America Semiconductor

"In America Semi We Trust"

MANUFACTURER OF WORLD CLASS HIGH POWER SEMICONDUCTORS

America Semiconductor

MBR40045CT thru MBR400100CTR

V_{RRM} = 20 V - 100 V

I_F = 400 A

Silicon Power Schottky Diode

Features

- High Surge Capability
- Types up to 100 V V_{RRM}

Twin Tower Package

Maximum ratings, at T_j = 25 °C, unless otherwise specified ("R" devices have leads reversed)

Parameter	Symbol	Conditions	MBR40045CT (R)	MBR40060CT (R)	MBR40080CT (R)	MBR400100CT (R)	Unit
Repetitive peak reverse voltage	V_{RRM}		45	60	80	100	V
RMS reverse voltage	V_{RMS}		32	42	56	70	V
DC blocking voltage	V_{DC}		45	60	80	100	V
Continuous forward current	I_F	$T_C \leq$ 125 °C	400	400	400	400	A
Surge non-repetitive forward current, Half Sine Wave	$I_{F,SM}$	T_C = 25 °C, t_p = 8.3 ms	3000	3000	3000	3000	A
Operating temperature	T_j		-40 to 175	-40 to 175	-40 to 175	-40 to 175	°C
Storage temperature	T_{stg}		-40 to 175	-40 to 175	-40 to 175	-40 to 175	°C

Electrical characteristics, at Tj = 25 °C, unless otherwise specified

Parameter	Symbol	Conditions	MBR40045CT (R)	MBR40060CT (R)	MBR40080CT (R)	MBR400100CT (R)	Unit
Diode forward voltage	V_F	I_F = 200 A, T_j = 25 °C	0.65	0.8	0.84	0.84	V
Reverse current	I_R	V_R = 20 V, T_j = 25 °C V_R = 20 V, T_j = 125 °C	5 200	5 200	5 200	5 200	mA
Thermal characteristics							
Thermal resistance, junction - case	R_{thJC}		0.35	0.35	0.35	0.35	°C/W

Figure .1-Typical Forward Characteristics

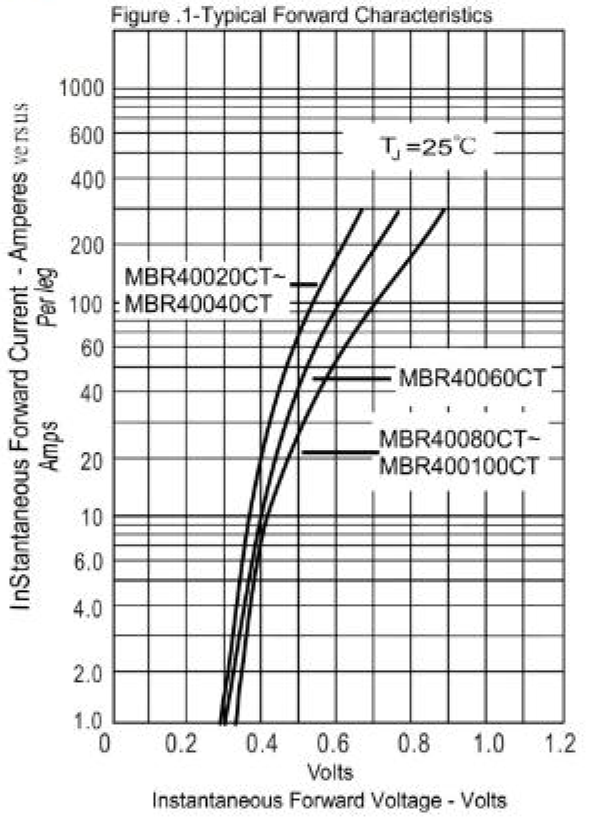

Figure .2- Forward Derating Curve

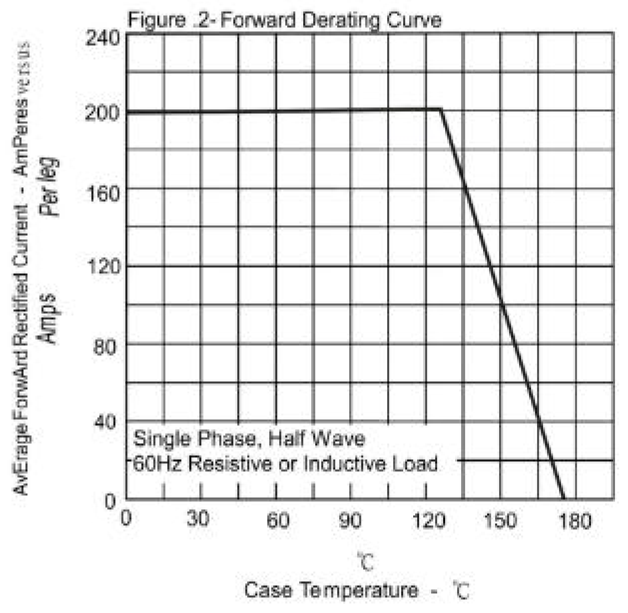

Figure .4- Typical Reverse Characteristics

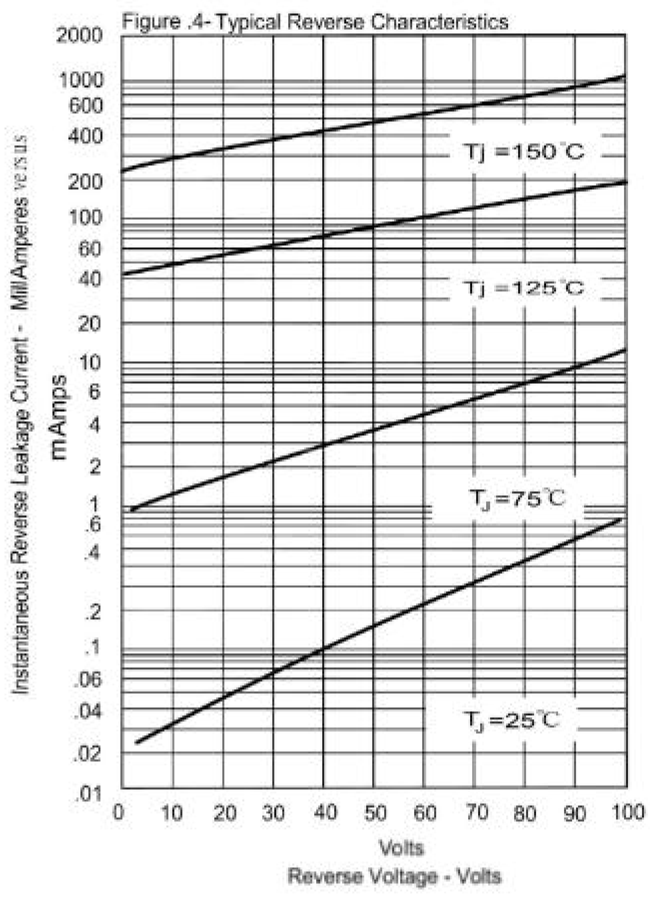

Figure.3- Peak Forward Surge Current