



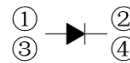
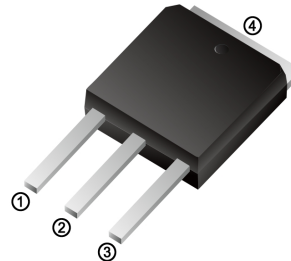
SF508DS

Superfast Recovery Rectifiers

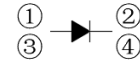
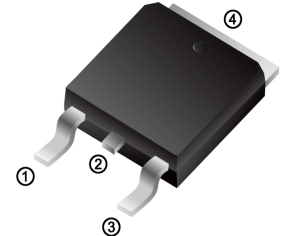
FEATURES

- High current capability
- Low forward voltage drop
- Low power loss, high efficiency
- High surge capability
- High temperature soldering guaranteed
- Mounting position: any

TO-251(I-PAK)



TO-252(D-PAK)



MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified

CHARACTERISTICS	TO-251	SF508VS	Units
	TO-252	SF508DS	
Maximum Recurrent Peak Reverse Voltage	V_{RRM}	800	V
Maximum RMS voltage	V_{RMS}	560	V
Maximum DC Blocking Voltage	V_{DC}	800	V
Maximum Average Forward Rectified Current	$I_{F(AV)}$	5.0	A
Peak Forward Surge Current, 8.3ms Single Half Sine-wave Superimposed on Rated Load (JEDEC method)	I_{FSM}	150	A
Max Instantaneous Forward Voltage at 5 A	V_F	2.30	V
Maximum DC Reverse Current $T_a = 25^\circ\text{C}$ at Rated DC Reverse Voltage $T_a = 125^\circ\text{C}$	I_R	1 300	μA
Typical Junction Capacitance $f=1\text{MHz}, 4\text{V DC}$	C_j	45	pF
Typical Thermal Resistance ⁽¹⁾	$R_{\theta JA}$	15	$^\circ\text{C/W}$
Maximum Reverse Recovery Time ⁽²⁾	t_{rr}	35	ns
Operating Junction Temperature Range	T_j	-55 ~ +150	$^\circ\text{C}$
Storage Temperature Range	T_{stg}	-55 ~ +150	$^\circ\text{C}$

(1) P.C.B. mounted with 10cm x 10cm x 1mm copper pad areas.

(2) Measured with $I_F = 0.5\text{ A}$, $I_R = 1\text{ A}$, $I_{rr} = 0.25\text{ A}$.



Characteristic Curves ($T_A=25\text{ }^\circ\text{C}$ unless otherwise noted)

Fig.1 Maximum Average Forward Current Rating

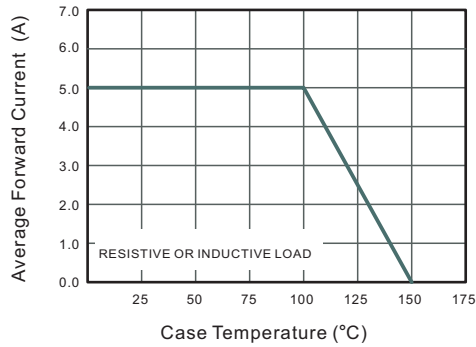


Fig.2 Typical Reverse Characteristics

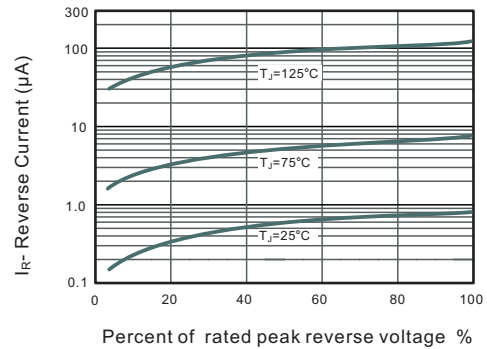


Fig.3 Typical Forward Characteristics

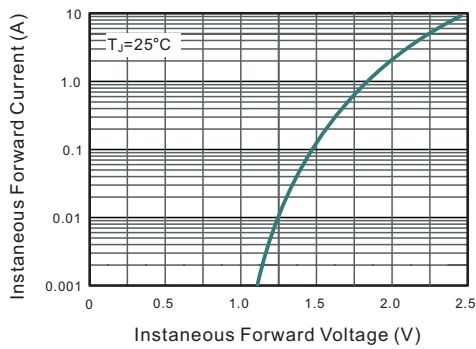


Fig.4 Typical Junction Capacitance

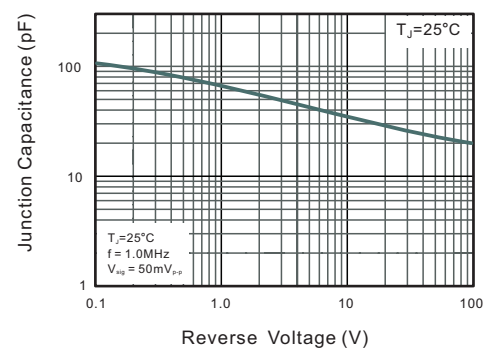
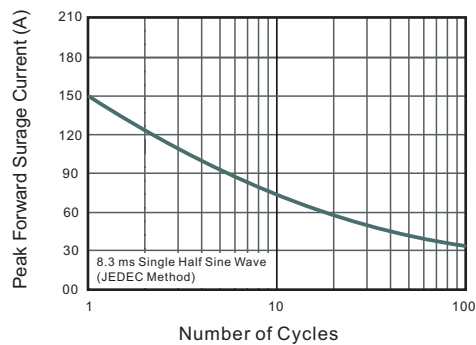


Fig.5 Maximum Non-Repetitive Peak Forward Surge Current

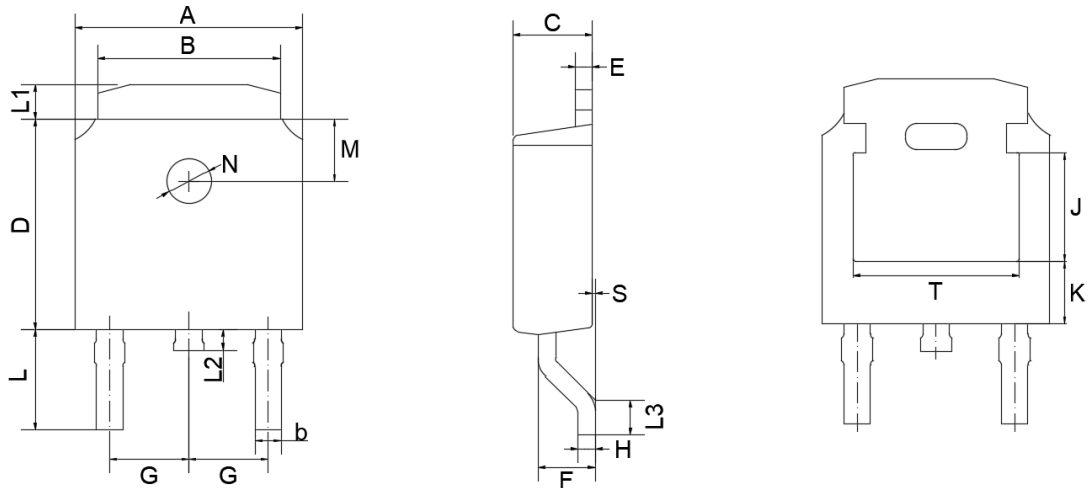




SF508DS

Superfast Recovery Rectifiers

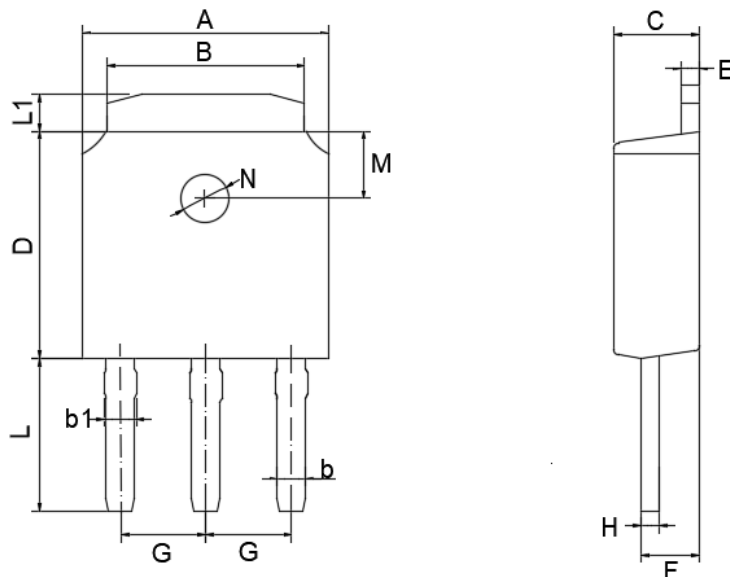
TO-252(D-PAK) Package Outline Dimensions



TO-252(D-PAK) mechanical data

UNIT		A	B	b	C	D	E	F	G	H	L	L1	L2	L3	M	N	J	K	T
mm	max	6.70	5.50	0.80	2.50	6.30	0.60	1.80	2.29	0.55	3.10	1.20	0.80	1.60	1.8	1.3	3.16	1.80	4.83
	min	6.30	5.10	0.30	2.10	5.90	0.40	1.30	TYPICAL	0.45	2.70	0.80	0.40	1.40	TYPICAL	TYPICAL	ref.	ref.	ref.
mil	max	264	217	31	98	248	24	71	90	22	122	47	31	63	71	51	124	71	190
	min	248	201	12	83	232	16	51	TYPICAL	18	106	31	16	55	TYPICAL	TYPICAL	ref.	ref.	ref.

TO-251(I-PAK) Package Outline Dimensions



TO-251(I-PAK) mechanical data

UNIT		A	B	b	b1	C	D	E	F	G	H	L	L1	M	N
mm	max	6.70	5.50	0.80	0.90	2.50	6.30	0.60	1.80	2.29	0.55	4.30	1.20	1.8	1.3
	min	6.30	5.10	0.30	0.76	2.10	5.90	0.40	1.30	TYPICAL	0.45	3.90	0.80	TYPICAL	TYPICAL
mil	max	264	217	31	35	98	248	24	71	90	22	169	47	71	51
	min	248	201	12	30	83	232	16	51	TYPICAL	18	154	31	TYPICAL	TYPICAL

