



SFD510S~SFD560S

ULTRAFAST RECOVERY RECTIFIERS

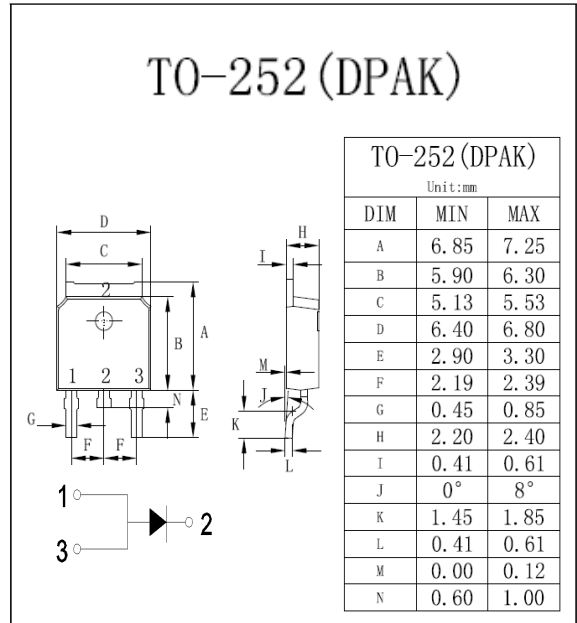
VOLTAGE	100 to 600 Volts
CURRENT	5 Amperes

FEATURES

- Plastic package has Underwriters Laboratory Flammability Classification 94V-0. Flame Retardant Epoxy Molding Compound.
- Low power loss, high efficiency.
- Low forward voltage, high current capability.
- High surge capability
- Ultra fast recovery time, high voltage.
- Lead free in comply with EU RoHS.

MECHANICAL DATA

- Case: TO-252AC molded plastic
- Terminals: solder plated, solderable per MIL-STD-750, Method 2026
- Polarity: As marked.
- Mounting Position: Any



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%

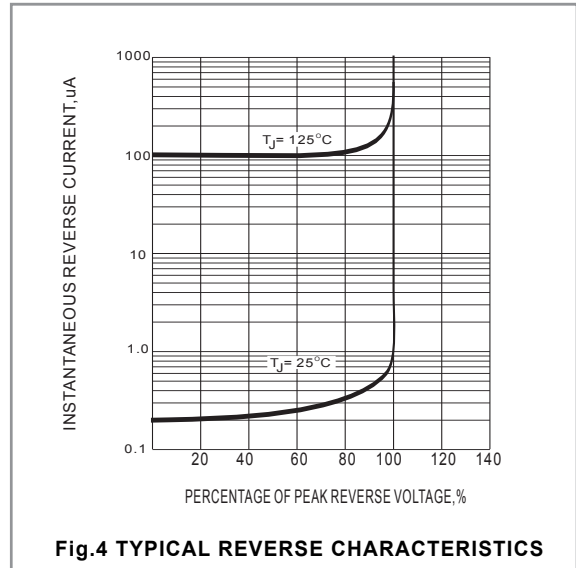
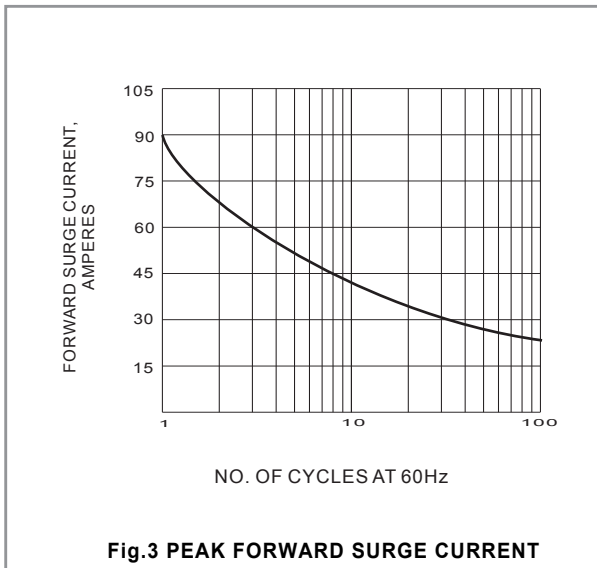
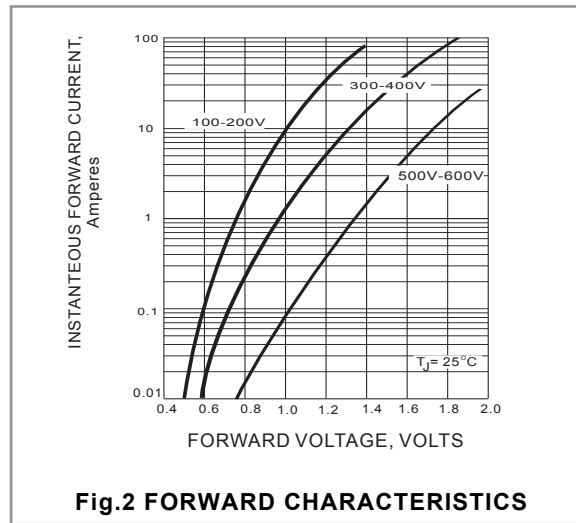
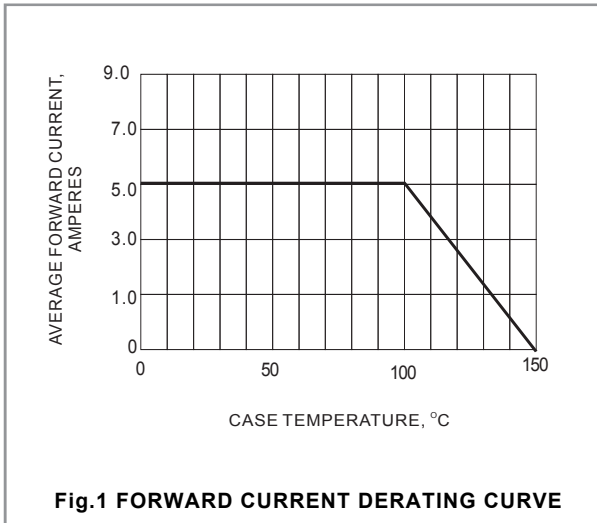
PARAMETER	SYMBOL	SFD510S	SFD520S	SFD530S	SFD540S	SFD550S	SFD560S	UNITS
Maximum Recurrent Peak Reverse Voltage	V_{RRM}	100	200	300	400	500	600	V
Maximum RMS Voltage	V_{RMS}	70	140	210	280	350	420	V
Maximum DC Blocking Voltage	V_{DC}	100	200	300	400	500	600	V
Maximum Average Forward Rectified Current at $T_c=100^\circ\text{C}$	$I_{F(AV)}$	5						A
Peak Forward Surge Current : 8.3ms single half sine-wave superimposed on rated load (JEDEC method)	I_{FSM}	90						A
Maximum Forward Voltage at 5A	V_F	1		1.3		1.7		V
Maximum DC Reverse Current at Rated DC Blocking Voltage $T_J=25^\circ\text{C}$ $T_J=125^\circ\text{C}$	I_R	10 500						μA
Maximum Thermal Resistance (Note 2)	$R_{\theta JC}$	5						$^\circ\text{C} / \text{W}$
Typical Junction Capacitance	C_J	80				50		pF
Maximum Reverse Recovery Time (Note 1)	t_{rr}	35						ns
Operating Junction and Storage Temperature Range	T_J, T_{STG}	-55 to +150						$^\circ\text{C}$

NOTES:

1. Reverse Recovery Test Conditions: $I_F=0.5\text{A}$, $I_R=1\text{A}$, $I_{rr}=0.25\text{A}$.
2. Thermal resistance from Junction to ambient and from junction to lead 0.375" (9.5mm) P.C.B mounted



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