$\mu\text{A}$
	$T_A = 100^\circ\text{C}$	100							
Maximum Reverse Recovery Time(NOTE1)	$T_{RR}$	150				250	500		
Typical Junction Capacitance (NOTE 2)	$C_J$	20							pF
Typical Thermal Resistance (NOTE 3)	$R_{\theta JA}$	55							$^\circ\text{C}/\text{W}$
Operating and Storage Temperature Range	$T_J, T_{STG}$	-55 to +150							$^\circ\text{C}$

#### Notes:

- 1.Reverse Recovery Test Conditions: $I_f=0.5\text{A}, I_r=1.0\text{A}, I_{rr}=0.25\text{A}$ .
- 2.Measured at 1.0MHz and applied reverse voltage of 4.0 Volts.
- 3.Thermal Resistance from Junction to Ambient at  $8.0 \times 8.0\text{mm}^2$  copper pad areas.



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CURRENT 1.0 Ampere

FIG.1-TYPICAL FORWARD CURRENT DERATING CURVE

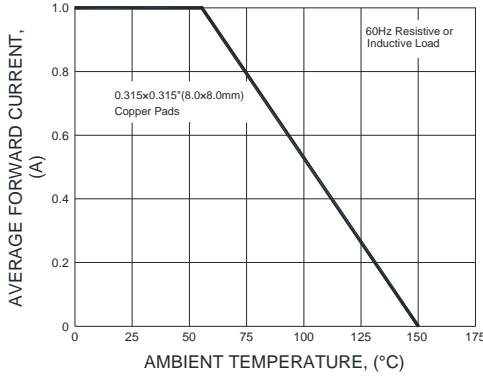


FIG.2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

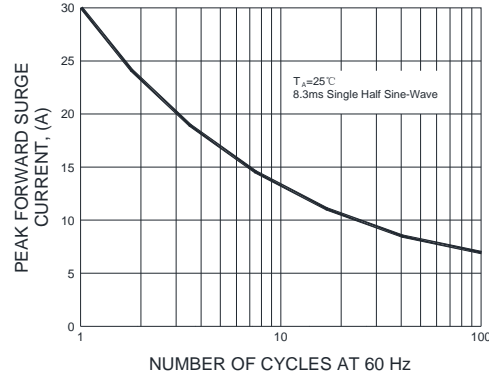


FIG.3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

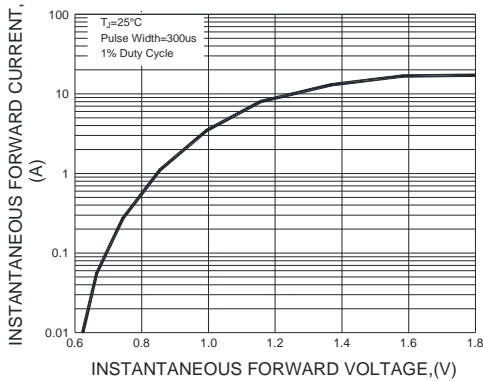


FIG.4-TYPICAL REVERSE CHARACTERISTICS

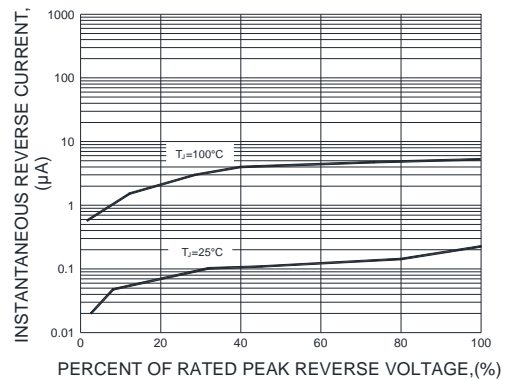


FIG.5-TYPICAL JUNCTION CAPACITANCE

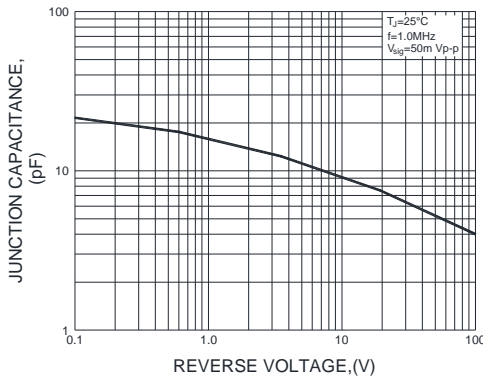
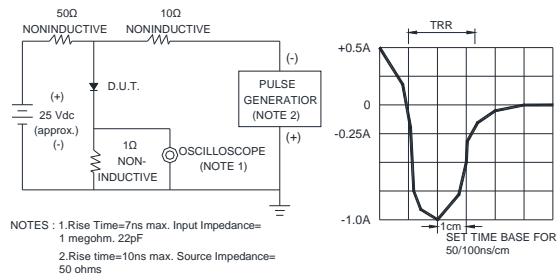


FIG.6-TEST CIRCUIT DIAGRAM AND FORWARD SURGE CURRENT



Note: Specifications are subject to change without notice. For more detail and update, please visit our website.