

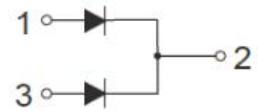


### Features

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



TO-252-2L



### Package Marking and Ordering Information

Product ID	Pack	Marking	Qty(PCS)
MBRD2040CT- MBRD20200CT	TO-252-2L	MBRD20*	2500

\*:From 40-200CT

### Maxim Ratings Electrical Characteristics

Ratings at 25°C ambient temperature unless otherwise specified

Characteristics	Symbol	MBRD 2040CT	MBRD 2045CT	MBRD 2060CT	MBRD 20100CT	MBRD 20150CT	MBRD 20200CT	Units	
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	$I_{F(AV)}$	20						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 ADC per leg	$V_F$	0.70	0.75	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>	$C_j$	600		400				pF	
Typical Thermal Resistance <sup>(2)</sup>	$R_{\theta JA}$	45						°C/W	
Operating Junction Temperature Range	$T_j$	-55 ~ +150				-55 ~ +175			°C
Storage Temperature Range	$T_{stg}$	-55 ~ +150				-55 ~ +175			°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.



## Typical Characteristics

Fig.1 TYPICAL FORWARD CURRENT DERATING CURVE

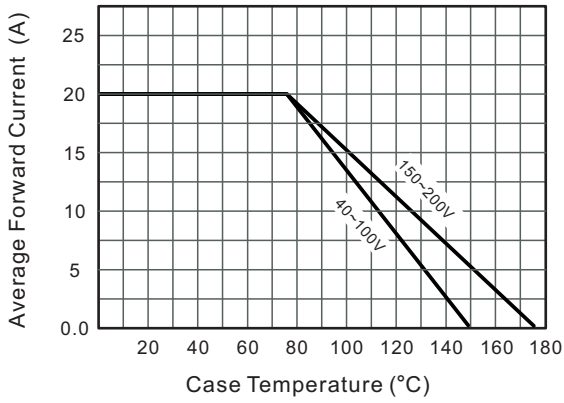


Fig.2 Typical Reverse Characteristics

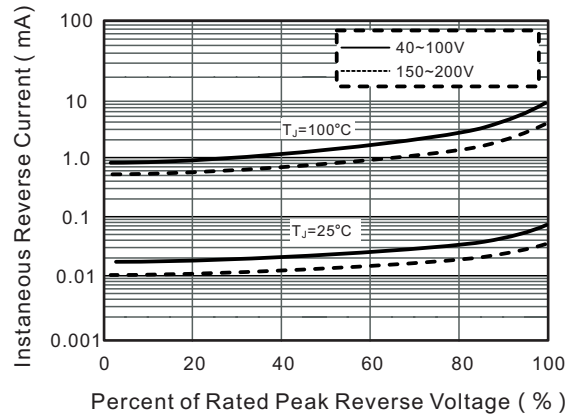


Fig.3 Typical Forward Characteristic

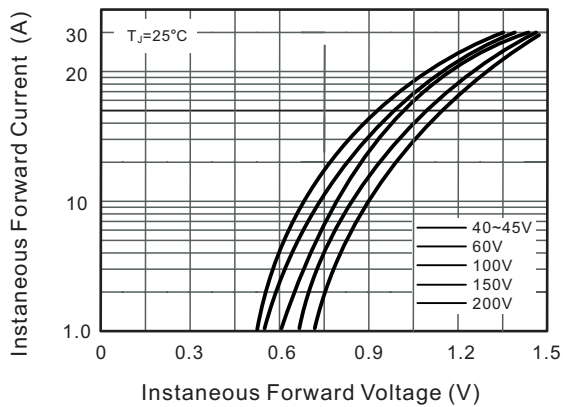


Fig.4 Typical Junction Capacitance

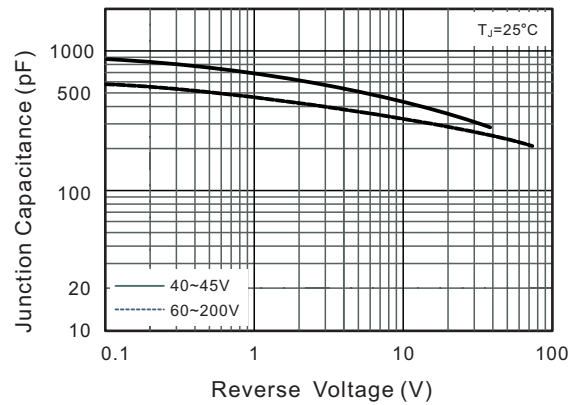


Fig.5 Maximum Non-Repetitive Peak Forward Surge Current

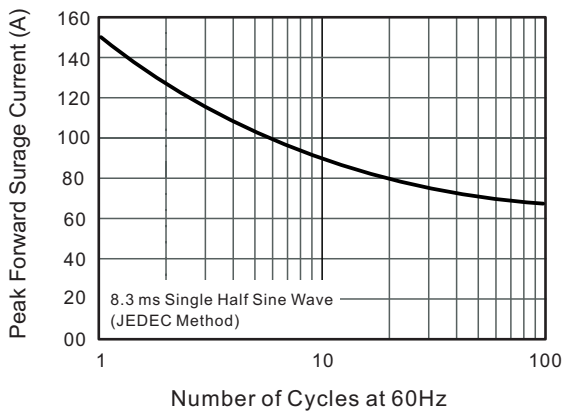
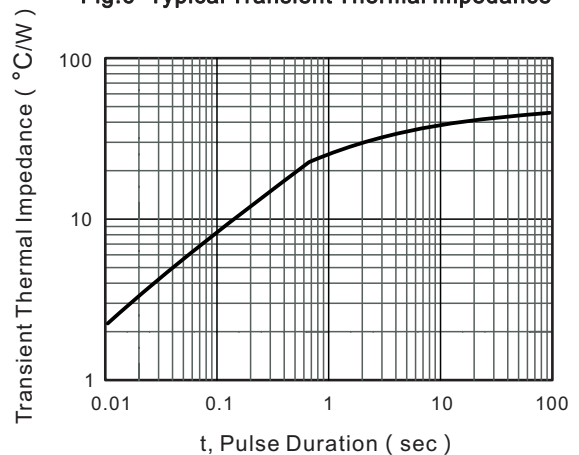
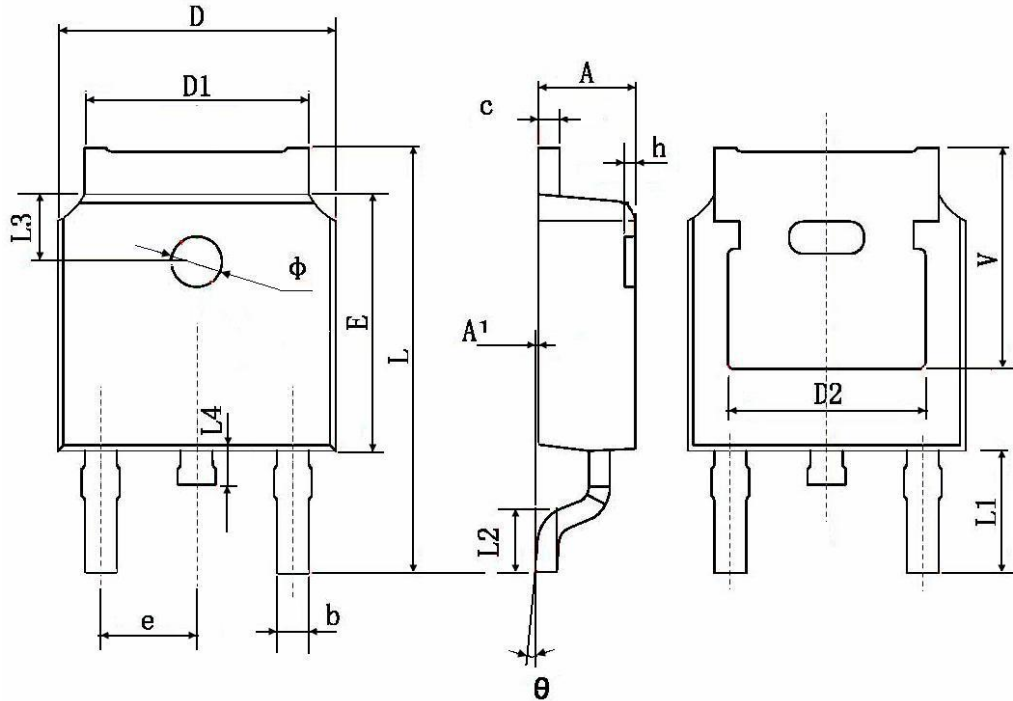


Fig.6- Typical Transient Thermal Impedance





**TO-252-2L Package Information**



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min.	Max.	Min.	Max.
A	2.200	2.400	0.087	0.094
A1	0.000	0.127	0.000	0.005
b	0.660	0.860	0.026	0.034
c	0.460	0.580	0.018	0.023
D	6.500	6.700	0.256	0.264
D1	5.100	5.460	0.201	0.215
D2	0.483 TYP.		0.190 TYP.	
E	6.000	6.200	0.236	0.244
e	2.186	2.386	0.086	0.094
L	9.800	10.400	0.386	0.409
L1	2.900 TYP.		0.114 TYP.	
L2	1.400	1.700	0.055	0.067
L3	1.600 TYP.		0.063 TYP.	
L4	0.600	1.000	0.024	0.039
φ	1.100	1.300	0.043	0.051
θ	0°	8°	0°	8°
h	0.000	0.300	0.000	0.012
V	5.350 TYP.		0.211 TYP.	



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