

GLASS PASSIVATED SUPER FAST RECTIFIER

VOLTAGE RANGE 50 to 400 Volts CURRENT 16 Amperes

FEATURES

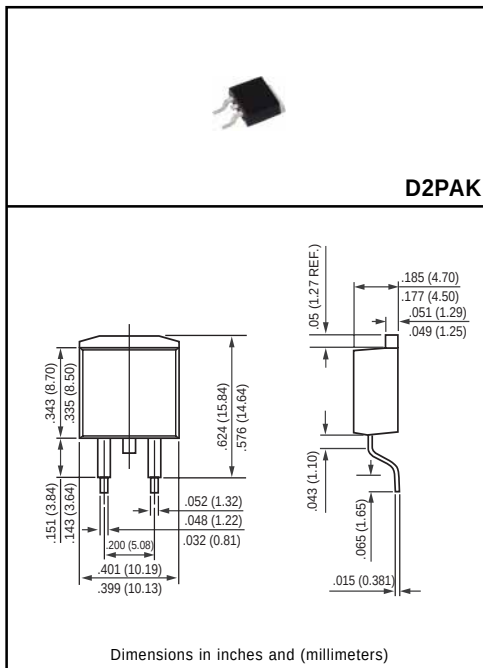
- * Low switching noise
- * Low forward voltage drop
- * Low thermal resistance
- * High current capability
- * Super fast switching speed
- * High reliability
- * Good for switching mode circuit

MECHANICAL DATA

- * Case: D2PAK molded plastic
- * Epoxy: Device has UL flammability classification 94V-O
- * Lead: MIL-STD-202E method 208C guaranteed
- * Mounting position: Any
- * Weight: 2.2 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%.



Dimensions in inches and (millimeters)

MAXIMUM RATINGS (At Ta = 25°C unless otherwise noted)

RATINGS	SYMBOL	SF161CS	SF162CS	SF163CS	SF164CS	SF165CS	SF166CS	UNITS
Maximum Recurrent Peak Reverse Voltage	V _{RRM}	50	100	150	200	300	400	Volts
Maximum RMS Voltage	V _{RMS}	35	70	105	140	210	280	Volts
Maximum DC Blocking Voltage	V _{DC}	50	100	150	200	300	400	Volts
Maximum Average Forward Rectified Current at T _C = 125°C	I _O	16.0						Amps
Peak Forward Surge Current 8.3 ms single half sine-wave superimposed on rated load (JEDEC method)	I _{FSM}	150						Amps
Typical Thermal Resistance	R _{θJC}	3						°C/W
Typical Junction Capacitance (Note 2)	C _J	50				30		pF
Operating and Storage Temperature Range	T _J , T _{STG}	-65 to + 150						°C

ELECTRICAL CHARACTERISTICS (At Ta = 25°C unless otherwise noted)

CHARACTERISTICS	SYMBOL	SF161CS	SF162CS	SF163CS	SF164CS	SF165CS	SF166CS	UNITS
Maximum Instantaneous Forward Voltage at 8.0A DC	VF	1.0				1.35		Volts
Maximum DC Reverse Current at Rated DC Blocking Voltage	IR	10				500		uAmps
Maximum Reverse Recovery Time (Note 1)	trr	35				50		nSec

NOTES : 1. Test Conditions: IF = 0.5A, IR = -1.0A, IRR = -0.25A
2. Measured at 1 MHz and applied reverse voltage of 4.0 volts.
3. Suffix "A" =Common Anode.

RATING AND CHARACTERISTIC CURVES (SF161CS THRU SF166CS)

FIG. 1 - TYPICAL FORWARD CURRENT DERATING CURVE

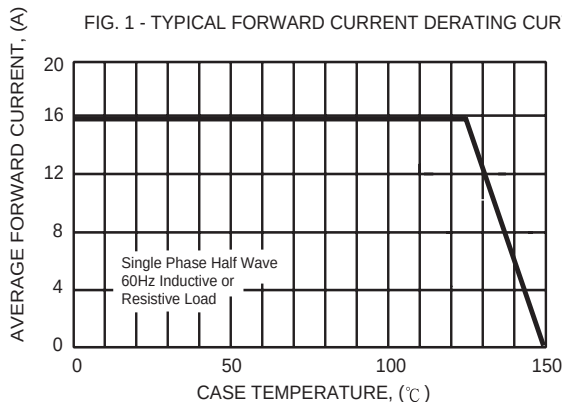


FIG. 2 - TYPICAL REVERSE CHARACTERISTICS

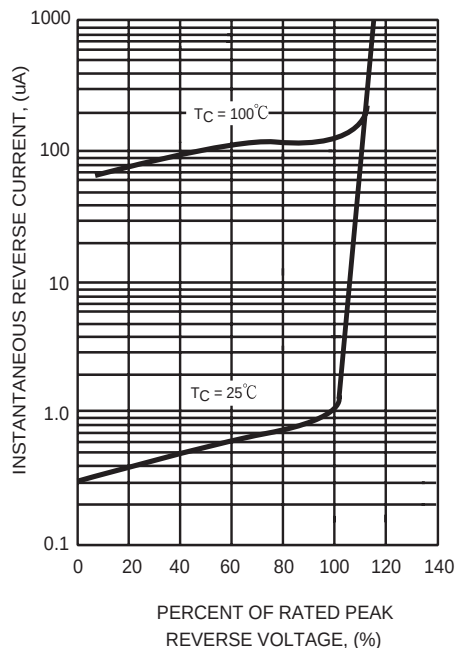


FIG. 3 - MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

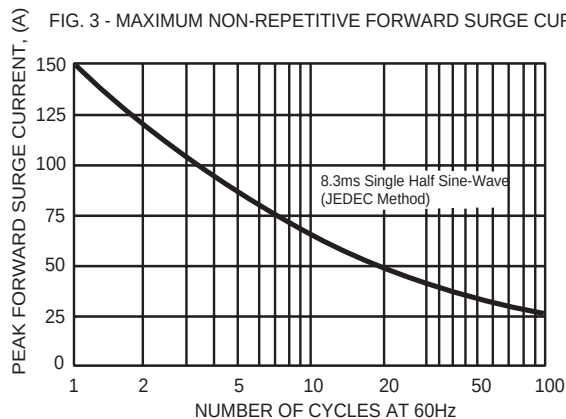


FIG. 4 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

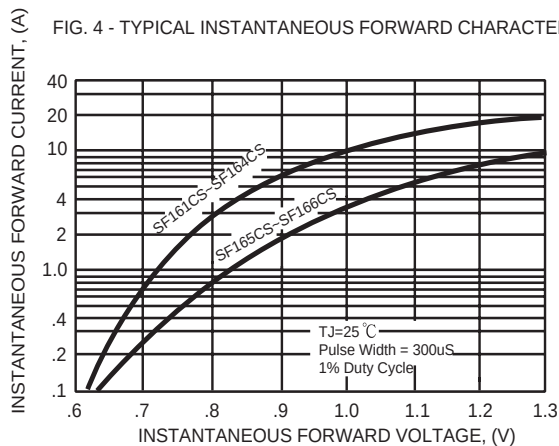
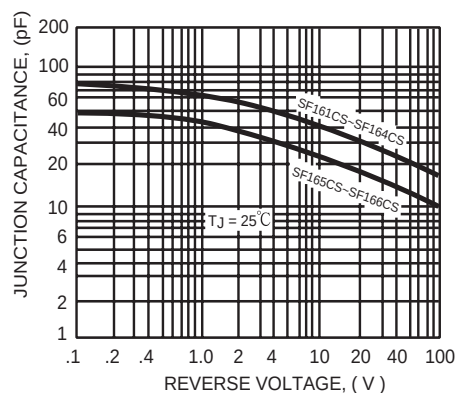


FIG. 5 - TYPICAL JUNCTION CAPACITANCE



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