

GLASS PASSIVATED SUPER FAST RECTIFIER

VOLTAGE RANGE 50 to 600 Volts CURRENT 8.0 Amperes

FEATURES

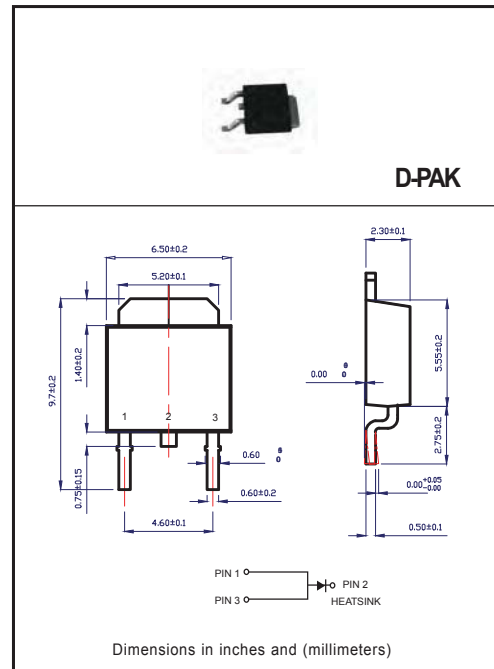
- * Low switching noise
- * Low forward voltage drop
- * Low thermal resistance
- * High current capability
- * Super fast switching speed
- * High reliability
- * Good for switching mode circuit

MECHANICAL DATA

- * Case: D-PAK molded plastic
- * Epoxy: Device has UL flammability classification 94V-0
- * Lead: MIL-STD-202E method 208C guaranteed
- * Mounting position: Any
- * Weight: 0.33 grams

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25 °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	SF81K	SF82K	SF83K	SF84K	SF85K	SF86K	SF87K	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 _C = 100°C	I _O	8.0							Amps
Peak Forward Surge Current 8.3 ms single half sine-wave superimposed on rated load (JEDEC method)	I _{FSM}	125							Amps
Typical Current Squared Time	I ² t	64.84							A ² /Sec
Typical Thermal Resistance (Note 1)	R _{θJC}	3							°C/W
	R _{θJA}	20							
Typical Junction Capacitance (Note 2)	C _J	150							pF
Operating and Storage Temperature Range	T _J , T _{STG}	-55 to + 150							°C

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

CHARACTERISTICS	SYMBOL	SF81K	SF82K	SF83K	SF84K	SF85K	SF86K	SF87K	UNITS
Maximum Instantaneous Forward Voltage at 8.0A DC	V _F	1.0				1.35		1.70	Volts
Maximum DC Reverse Current at Rated DC Blocking Voltage	@ T _A = 25°C	10							uAmps
	@ T _A = 100°C	100							
Maximum Reverse Recovery Time (Note 3)	t _{rr}	35				50		nSec	

- NOTES : 1. Thermal Resistance : Heat-sink case mounted or if PCB mounted.
2. Measured at 1 MHz and applied reverse voltage of 4.0 volts.
3. Test conditions: I_F = 0.5A, I_R = -0.1A, I_{RR} = -0.25A.
4. * ROHS complaint
5. Suffix "R" for Reverse Polarity.

RATING AND CHARACTERISTICS CURVES (SF81K THRU SF87K)

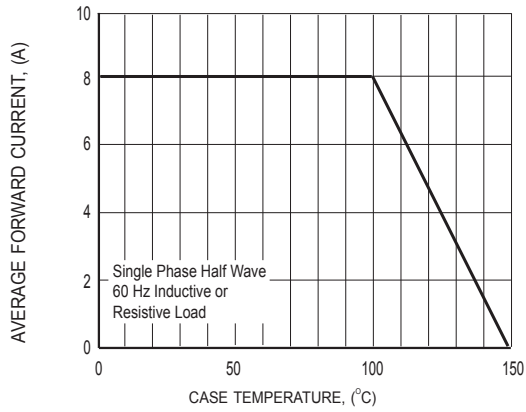


FIG.1 TYPICAL FORWARD CURRENT DERATING CURVE

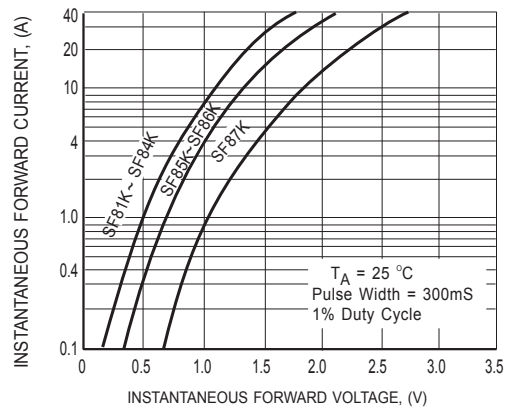


FIG.2 TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

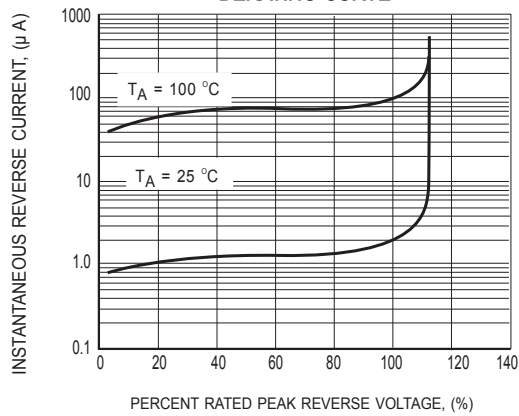


FIG.3 TYPICAL REVERSE CHARACTERISTICS

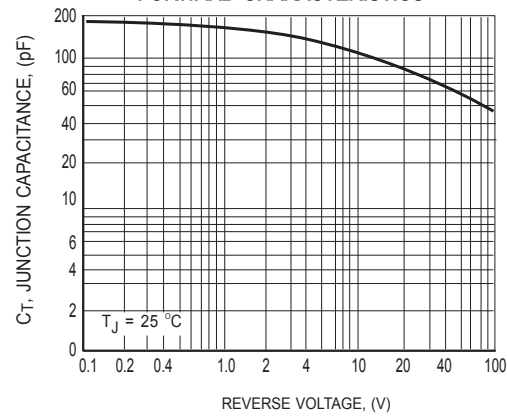


FIG.4 TYPICAL JUNCTION CAPACITANCE

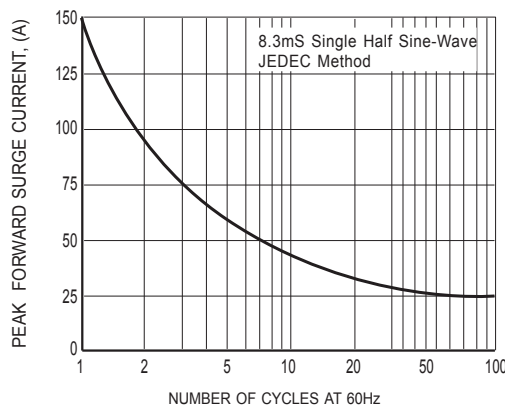
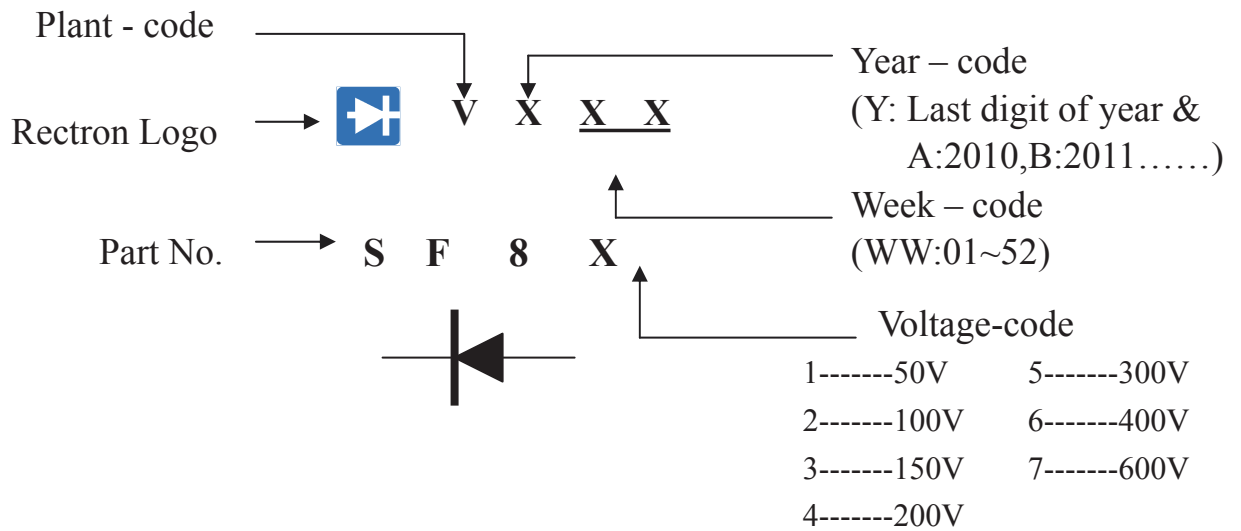


FIG.5 MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT



Attachment information about SF8XK

Marking on the body



PACKAGING OF DIODE AND BRIDGE RECTIFIERS

REEL PACK

PACKAGE	PACKING CODE	EA PER REEL	EA PER INNER BOX	BOX SIZE (mm)	CARTON SIZE (mm)	EA PER CARTON	GROSS WEIGHT(Kg)
DPAK	-W/-C	2,500	2,500	338*338*40	360*355*360	20,000	---

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