

# Silicon Power Schottky Diode

 $V_{RRM} = 20\text{ V} - 100\text{ V}$ 
 $I_F = 120\text{ A}$ 

## Features

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

**Twin Tower Package**


## Maximum ratings, at $T_j = 25\text{ °C}$ , unless otherwise specified ("R" devices have leads reversed)

Parameter	Symbol	Conditions	MBR12045CT (R)	MBR12060CT (R)	MBR12080CT (R)	MBR120100CT (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	$I_F$	$T_C \leq 140\text{ °C}$	120	120	120	120	A
Surge non-repetitive forward current, Half Sine Wave	$I_{F,SM}$	$T_C = 25\text{ °C}$ , $t_p = 8.3\text{ ms}$	800	800	800	800	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 $T_j = 25\text{ °C}$ , unless otherwise specified

Parameter	Symbol	Conditions	MBR12045CT (R)	MBR12060CT (R)	MBR12080CT (R)	MBR120100CT (R)	Unit
Diode forward voltage	$V_F$	$I_F = 60\text{ A}$ , $T_j = 25\text{ °C}$	0.65	0.75	0.84	0.84	V
Reverse current	$I_R$	$V_R = 20\text{ V}$ , $T_j = 25\text{ °C}$	3	3	3	3	mA
		$V_R = 20\text{ V}$ , $T_j = 125\text{ °C}$	200	200	200	200	

## Thermal characteristics

Thermal resistance, junction - case	$R_{thJC}$		0.8	0.8	0.8	0.8	°C/W
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Figure .1-Typical Forward Characteristics

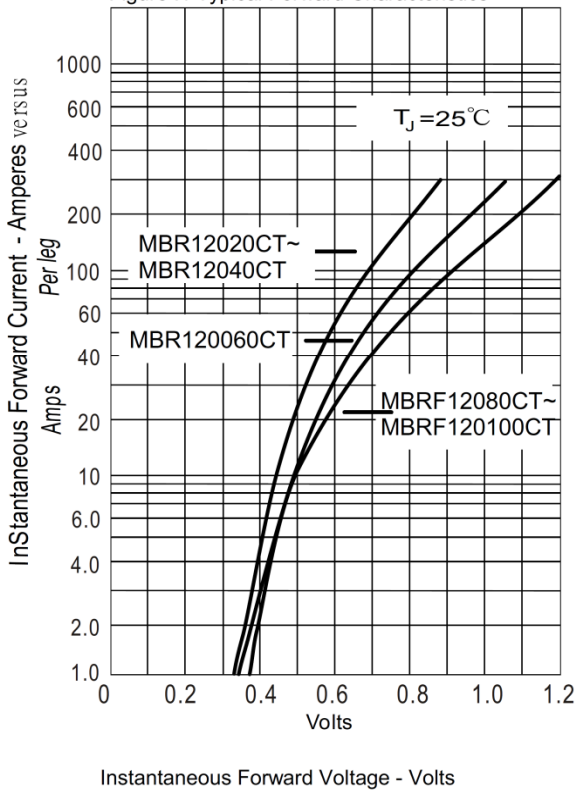


Figure .2-Forward Derating Curve

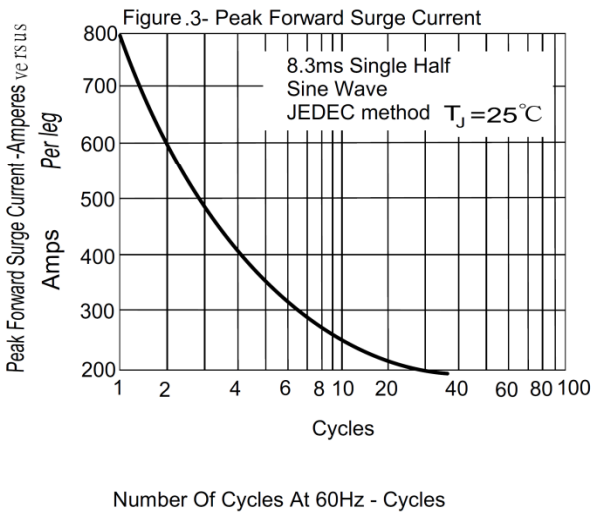
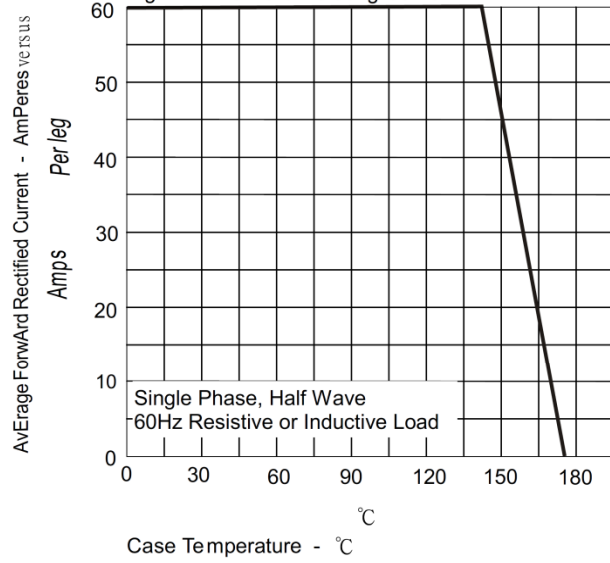
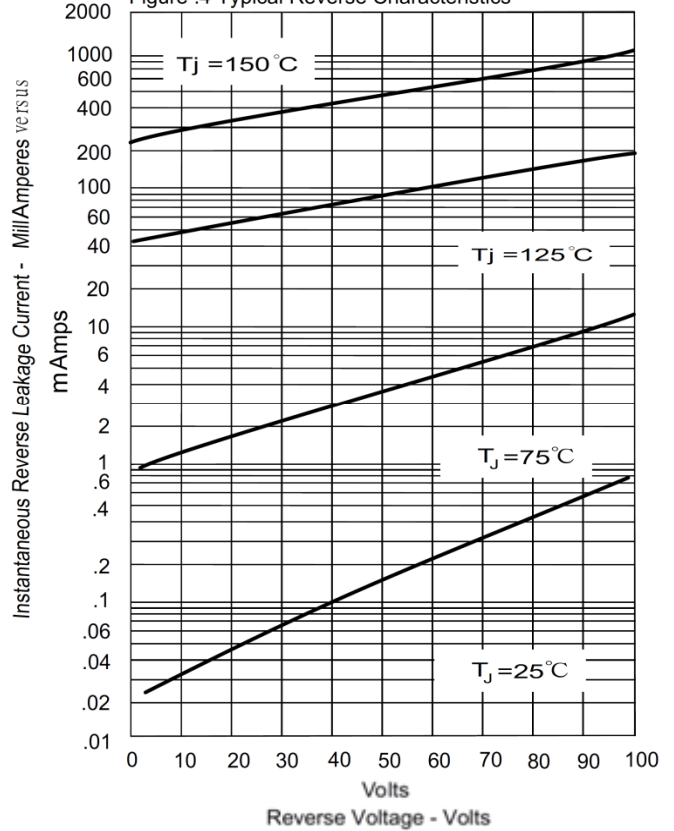
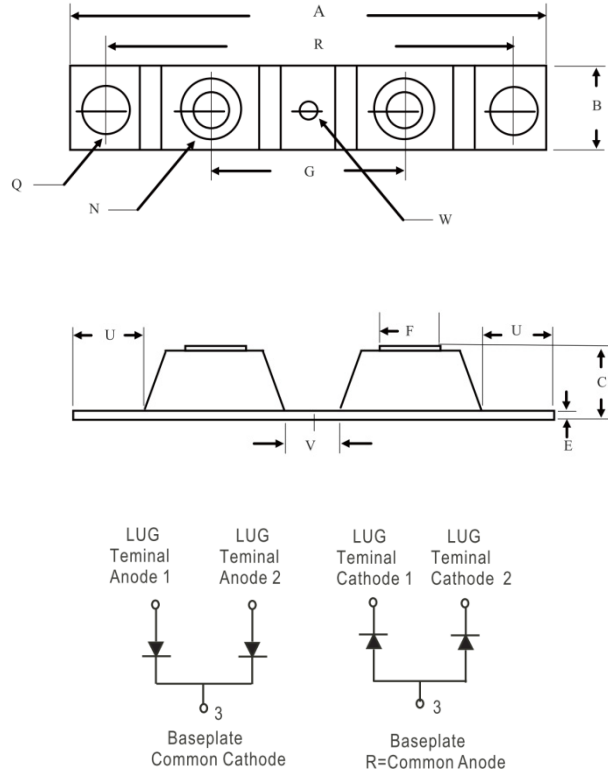


Figure .4-Typical Reverse Characteristics



## Package dimensions and terminal configuration

Product is marked with part number and terminal configuration.



DIM	Inches		Millimeters	
	Min	Max	Min	Max
A	-----	3.630	-----	92.40
B	0.700	0.800	17.78	20.32
C	-----	0.650	-----	16.51
E	0.130	0.141	3.30	3.60
F	0.482	0.490	12.25	12.45
G	1.368	BSC	34.75	BSC
N	1/4-20 UNC FULL			
Q	0.275	0.290	6.99	7.37
R	3.150	BSC	80.01	BSC
U	0.600	-----	15.24	-----
V	0.312	0.370	7.92	9.40
W	0.180	0.195	4.57	4.95