GLASS PASSIVATED SUPER FAST RECTIFIER

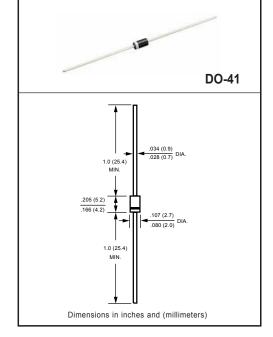
VOLTAGE RANGE 50 to 600 Volts CURRENT 1.0 Ampere

FEATURES

- * High reliability
- * Low leakage
- * Low forward voltage
- * High current capability
- * Super fast switching speed
- * High surge capability
- * Good for switching mode circuit

MECHANICAL DATA

- * Case: Molded plastic
- * Epoxy: Device has UL flammability classification 94V-O
- * Lead: MIL-STD-202E method 208C guaranteed
- * Mounting position: Any
- * Weight: 0.33 gram



MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25 $^{\circ}\text{C}$ ambient temperature unless otherwise specified. Single phase, half wave, 60 Hz, resistive or inductive load. For capacitive load, derate current by 20%.

MAXIMUM RATINGS (@ TA=25 °C unless otherwise noted)

RATINGS	SYMBOL	SF11	SF12	SF13	SF14	SF15	SF16	SF17	UNITS
Maximum Recurrent Peak Reverse Voltage	V_{RRM}	50	100	150	200	300	400	600	Volts
Maximum RMS Voltage	V _{RMS}	35	70	105	140	210	280	420	Volts
Maximum DC Blocking Voltage	V _{DC}	50	100	150	200	300	400	600	Volts
Maximum Average Forward Rectified Current at T _A = 55°C	I ₀	1.0						Amps	
Peak Forward Surge Current 8.3 ms single half sine-wave superimposed on rated load (JEDEC method)	I _{FSM}	30						Amps	
Typical Thermal Resistance (Note 3)	R _θ JA	50							°C/W
Typical Thermal Resistance (Note 3)	$R_{\theta JL}$	20							
Typical Junction Capacitance (Note 2)	CJ	15			10			pF	
Operating and Storage Temperature Range	TJ, TSTG	-55 to + 150						٥C	

ELECTRICAL CHARACTERISTICS(@TA=25 °C unless otherwise noted)

CHARACTERISTICS		SYMBOL	SF11	SF12	SF13	SF14	SF15	SF16	SF17	UNITS
Maximum Instantaneous Forward Voltage at 1.0A DC		V _F	0.95 1.25 1.50					1.50	Volts	
Maximum DC Reverse Current at Rated DC Blocking Voltage	@T _A = 25°C	- I _R	5.0							μAmps
	@T _A = 100°C		100							
Maximum Reverse Recovery Time (Note 1)		trr	35			50			nSec	

- NOTES: 1. Test Conditions: I_F = 0.5A, I_R = -1.0A, I_{RR} = -0.25A
 2. Measured at 1 MHz and applied reverse voltage of 4.0 volts.
 3. Typical Thermal Resistance: At 9.5mm lead lengths,PCB mounted.
 4. "Fully ROHS complaint", "100% Sn plating (Pb-free)"

2006-11

RATING AND CHARACTERISTICS CURVES (SF11 THRU SF17)

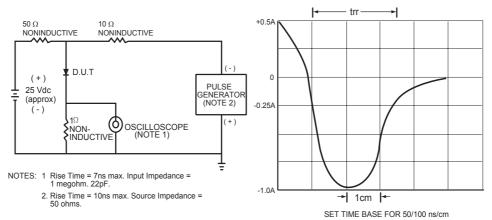
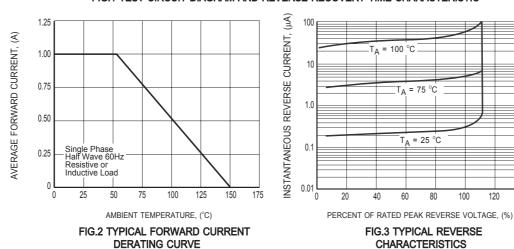
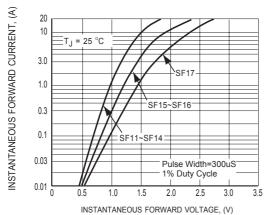


FIG.1 TEST CIRCUIT DIAGRAM AND REVERSE RECOVERY TIME CHARACTERISTIC



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RATING AND CHARACTERISTICS CURVES (SF11 THRU SF17)



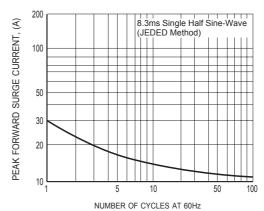


FIG.4 TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

FIG.5 MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

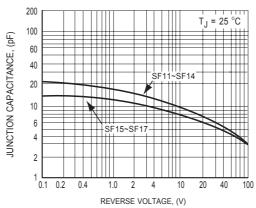


FIG.6 TYPICAL JUNCTION CAPACITANCE



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