

MBR2045CL

LOW VF SCHOTTKY RECTIFIER

VOLTAGE 45 Volts **CURRENT** 20 Amperes

FEATURES

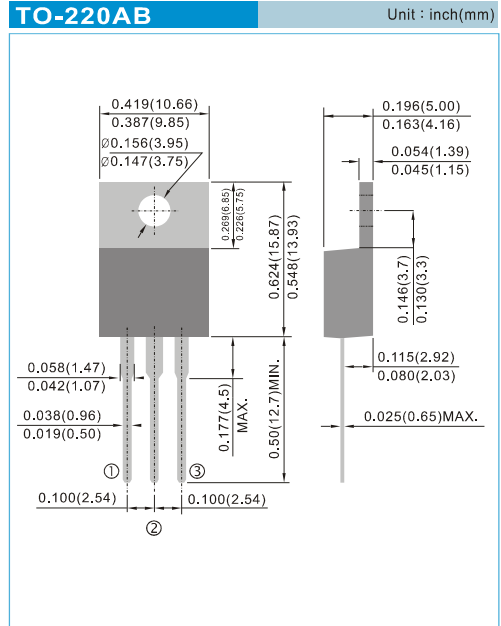
- Ultra Low forward voltage drop, low power losses
- High efficiency operation
- Lead free in comply with EU RoHS 2011/65/EU directives

MECHANICAL DATA

Case : TO-220AB, Plastic

Terminals : Solderable per MIL-STD-750, Method 2026

Weight: 0.065 ounces, 1.859 grams.



MAXIMUM RATINGS($T_A=25^\circ\text{C}$ unless otherwise noted)

PARAMETER	SYMBOL	VALUE	UNIT
Maximum repetitive peak reverse voltage	V_{RRM}	45	V
Maximum average forward rectified current	$I_{F(AV)}$	20 10	A
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load	I_{FSM}	300	A
Typical junction capacitance ($V_R=4V$, $f=1\text{MHz}$)	C_J	1100	pF
Typical thermal resistance per diode (Note 1)	$R_{\theta JC}$	2	$^\circ\text{C/W}$
Operating junction temperature range	T_J	-55 to + 150	$^\circ\text{C}$
Storage temperature range	T_{STG}	-55 to + 150	$^\circ\text{C}$

Note : 1. Mounted on infinite heatsink.

ELECTRICAL CHARACTERISTICS($T_A=25^\circ\text{C}$ unless otherwise noted)

PARAMETER	SYMBOL	TEST CONDITIONS	MIN.	TYP.	MAX.	UNIT
Breakdown voltage per diode	V_{BR}	$I_R=0.5\text{mA}$	45	-	-	V
Instantaneous forward voltage per diode	V_F	$I_F=1\text{A}$	-	0.28	-	V
		$I_F=5\text{A}$	-	0.35	-	V
		$I_F=15\text{A}$	-	0.44	0.45	V
		$T_J=125^\circ\text{C}$	-	0.17	-	V
Reverse current per diode	I_R	$I_F=1\text{A}$	-	0.17	-	V
		$I_F=5\text{A}$	-	0.27	-	V
		$I_F=15\text{A}$	-	0.4	-	V
		$T_J=125^\circ\text{C}$	-	0.4	-	V
Reverse current per diode	I_R	$V_R=36\text{V}$	-	86	-	μA
		$T_J=25^\circ\text{C}$	-	20	-	mA
		$T_J=125^\circ\text{C}$	-	-	320	μA
Reverse current per diode	I_R	$V_R=45\text{V}$	-	-	320	μA
		$T_J=125^\circ\text{C}$	-	28	-	mA

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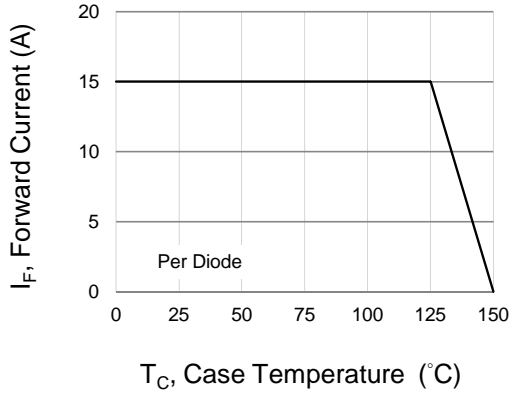


Fig.1 Forward Current Derating Curve

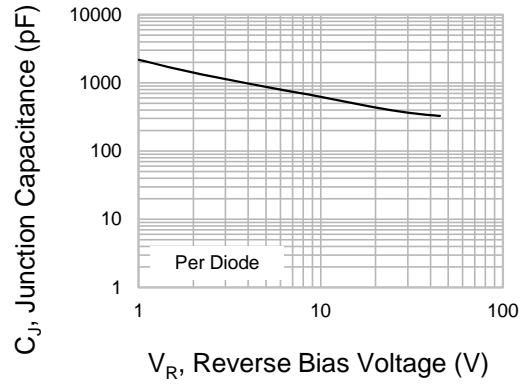


Fig.2 Typical Junction Capacitance

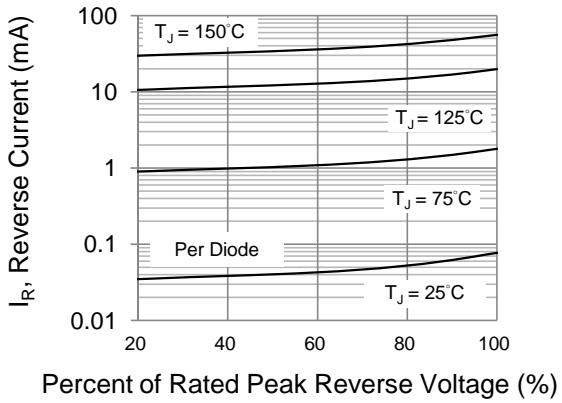


Fig.3 Typical Reverse Characteristics

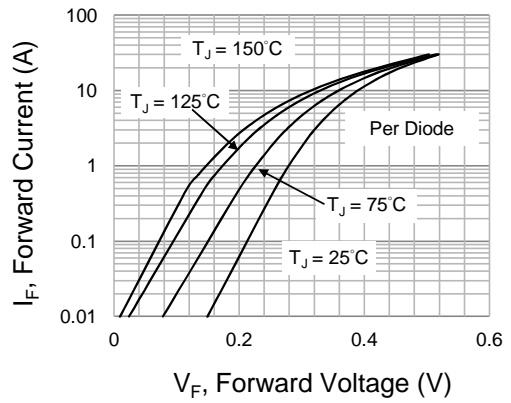


Fig.4 Typical Forward Characteristics