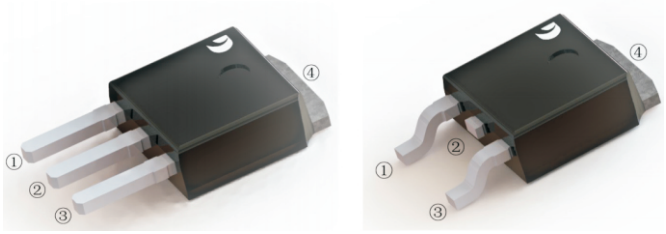
SUPER FAST GLASS PASSIVATED RECTIFIERS
Reverse Voltage – 100 to 600 V
Forward Current – 10 A

TO-251(I-PAK) **TO-252(D-PAK)**



FEATURES

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

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25℃ ambient temperature unless otherwise specified

CHARACTERISTICS	TO-251	SF1001VY	SF1002VY	SF1003VY	SF1004VY	SF1005VY	SF1006VY	Units
	TO-252	SF1001DY	SF1002DY	SF1003DY	SF1004DY	SF1005DY	SF1006DY	
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	$I_{F(AV)}$	10						A
Peak Forward Surge Current,8.3ms Single Half Sine-wave Superimposed on Rated Load (JEDEC method)	I_{FSM}	170						A
Max Instantaneous Forward Voltage at 10 A DC	V_F	0.95		1.30		1.70		V
Maximum DC Reverse Current T_a = 25°C at Rated DC Reverse Voltage T_a =125°C	I_R	1 300						uA
Typical Junction Capacitance f=1MHz,4V DC	C_j	150						pF
Typical Thermal Resistance (1)	$R_{\theta JA}$	50						°C/W
Maximum Reverse Recovery Time (2)	t_{rr}	35						ns
Operating Junction Temperature Range	T_j	-55 ~ +150						°C
Storage Temperature Range	T_{stg}	-55 ~ +150						°C

(1) P.C.B. mounted with 10cm x 10cm x 1mm copper pad areas.
(2) Measured with I_F = 0.5 A, I_R = 1 A, I_{rr} = 0.25 A.

Fig.1 Maximum Average Forward Current Rating

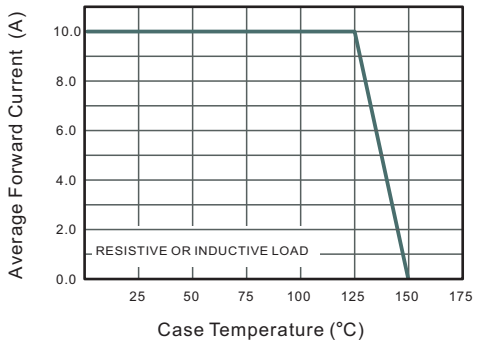


Fig.2 Typical Reverse Characteristics

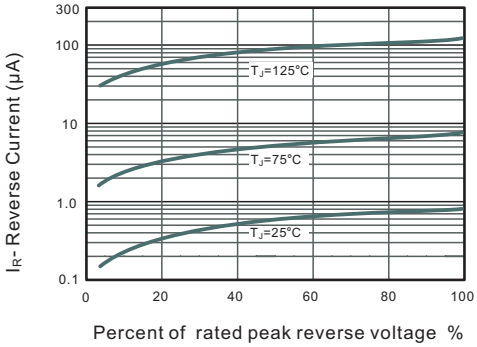


Fig.4 Typical Forward Characteristics

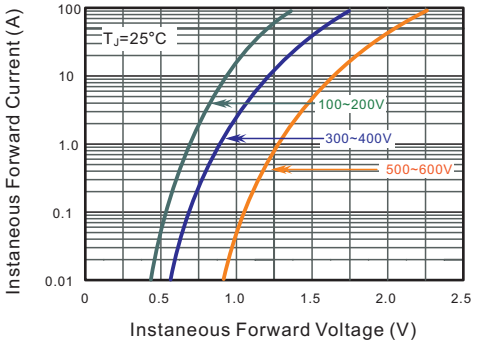


Fig.4 Typical Junction Capacitance

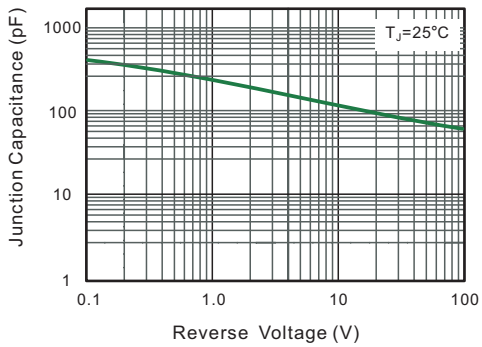


Fig.5 Maximum Non-Repetitive Peak Forward Surage Current

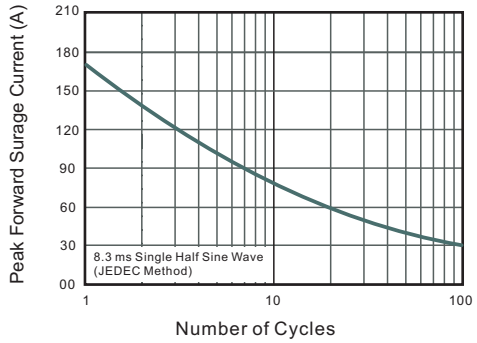
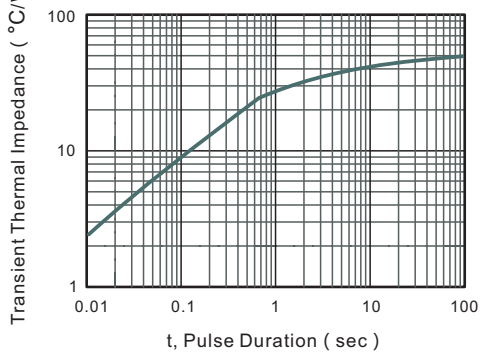
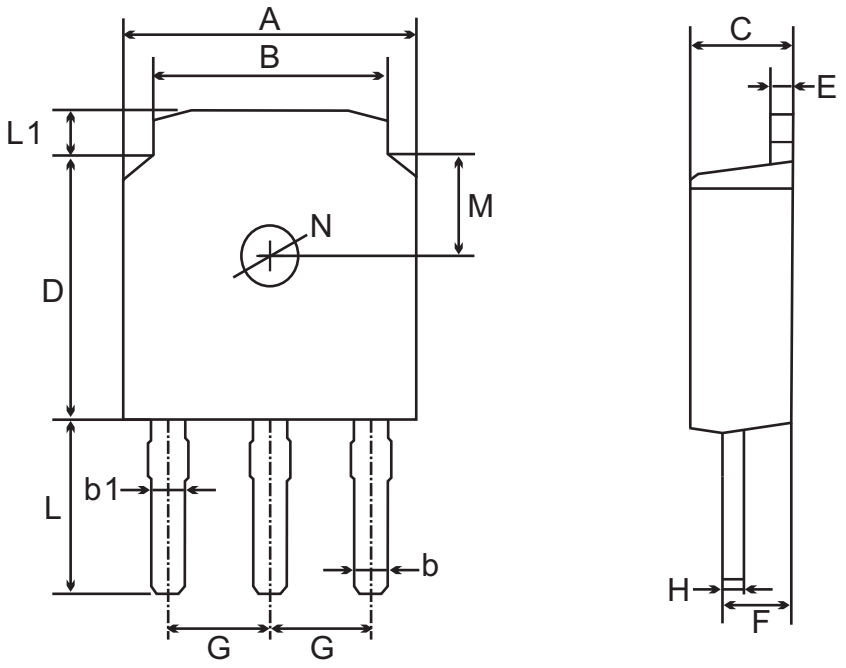


Fig.6- Typical Transient Thermal Impedance



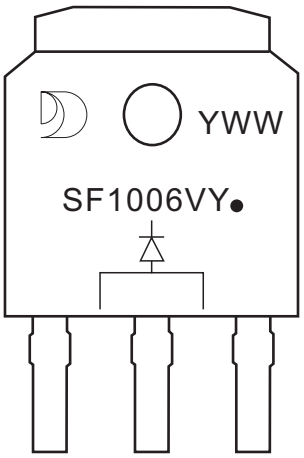
TO-251(I-PAK) Package Outline Dimensions



TO-251(I-PAK) mechanical data

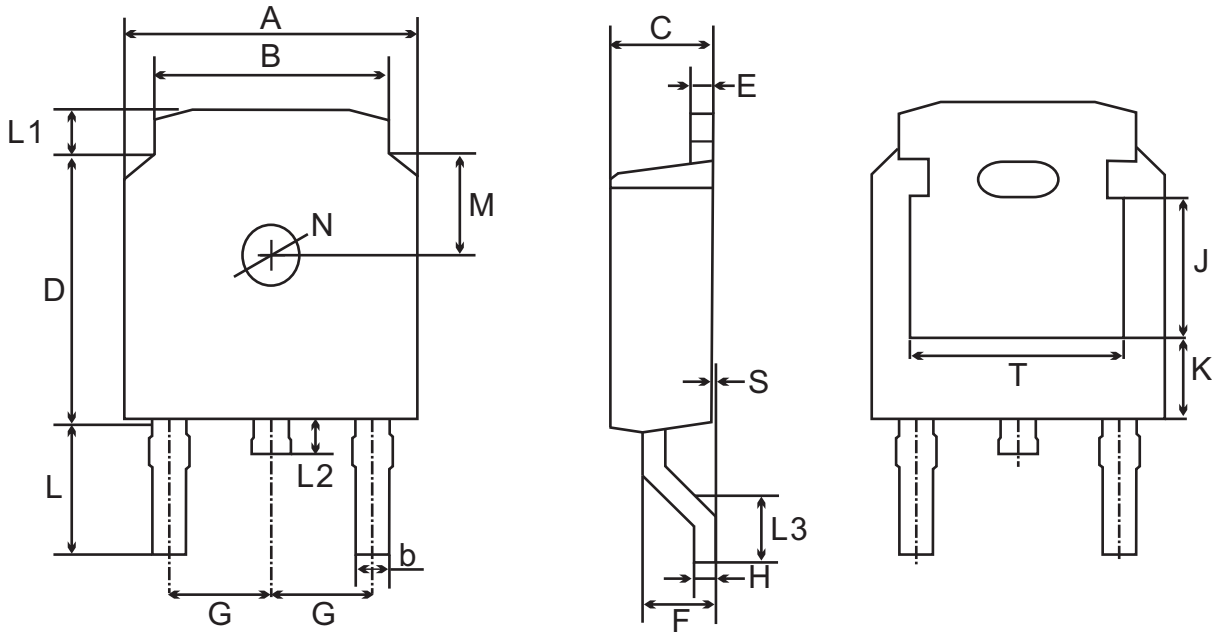
UNIT		A	B	b	b1	C	D	E	F	G	H	L	L1	M	N
mm	max	6.7	5.5	0.8	0.9	2.5	6.3	0.6	1.8	2.29 TYPICAL	0.55	4.3	1.2	1.8 TYPICAL	1.3 TYPICAL
	min	6.3	5.1	0.3	0.76	2.1	5.9	0.4	1.3		0.45	3.9	0.8		
mil	max	264	217	31	35	98	248	24	71	90 TYPICAL	22	169	47	71 TYPICAL	51 TYPICAL
	min	248	201	12	30	83	232	16	51		18	154	31		

MARKING DIAGRAM



YWW: Date Code
Y:Years(0~9)
WW:Week
SF1006VY: Product name
(NOTE:The weekly code is based on the actual number of weeks in the calendar year.)

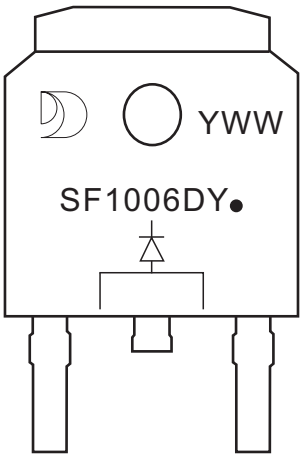
TO-252(D-PAK) Package Outline Dimensions



TO-252(D-PAK) mechanical data

UNIT		A	B	b	C	D	E	F	G	H	L	L1	L2	L3	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 ref.	1.80 ref.	4.83 ref.
	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					
mil	max	264	217	31	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	12	83	232	16	51		18	106	31	24	55	0					

MARKING DIAGRAM



YWW: Date Code
Y:Years(0~9)
WW:Week
SF1006DY: Product name
(NOTE:The weekly code is based on the actual number of weeks in the calendar year.)

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