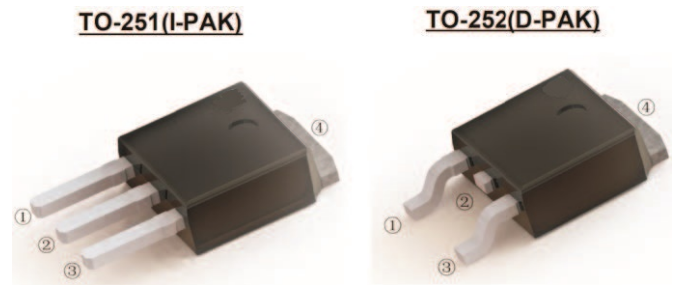




SF1001~SF1006 Surface Mount Superfast Recovery Rectifiers

Features

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



Maximum Ratings and Electrical Characteristics

Ratings at 25°C ambient temperature unless otherwise specified.

Characteristics	TO-251	SF1001TD	SF1002TD	SF1003TD	SF1004TD	SF1005TD	SF1006TD	Units
	TO-252	SF1001TE	SF1002TE	SF1003TE	SF1004TE	SF1005TE	SF1006TE	
Maximum Repetitive 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	$I_{F(AV)}$	10						A
Peak Forward Surge Current, 8.3ms Single Half Sine-wave Superimposed on Rated Load (JEDEC method)	I_{FSM}	170						A
Maximum Instantaneous Forward Voltage at 10 A	V_F	0.95	1.30		1.70			V
Maximum DC Reverse Current at Rated DC Blocking Voltage $T_A = 25^\circ\text{C}$ $T_A = 125^\circ\text{C}$	I_R	1 300						μA
Typical Junction Capacitance ^{Note1}	C_j	45						pF
Typical Thermal Resistance ^{Note2}	$R_{\theta JA}$	15						$^\circ\text{C/W}$
Maximum Reverse Recovery Time ^{Note3}	T_{rr}	35						nS
Junction Temperature	T_J	150						$^\circ\text{C}$
Storage Temperature Range	T_{STG}	-55 to +150						$^\circ\text{C}$

Note:

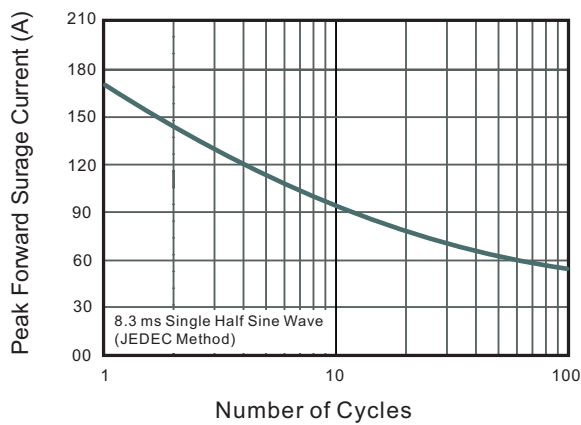
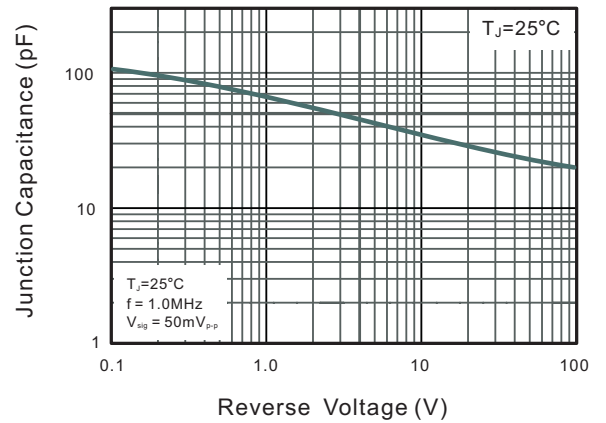
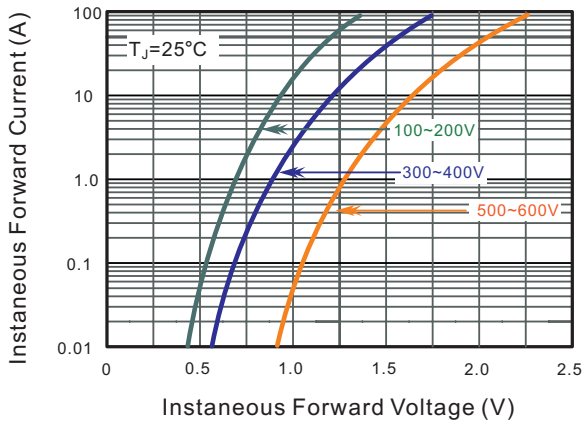
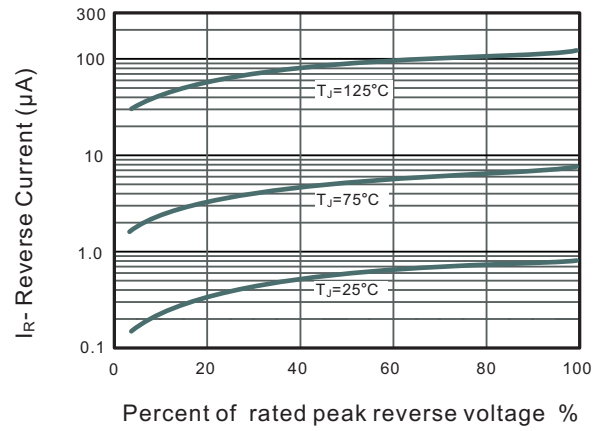
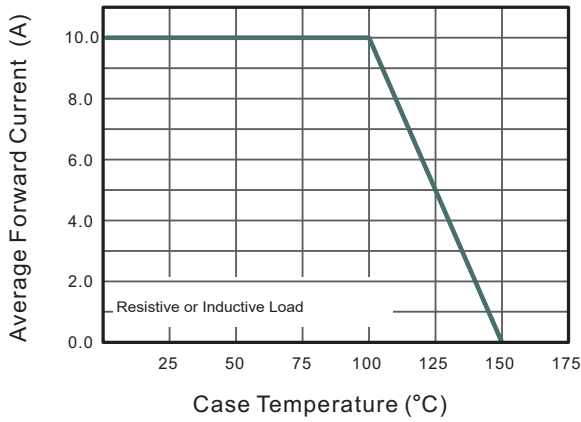
1. Measured at 1 MHz and applied reverse voltage of 4 V DC.
2. P.C.B. mounted with 10cm x 10cm x 1mm copper pad areas.
3. Measured with $I_F = 0.5\text{ A}$, $I_R = 1\text{ A}$, $I_{rr} = 0.25\text{ A}$.



SF1001~SF1006

Surface Mount Superfast Recovery Rectifiers

Typical Characteristic Curves





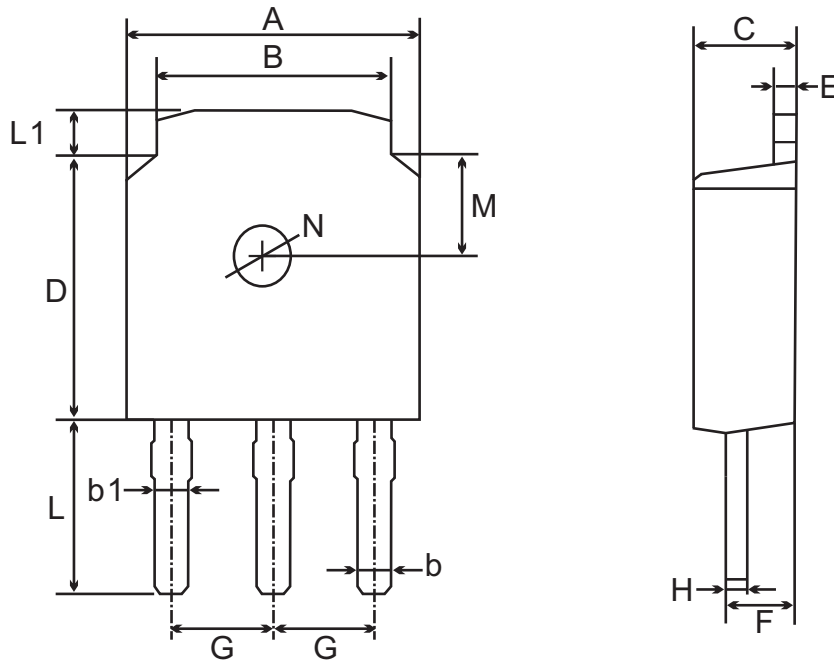
SF1001~SF1006

Surface Mount Superfast Recovery Rectifiers

Package Outline

TO-251

Dimensions in mm



UNIT		A	B	b	b1	C	D	E	F	G	H	L	L1	M	N
mm	max	6.7	5.5	0.8	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	0.3	0.76	2.1	5.9	0.4	1.3		0.45	3.9	0.8		
mil	max	264	217	31	35	98	248	24	71	90 TYPICAL	22	169	47	71 TYPICAL	51 TYPICAL
	min	248	201	12	30	83	232	16	51		18	154	31		



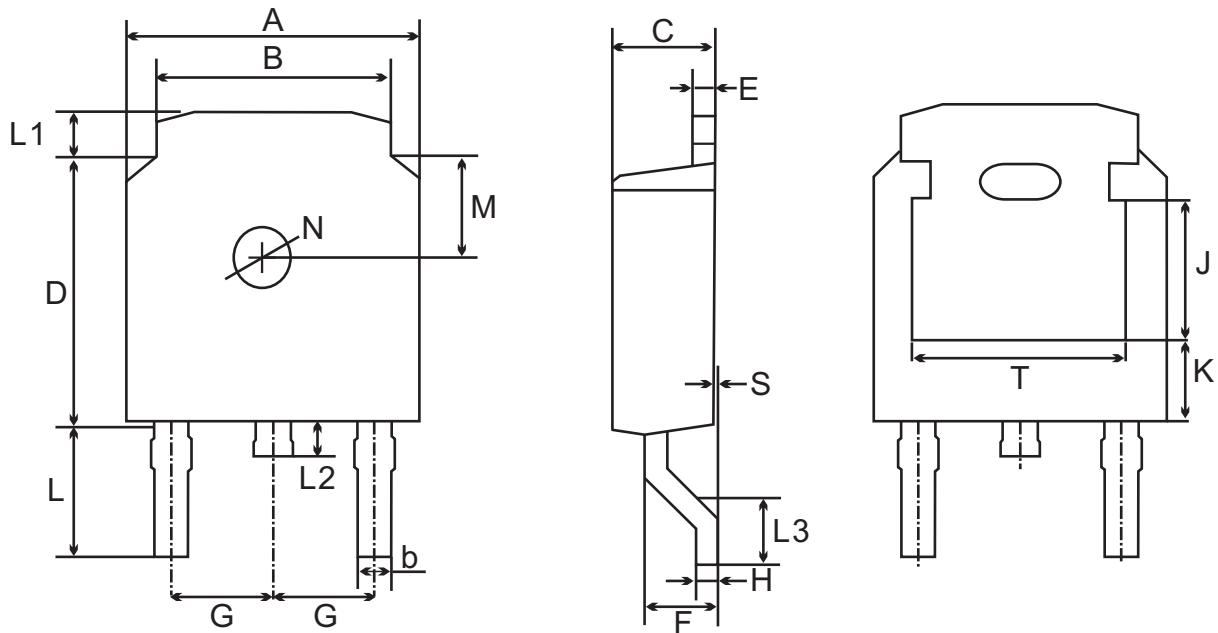
SF1001~SF1006

Surface Mount Fast Recovery Rectifiers

Package Outline

TO-252

Dimensions in mm



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	0.8	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	1.80	4.83
	min	6.3	5.1	0.3	2.1	5.9	0.4	1.3		0.45	2.7	0.8	0.6	1.40	0.0			ref.	ref.	ref.
mil	max	264	217	31	98	248	24	71	90 TYPICAL	22	122	47	39	69	4	71 TYPICAL	51 TYPICAL	124	71	190
	min	248	201	12	83	232	16	51		18	106	31	24	55	0			ref.	ref.	ref.