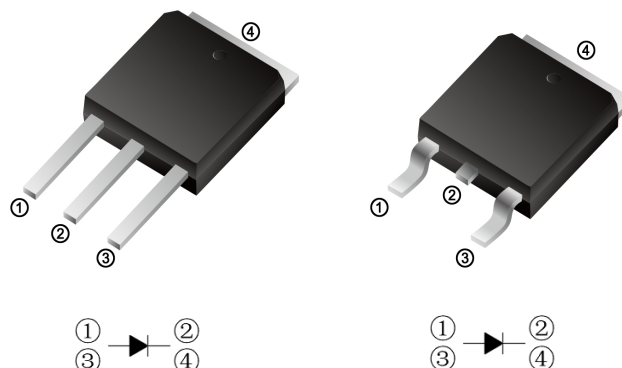


SUPER FAST RECOVER RECTIFIER

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	SF501VS	SF502VS	SF503VS	SF504VS	SF505VS	SF506VS	UNIT
	TO-252	SF501DS	SF502DS	SF503DS	SF504DS	SF505DS	SF506DS	
Maximum Recurrent Peak Reverse Voltage	VRRM	100	200	300	400	500	600	V
Maximum RMS Voltage	VRMS	70	140	210	280	350	420	V
Maximum DC Blocking Voltage	VDC	100	200	300	400	500	600	V
Maximum Average Forward Rectified Current	I(AV)	5.0						A
Peak Forward Surge Current 8.3ms Single Half Sine-Wave Super Imposed on Rated Load (JEDEC Method)	IFSM	150						A
Maximum Forward Voltage at 5.0A DC	VF	1.0		1.30		1.70		V
Maximum DC Reverse Current at Rated DC Blocking Voltage	IR			1.0				uA
				300				
Typical Junction Capacitance Per Element (Note1)	CJ	45						pF
Typical Thermal Resistance	RθJA	15						°C/W
Maximum Reverse Recovery Time(Note2)	Trr	35						ns
Operating Temperature Range	TJ	-55 to +150						°C
Storage Temperature Range	TSTG	-55 to +150						°C

NOTES: 1. Measured at 1.0MHz and applied reverse voltage of 4.0V DC.

2. Reverse Recovery Test Conditions: IF=0.5A, IR=1A, Irr=0.25A

Typical Characteristics

FIG.1 - FORWARD CURRENT DERATING CURVE

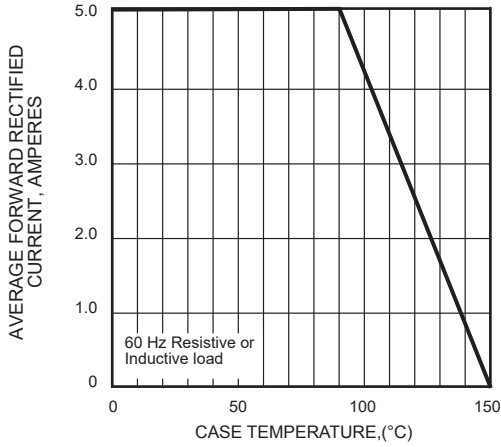


FIG.2 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

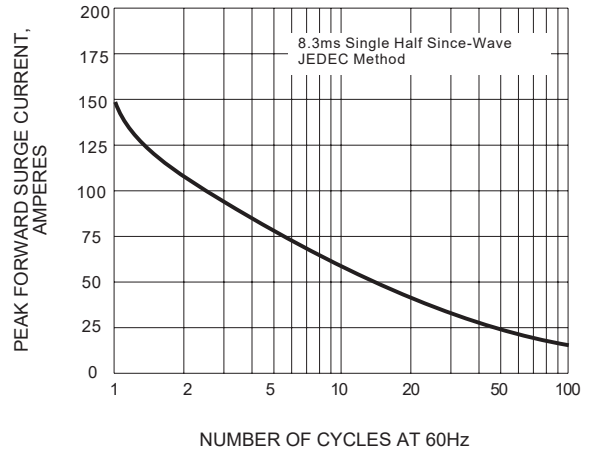


FIG.3 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

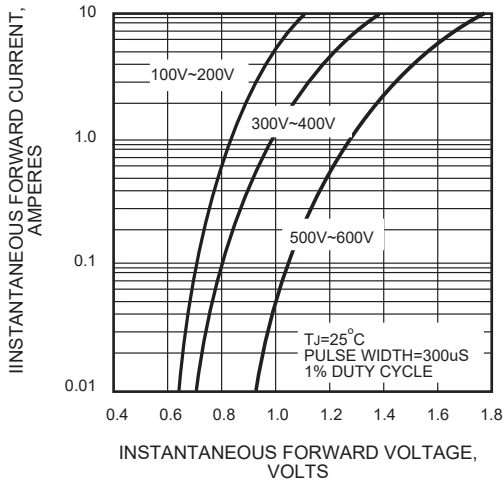


FIG.4 - TYPICAL REVERSE CHARACTERISTICS

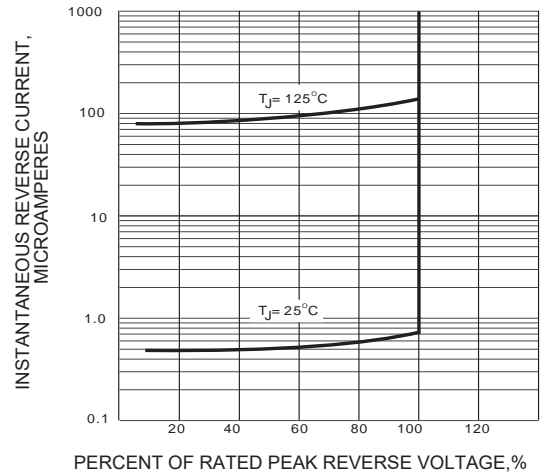
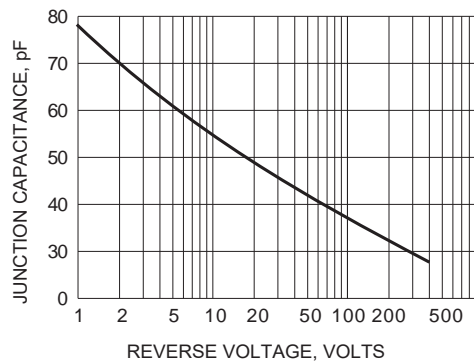
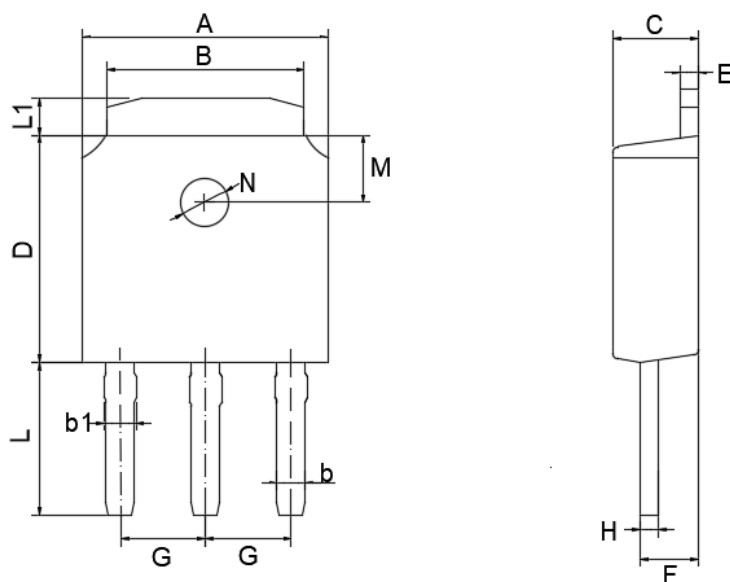


FIG.5 - TYPICAL JUNCTION CAPACITANCE

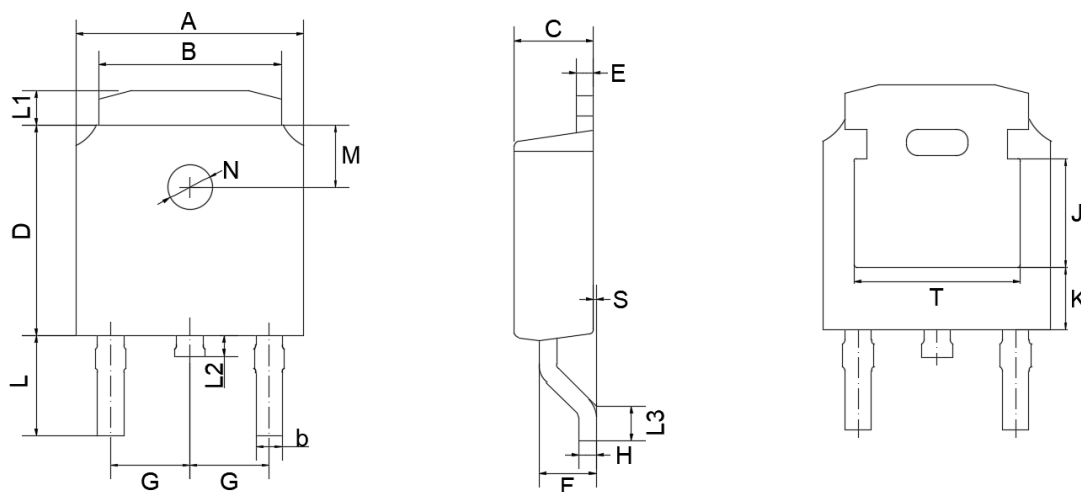


TO-251(D-PAK)



UNIT		A	B	b	b1	C	D	E	F	G	H	L	L1	M	N
mm	max	6.7	5.5	0.86	0.9	2.5	6.3	0.6	1.8	2.29 TYPICAL	0.55	4.3	1.2	1.8 TYPICAL	1.3 TYPICAL
	min	6.3	5.1	0.66	0.76	2.1	5.9	0.4	1.3		0.45	3.9	0.8		
mil	max	264	217	33	35	98	248	24	71	90 TYPICAL	22	169	47	71 TYPICAL	51 TYPICAL
	min	248	201	26	30	83	232	16	51		18	154	31		

TO-252(D-PAK)



UNIT	A	B	b	C	D	E	F	G	H	L	L1	L2	L3	S	M	N	J	K	T	
mm	max	6.7	5.5	0.86	2.5	6.3	0.6	1.8	2.29 TYPICAL	0.55	3.1	1.2	1.0	1.75	0.1	1.8 TYPICAL	1.3 TYPICAL	3.16 ref.	1.80 ref.	4.83 ref.
	min	6.3	5.1	0.66	2.1	5.9	0.4	1.3		0.45	2.7	0.8	0.6	1.40	0.0					
mil	max	264	217	33	98	248	24	71	90 TYPICAL	22	122	47	39	69	4	71 TYPICAL	51 TYPICAL	124 ref.	71 ref.	190 ref.
	min	248	201	26	83	232	16	51		18	106	31	24	55	0					