



Low VF Schottky Barrier Rectifiers

Reverse Voltage - 100 V

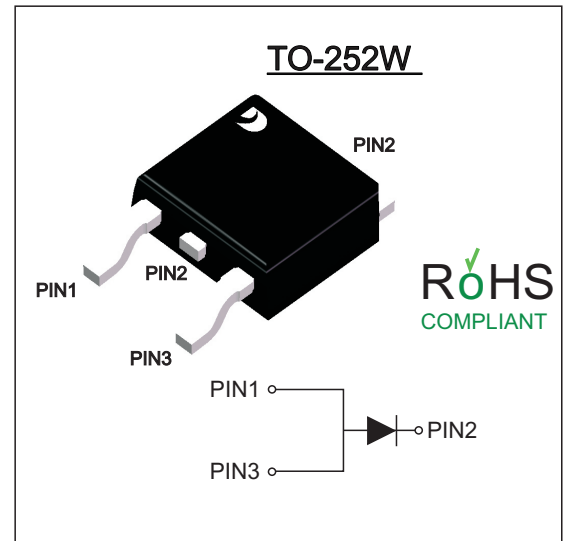
Forward Current - 20 A

Features

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

Mechanical data

- Case: TO-252W
- Approx. Weight: 0.33g (0.012oz)
- RoHS compliant
- Case Material: “Green” molding compound, UL flammability classification 94V-0,“Halogen-free”.



MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified

CHARACTERISTICS	Symbol	MBR20100DY	Units
Maximum Recurrent Peak Reverse Voltage	V_{RRM}	100	V
Maximum RMS voltage	V_{RMS}	70	V
Maximum DC Blocking Voltage	V_{DC}	100	V
Maximum Average Forward Rectified Current	$I_{F(AV)}$	20	A
Peak Forward Surge Current,8.3ms Single Half Sine-wave Superimposed on Rated Load (JEDEC method) per diode	I_{FSM}	150	A
Max Instantaneous Forward Voltage IF=20 A	V_F	0.95	V
Maximum DC Reverse Current at Rated DC Reverse Voltage $T_J = 25^{\circ}C$ $T_J = 100^{\circ}C$	I_R	0.05 10	mA
Typical Thermal Resistance ⁽¹⁾	$R_{\theta JC}$ $R_{\theta JA}$	2 50	$^{\circ}C/W$
Operating Junction Temperature Range	T_J	-55 ~ +150	$^{\circ}C$
Storage Temperature Range	T_{stg}	-55 ~ +150	$^{\circ}C$

Note:

(1) P.C.B. mounted with 10cmX10cmX1mm copper pad areas.



Fig.1 TYPICAL FORWARD CURRENT DERATING CURVE

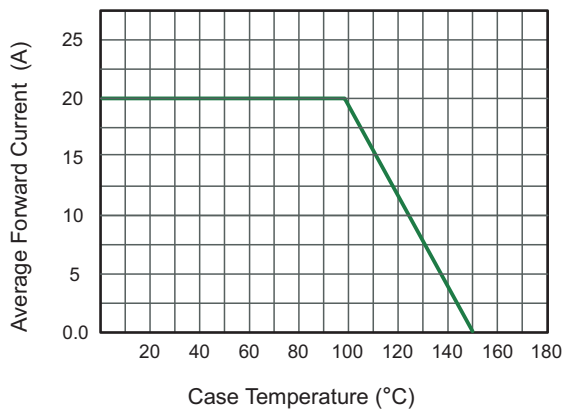


Fig.2 Typical Reverse Characteristics

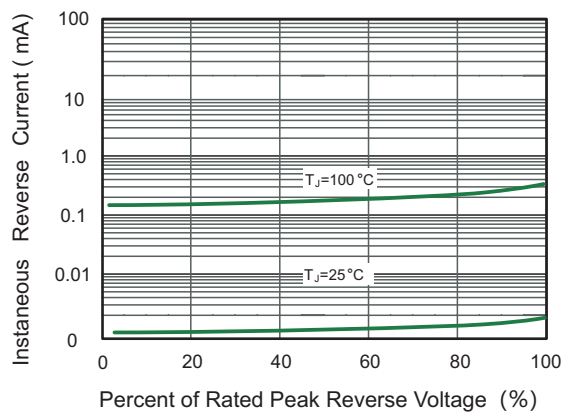


Fig.3 Typical Forward Characteristic(per leg)

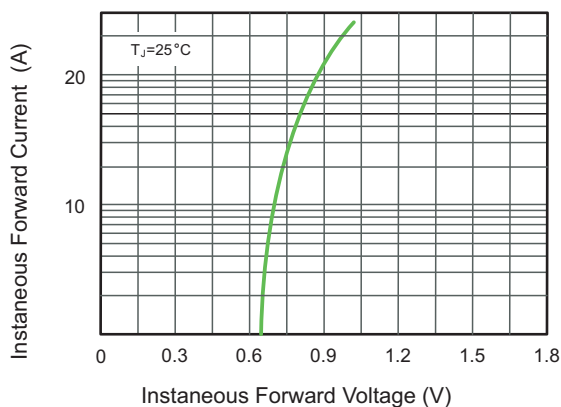


Fig.5 Maximum Non-Repetitive Peak Forward Surge Current

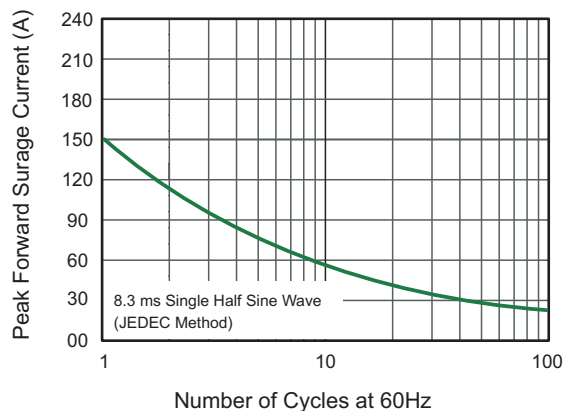
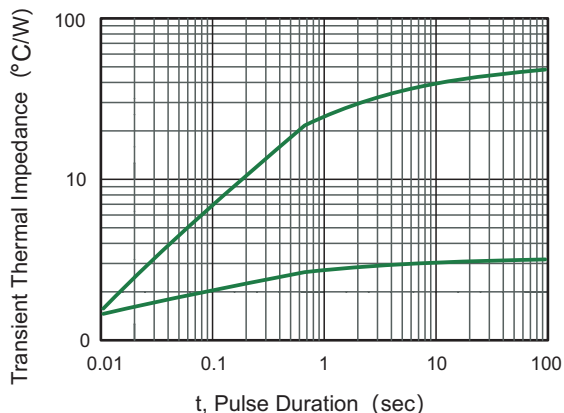
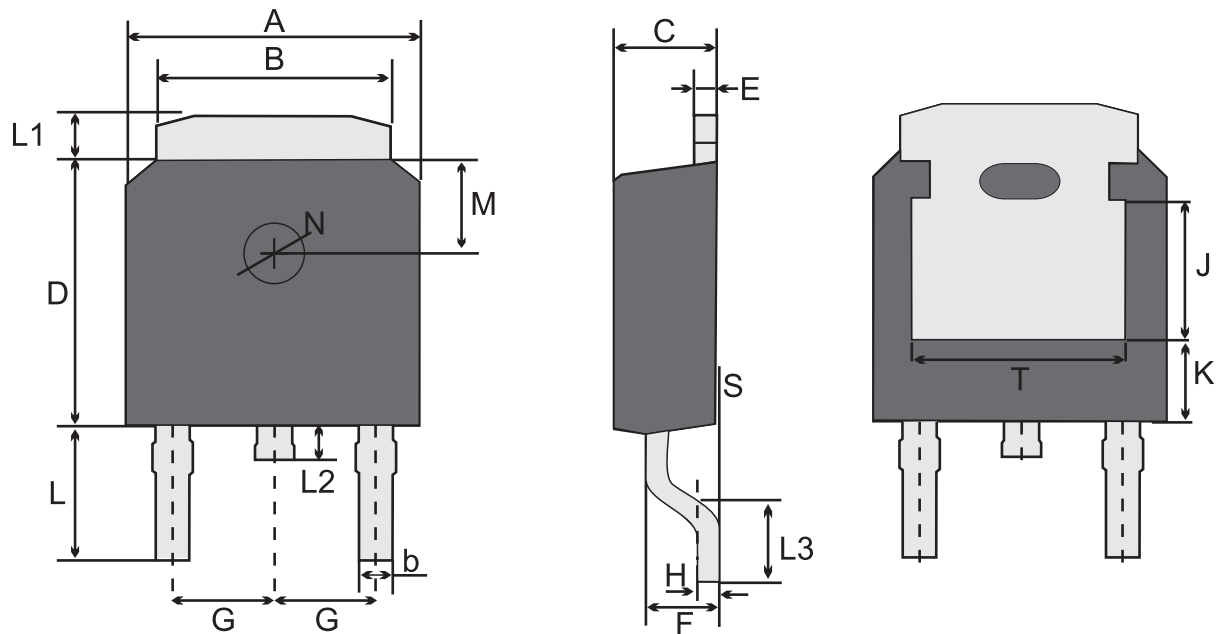


Fig.6 Typical Transient Thermal Impedance





TO-252W(D-PAK) Package Outline Dimensions

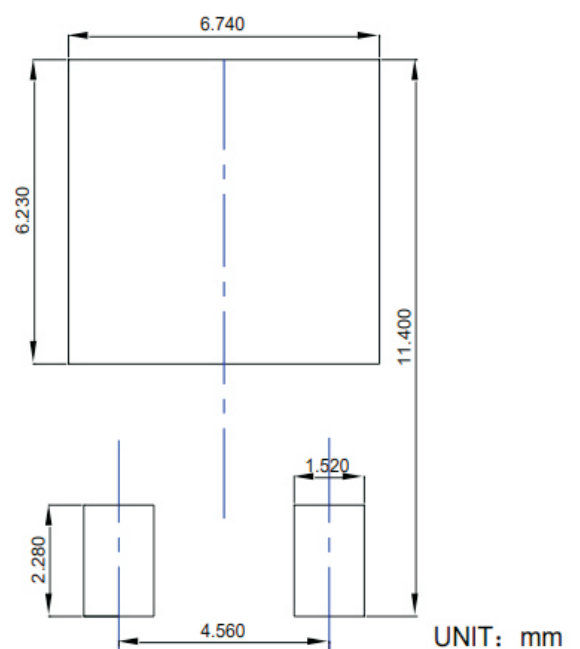


TO-252W(D-PAK)Mechanical data

UNIT		A	B	b	C	D	E	F	G	H	L	L1	L2	L3	S	M	N	J	T	K
mm	max	6.7	5.53	0.86	2.5	6.3	0.61	1.87	2.3 typ.	0.55	3.1	1.2	1.0	1.75	0.1	1.8 typ.	1.3 typ.	3.2 ref.	4.83 ref.	1.8 ref.
	typ	6.6	5.33	0.76	2.3	6.1	0.51	1.57		0.50	2.95	1.0	0.8	1.30	0.05					
	min	6.3	5.13	0.66	2.1	5.9	0.41	1.27		0.45	2.7	0.8	0.6	1.0	/					
mil	max	264	218	34	98	248	24	74	91 typ.	22	121	47	39	69	3.9	71 typ.	51 typ.	126 ref.	190 ref.	71 ref.
	typ	260	210	30	91	240	20	62		20	116	39	31	51	2					
	min	248	202	26	83	232	16	50		18	106	31	24	39	/					

Marking

Type number	Marking code
MBR20100DY	MBR20100DY



SUGGESTED SOLDER PAD LAYOUT



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