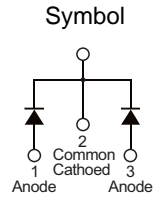


■ PRODUCT CHARACTERISTICS

VR(@IC=0.5mA)	100V
VF(Typ@IF=20A)	0.82V
IR(@VR=100V)	0.05mA
ID	40A

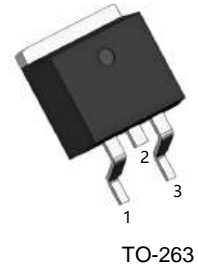


■ MECHANICAL CHARACTERISTICS

- * Case: epoxy,molded
- * Finish:all external surfaces corrosion resistant and terminal
- * Leads are readily solderable
- * Leads temperature for soldering purposes:
260°C Max for 10 seconds

■ FEATURES

- * Low forward voltage
- * Low power loss/high efficiency
- * Low stored charge majority carrier conduction
- * Pb free package are available



■ ORDER INFORMATION

Order codes		Package	Packing
Halogen-free	Halogen		
N/A	MBR40100E	TO-263	800pieces/Reel

■ MAXIMUM RATINGS (Each diode leg)

Parameter	Symbol	Value	Unit
Peak repetitive reverse voltage	V_{RRM}	100	V
Average rectified output current	Total	40	A
	Per leg	20	A
Non-repetitive peak forward surge current 8.3ms single half sine-wave superimposed on reate load	I_{FSM}	300	A
Operating and storage temperature range	T_J, T_{STG}	-55 to + 175	°C

■ ELECTRICAL CHARACTERISTICS($T_A=25^\circ\text{C}$ Unless otherwise specified)

Parameter	Symbol	Conditions	Min	Typ	Max	Unit
Peak repetitive reverse voltage	B_V	$I_C=0.5\text{mA}, T_J=25^\circ\text{C}$	100	-	-	V
Forward voltage drop	V_F	$I_F=20\text{A}, T_J=25^\circ\text{C}$	-	0.82	0.85	V
Typical junction capacitance per diode	C_J	$V_R=4\text{V}, f=1\text{MHz}$	-	510	-	pF
Leakage current	I_R	$V_R=100\text{V}, T_J=25^\circ\text{C}$	-	-	0.05	mA
		$V_R=100\text{V}, T_J=125^\circ\text{C}$	-	-	20	
Typical thermal resistance per diode	$R_{\theta J-A}$		-	40	-	°C/W
	$R_{\theta J-C}$		-	4	-	

■ TYPICAL CHARACTERISTICS

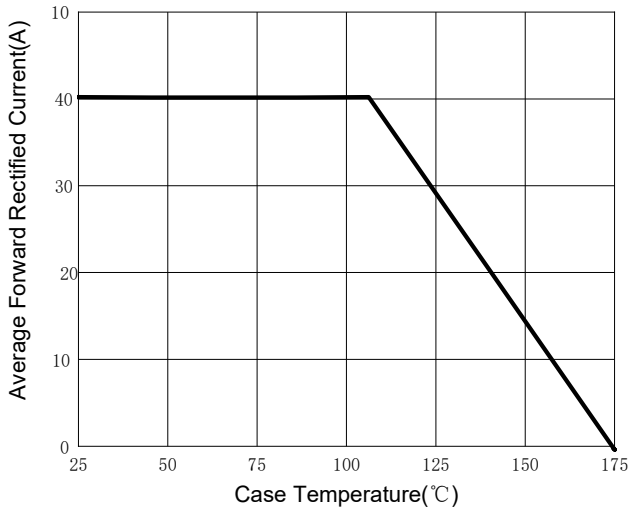


Fig. 1: Forward Current Derating Curve

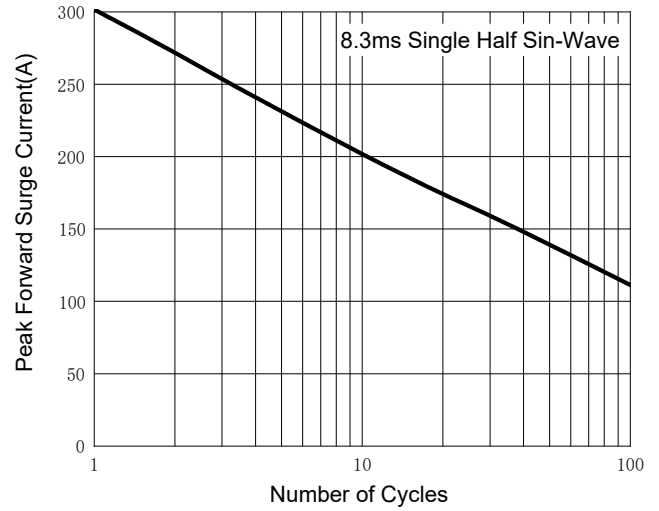


Fig. 2: Forward Surge Current Capability (Per Diode)

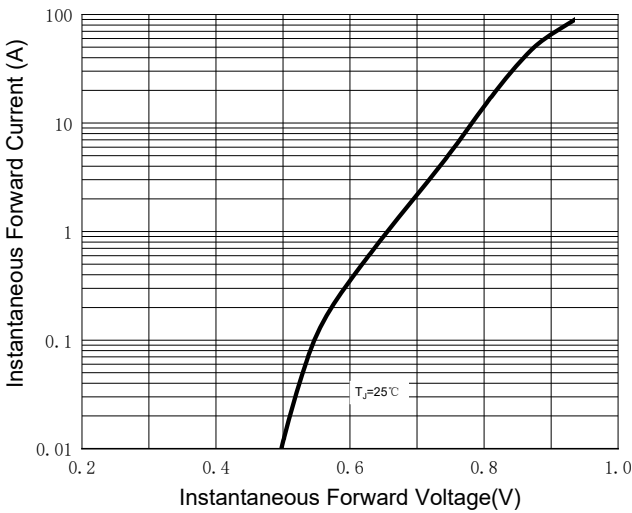


Fig. 3: Typical Instantaneous Forward Characteristics (Per Diode)

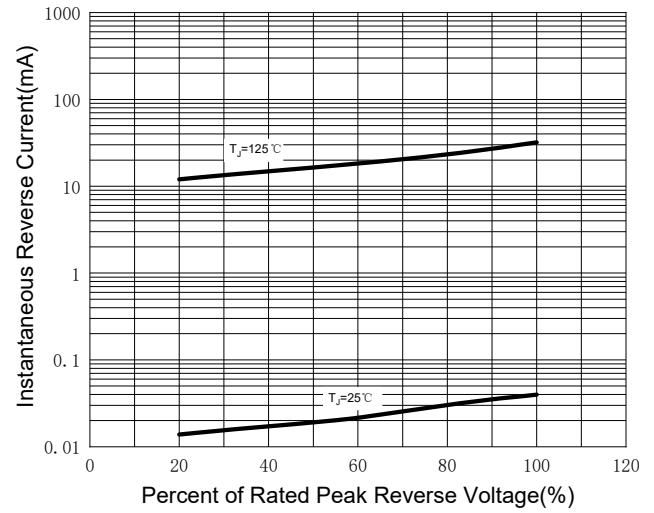


Fig. 4: Typical Reverse Leakage Characteristics (Per Diode)

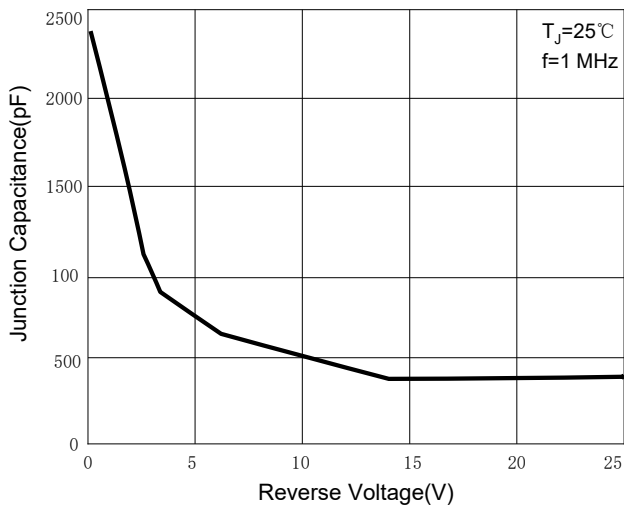


Fig. 5: Typical Junction Capacitance (Per Diode)

■ TO-263 PACKAGE OUTLINE DIMENSIONS
