



**SCHOTTKY BARRIER RECTIFIERS**

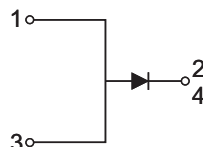
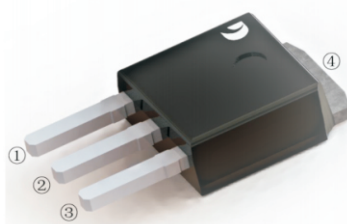
Reverse Voltage - 40 to 200 V

Forward Current - 10 A

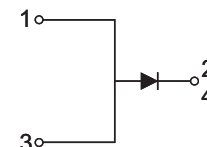
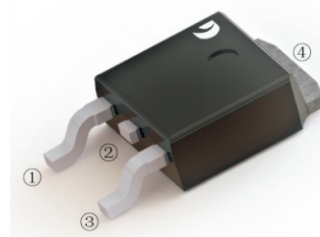
**FEATURES**

- 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	MBR1040VY	MBR1045VY	MBR1060VY	MBR10100VY	MBR10150VY	MBR10200VY	Units
	TO-252	MBR1040DY	MBR1045DY	MBR1060DY	MBR10100DY	MBR10150DY	MBR10200DY	
Maximum Recurrent Peak Reverse Voltage	$V_{RRM}$	40	45	60	100	150	200	V
Maximum RMS voltage	$V_{RMS}$	28	31.5	42	70	105	140	V
Maximum DC Blocking Voltage	$V_{DC}$	40	45	60	100	150	200	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)	$I_{FSM}$	150						A
Max Instantaneous Forward Voltage at 10 A	$V_F$	0.65		0.70	0.85	0.90	0.92	V
Maximum DC Reverse Current $T_a = 25^\circ\text{C}$ at Rated DC Reverse Voltage $T_a = 125^\circ\text{C}$	$I_R$	0.1 20			0.05 20			mA
Typical Junction Capacitance <sup>(1)</sup>	$C_j$	700		600				pF
Typical Thermal Resistance <sup>(2)</sup>	$R_{\theta JA}$	50						$^\circ\text{C}/\text{W}$
Operating Junction Temperature Range	$T_j$	-55 ~ +150				-55 ~ +175		$^\circ\text{C}$
Storage Temperature Range	$T_{stg}$	-55 ~ +150				-55 ~ +175		$^\circ\text{C}$

(1) Measured at 1 MHz and applied reverse voltage of 4 V D.C

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



Fig.1 Typical Forward Current Derating Curve

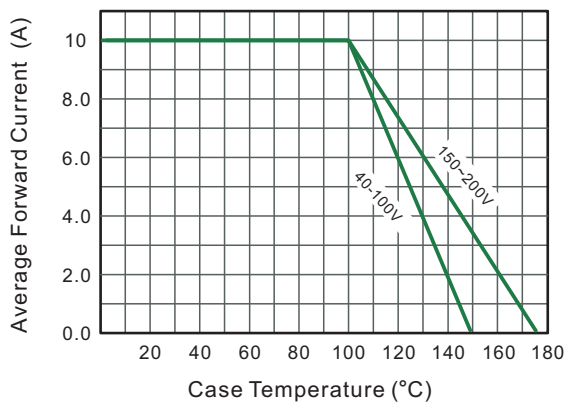


Fig.2 Typical Reverse Characteristics

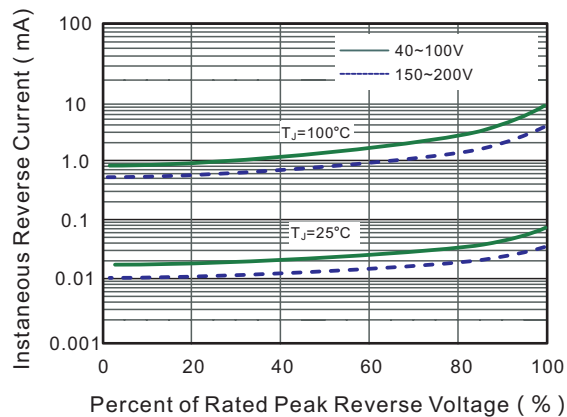


Fig.3 Typical Forward Characteristics

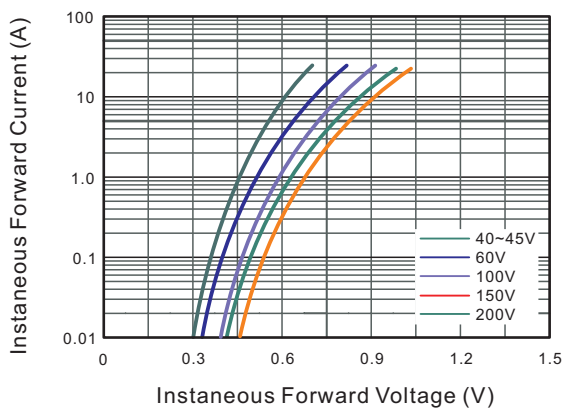


Fig.4 Typical Junction Capacitance

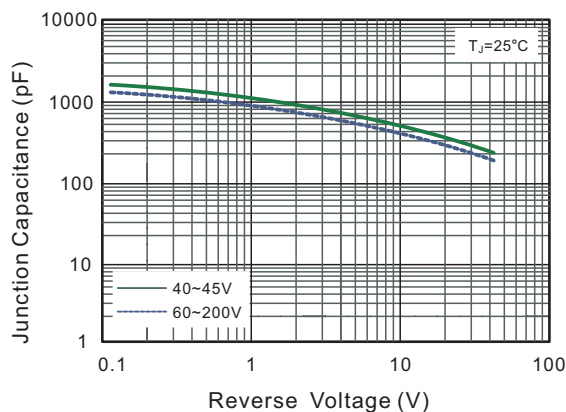


Fig.5 Maximum Non-Repetitive Peak Forward Surge Current

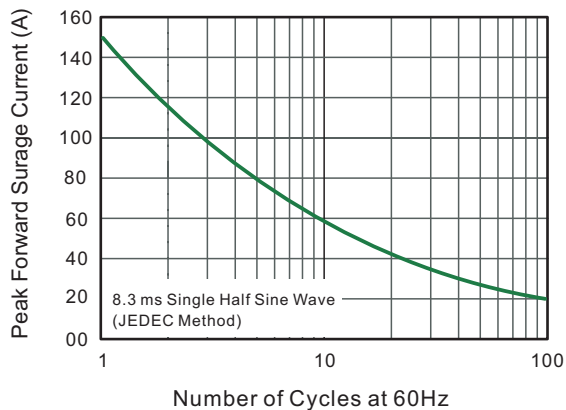
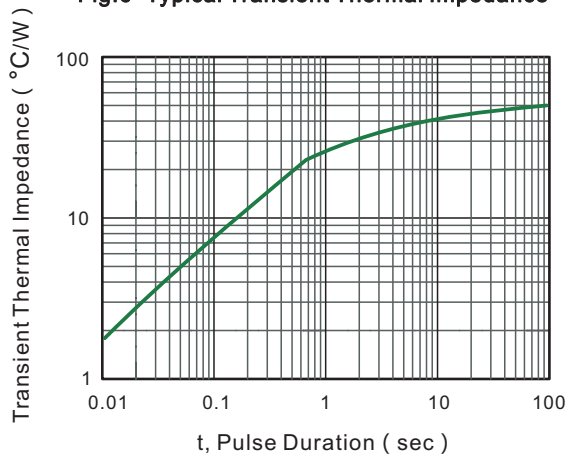
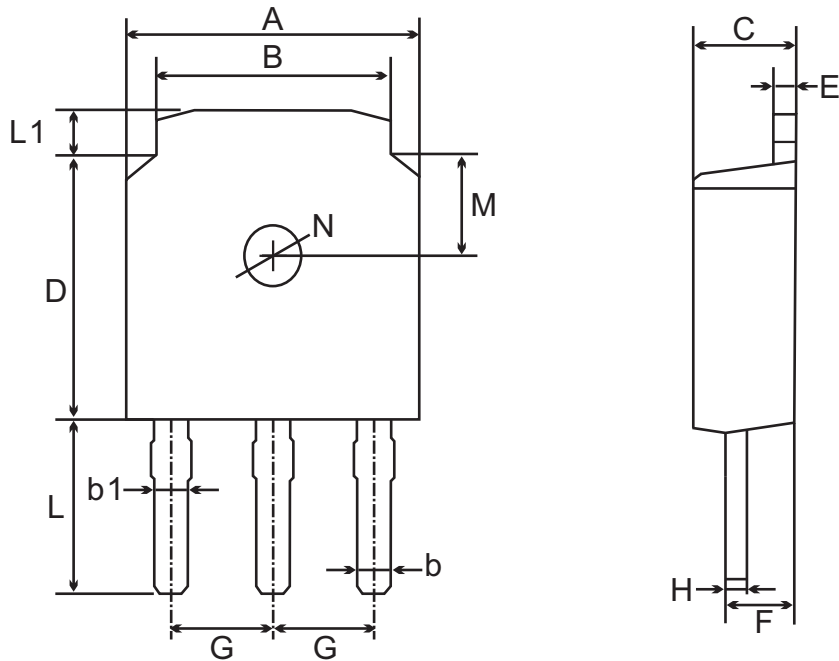


Fig.6- Typical Transient Thermal Impedance





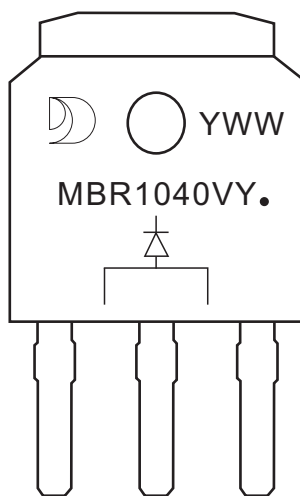
### TO-251(I-PAK) Package Outline Dimensions



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		

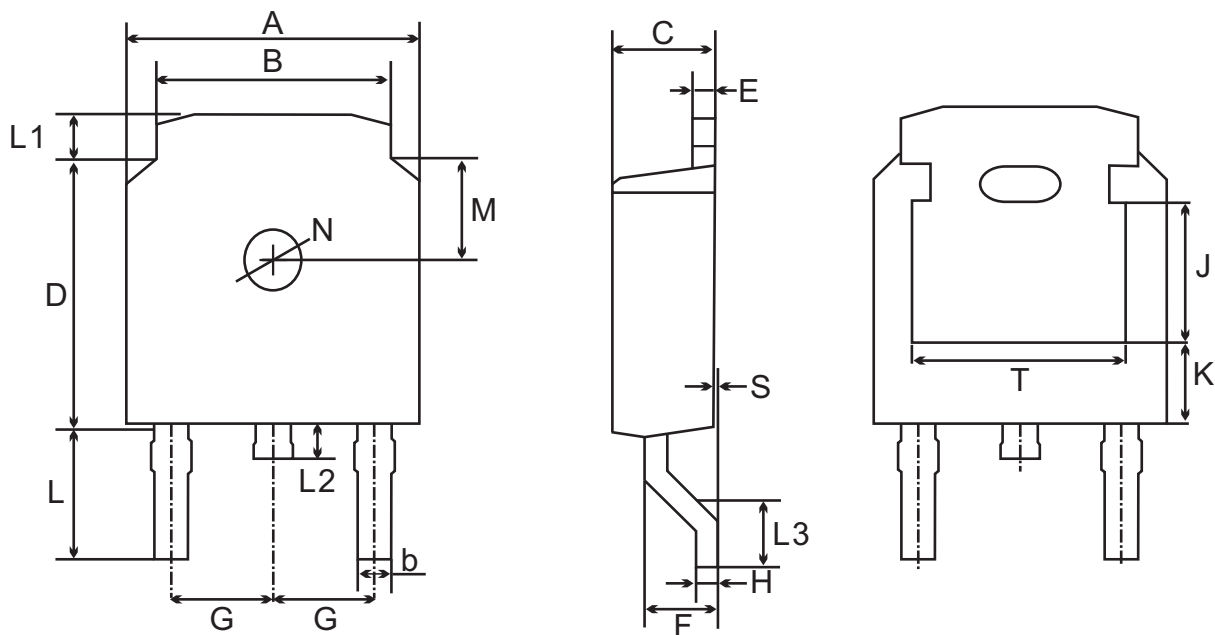
### MARKING DIAGRAM



YWW: Date Code  
Y: Years(0~9)  
WW: Week  
MBR1040VY: Product name  
(NOTE: The weekly code is based on the actual number of weeks in the calendar year.)



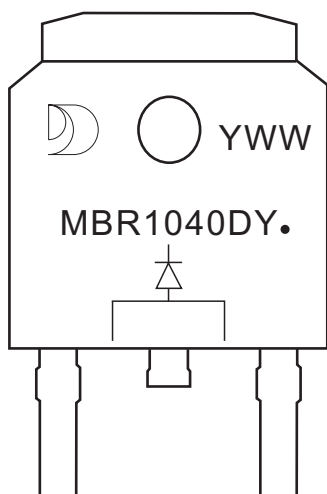
### TO-252(D-PAK) Package Outline Dimensions



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  
MBR1040DY: Product name  
(NOTE:The weekly code is based on the actual number of weeks in the calendar year.)



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