



SF301ET(D) THRU SF306ET(D)

Reverse Voltage -100 to 600 Volts Forward Current - 3.0 Ampere

SUPER FAST GLASS PASSIVATED RECTIFIERS

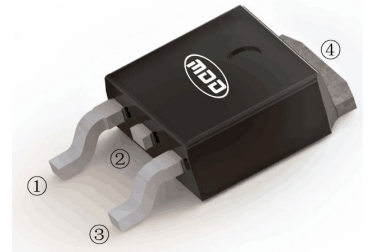
FEATURES

- ◆ 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)



MECHANICAL DATA

Case: TO-251/252 molded plastic body

Terminals: Plated axial leads, solderable per MIL-STD-750, Method 2026

Polarity: Color band denotes cathode end

Mounting Position: Any

Weight: 0.0141 ounce (approx), 0.4 grams (approx)

PACKAGE SPECIFICATIONS

Package	Reel Size	Reel DIA. (mm)	Q'TY/Reel (pcs)	Box Size (mm)	QTY/Box (pcs)	Carton Size (mm)	Q'TY/Carton (pcs)
TO-251	13'	330	2500	340×336×29	2500	353×346×365	25000
TO-252	13'	330	2500	340×336×29	2500	353×346×365	25000

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified.

Single phase half-wave 60Hz, resistive or inductive load, for capacitive load current derate by 20%.

MCHARACTERISTICS	TO-251	SF 301ET	SF 302ET	SF 303ET	SF 304ET	SF 305ET	SF 306ET	UNITS
	TO-252	SF 301ED	SF 302ED	SF 303ED	SF 304ED	SF 305ED	SF 306ED	
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 _(AV)	3.0						A
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)	I _{FSM}	120						A
Maximum instantaneous forward voltage at 3.0A	V _F	0.95		1.25		1.70		V
Maximum DC reverse current T _A =25℃ at rated DC blocking voltage T _A =125℃	I _R	1.0 300						uA
Typical junction capacitance (NOTE 1)	C _J	45						pF
Typical thermal resistance (NOTE 2)	R _{θJC}	25						℃/W
Maximum Reverse Recovery Time(Note3)	T _{rr}	35						ns
Operating junction and storage temperature range	T _J ,T _{STG}	-55 to +150						℃

Note: 1. Measured at 1.0MHz and applied reverse voltage of 4.0V D.C.

2. Mounted on 10cm x 10cm x 1mm copper pad area

3. Reverse Recovery Test Conditions: $I_F=0.5A, I_R=1A, I_{rr}=0.25A$

4. The typical data above is for reference only.

DN:T18B02A0



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Rating and Characteristic Curves

FIG.1 - FORWARD CURRENT DERATING CURVE

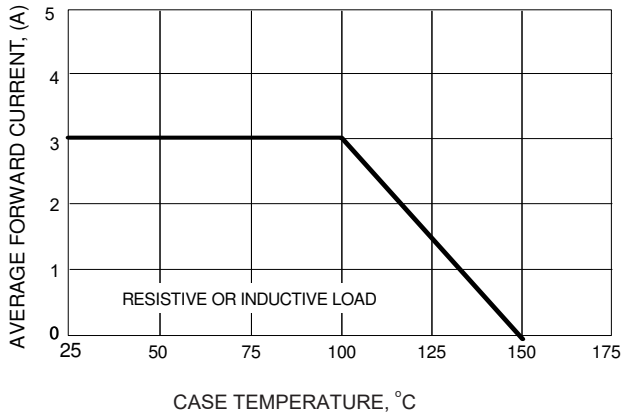


FIG.2 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

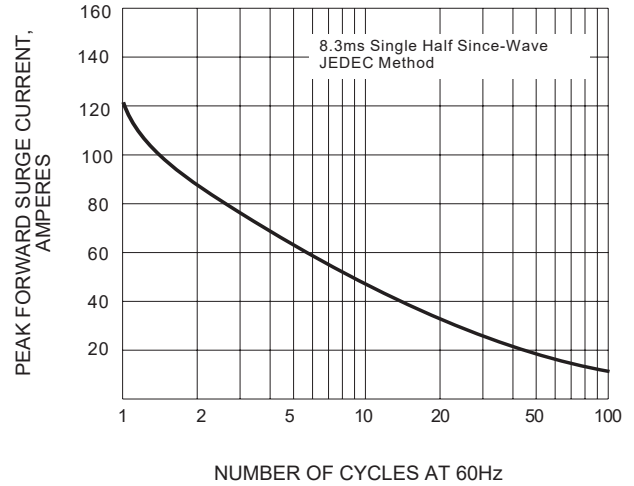


FIG.3 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

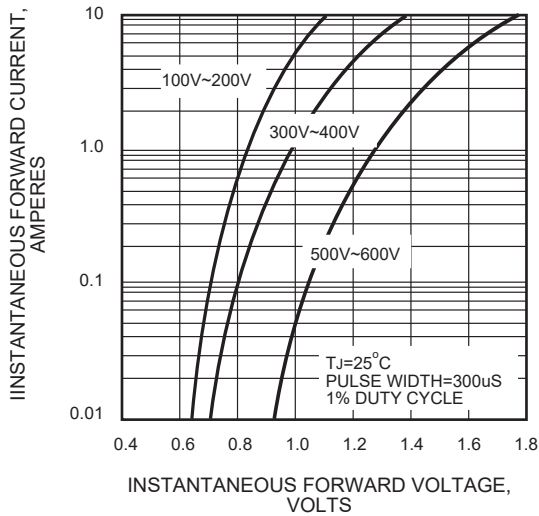


FIG.4 - TYPICAL REVERSE CHARACTERISTICS

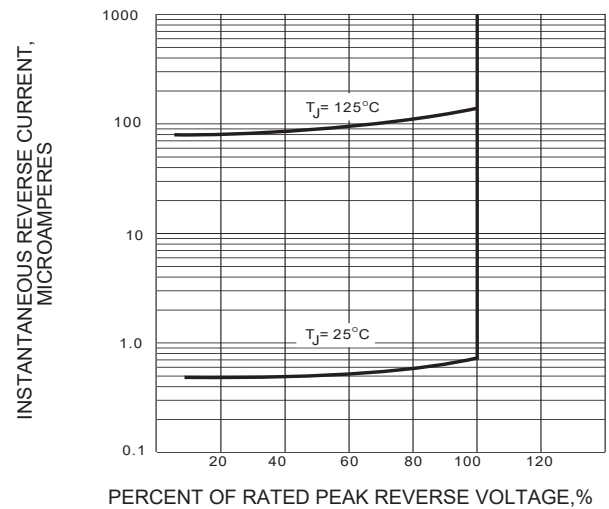
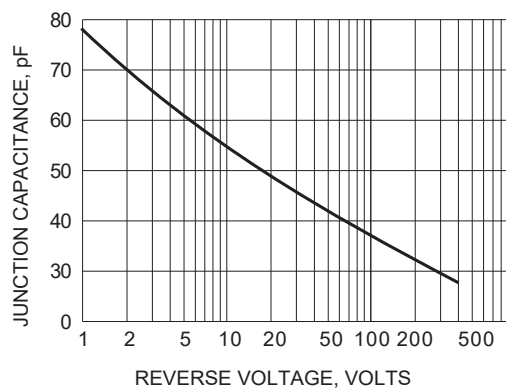


FIG.5 - TYPICAL JUNCTION CAPACITANCE



The curve above is for reference only.

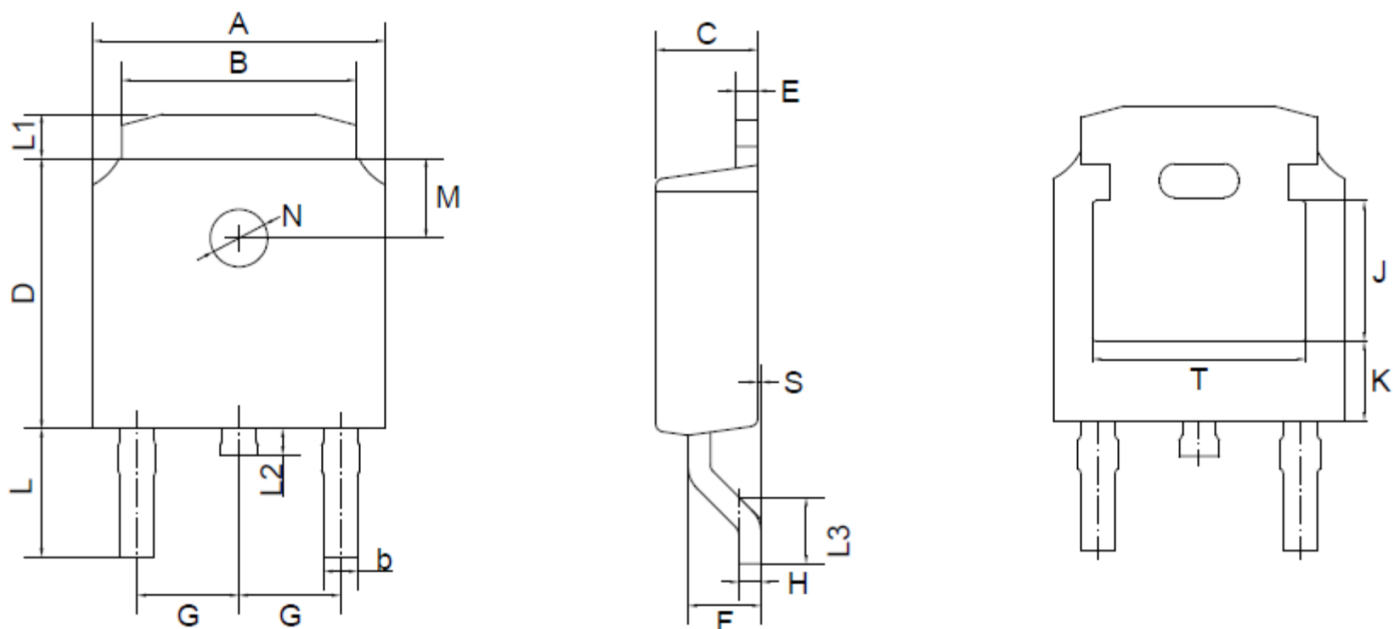


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Outlitne Drawing

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	0.55	3.1	1.2	1.0	1.75	0.1	1.8	1.3	3.16	1.80	4.83
	min	6.3	5.1	0.3	2.1	5.9	0.4	1.3	TYPICAL	0.45	2.7	0.8	0.6	1.40	0.0	TYPICAL	TYPICAL	ref.	ref.	ref.
mil	max	264	217	31	98	248	24	71	90	22	122	47	39	69	4	71	51	124	71	190
	min	248	201	12	83	232	16	51	TYPICAL	18	106	31	24	55	0	TYPICAL	TYPICAL	ref.	ref.	ref.

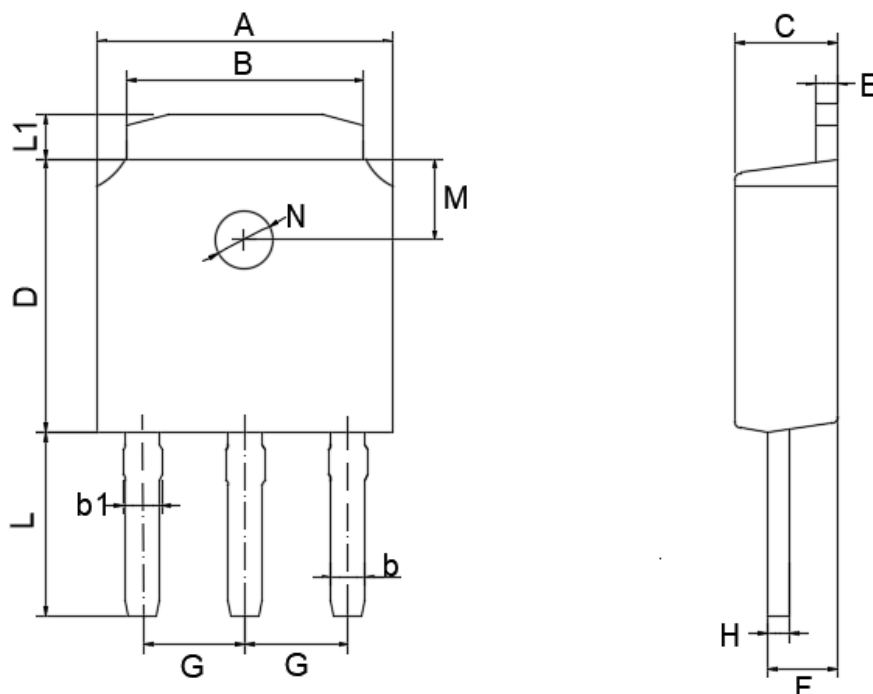


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TO-251(I-PAK) mechanical data

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 TYPICAL	0.55	4.30	1.20	1.8 TYPICAL	1.3 TYPICAL
	min	6.30	5.10	0.30	0.76	2.10	5.90	0.40	1.30		0.45	3.90	0.80		
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		

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