America Semiconductor

MBR30020CT thru MBR30040CTR

Silicon Power Schottky Diode

V_{RRM} = 20 V - 100 V

I_F = 300 A

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	MBR30020CT (R)	MBR30030CT (R)	MBR30035CT (R)	MBR30040CT (R)	Unit
Repetitive peak reverse voltage	V_{RRM}		20	30	35	40	V
RMS reverse voltage	V_{RMS}		14	21	25	28	V
DC blocking voltage	V_{DC}		20	30	35	40	V
Continuous forward current	I_F	$T_C \leq 140$ °C	300	300	300	300	A
Surge non-repetitive forward current, Half Sine Wave	$I_{F,SM}$	T_C = 25 °C, t_p = 8.3 ms	2500	2500	2500	2500	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	MBR30020CT (R)	MBR30030CT (R)	MBR30035CT (R)	MBR30040CT (R)	Unit
Diode forward voltage	V_F	I_F = 150 A, T_j = 25 °C	0.65	0.65	0.65	0.65	V
Reverse current	I_R	V_R = 20 V, T_j = 25 °C	8	8	8	8	mA
		V_R = 20 V, T_j = 125 °C	200	200	200	200	
Thermal characteristics							
Thermal resistance, junction - case	R_{thJC}		0.4	0.4	0.4	0.4	°C/W

Figure .1-Typical Forward Characteristics

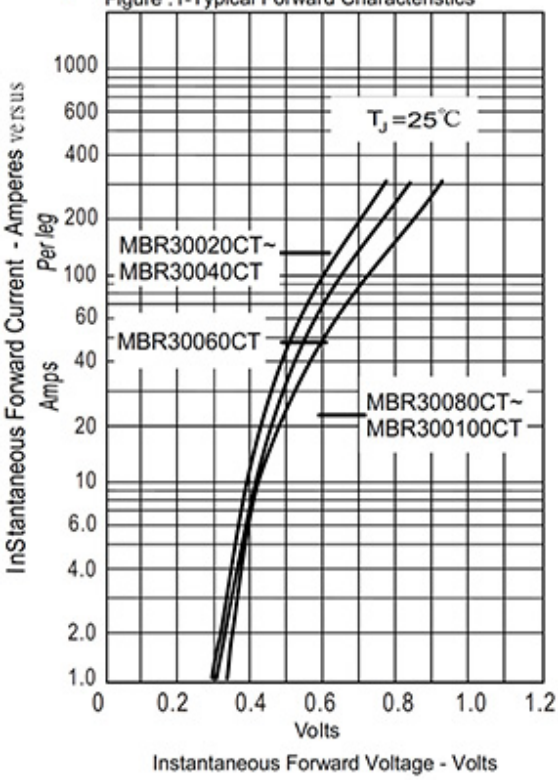

Figure .2-Forward Derating Curve

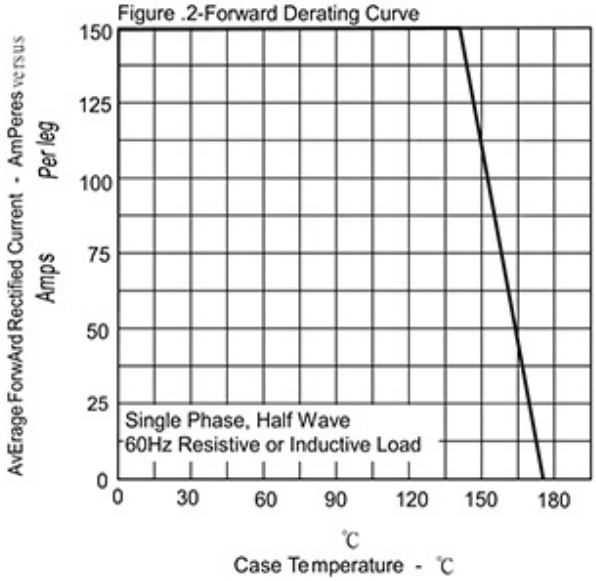

Figure .3- Peak Forward Surge Current

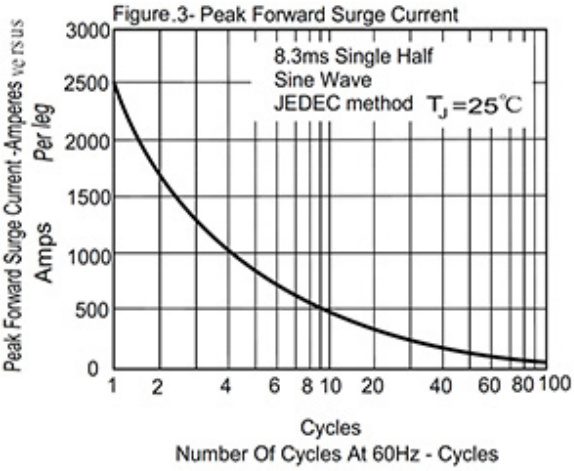

Figure .4- Typical Reverse Characteristics