

Silicon Power Schottky Diode

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

$I_F = 500\text{ A}$

Features

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

Three Tower Package



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

Parameter	Symbol	Conditions	MBRT50020 (R)	MBRT50030 (R)	MBRT50035 (R)	MBRT50040 (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	$T_C \leq 100\text{ °C}$	500	500	500	500	A
Surge non-repetitive forward current, Half Sine Wave	$I_{F,SM}$	$T_C = 25\text{ °C}$, $t_p = 8.3\text{ ms}$	3500	3500	3500	3500	A
Operating temperature	T_j		-40 to 150	-40 to 150	-40 to 150	-40 to 150	°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	MBRT50020 (R)	MBRT50030(R)	MBRT50035 (R)	MBRT50040 (R)	Unit
Diode forward voltage	V_F	$I_F = 250\text{ A}$, $T_j = 25\text{ °C}$	0.75	0.75	0.75	0.75	V
Reverse current	I_R	$V_R = 20\text{ V}$, $T_j = 25\text{ °C}$	1	1	1	1	mA
		$V_R = 20\text{ V}$, $T_j = 125\text{ °C}$	20	20	20	20	

Thermal characteristics

Thermal resistance, junction - case	R_{thJC}		0.12	0.12	0.12	0.12	°C/W
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Figure .1-Typical Forward Characteristics

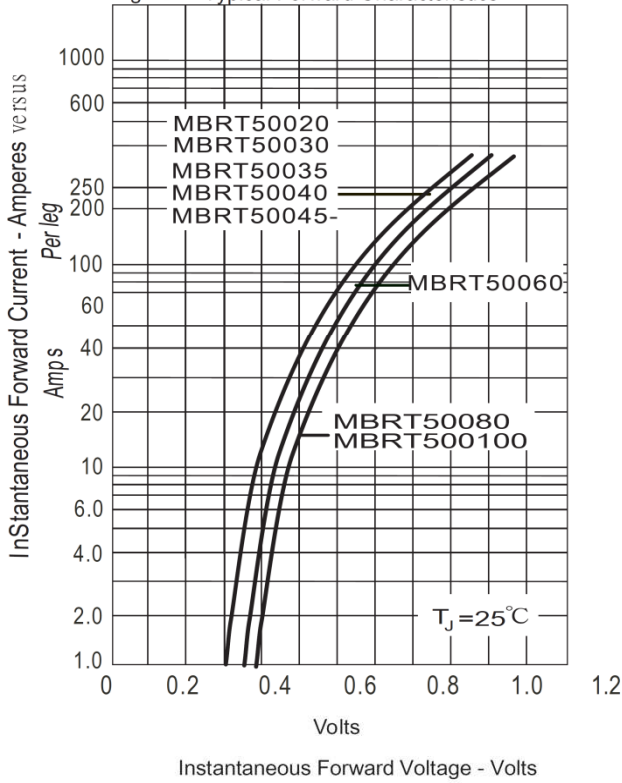


Figure .2- Forward Derating Curve

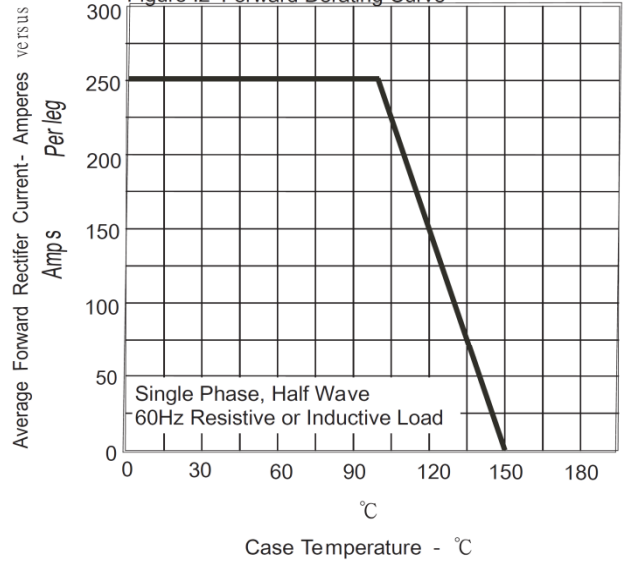


Figure .4-Typical Reverse Characteristics

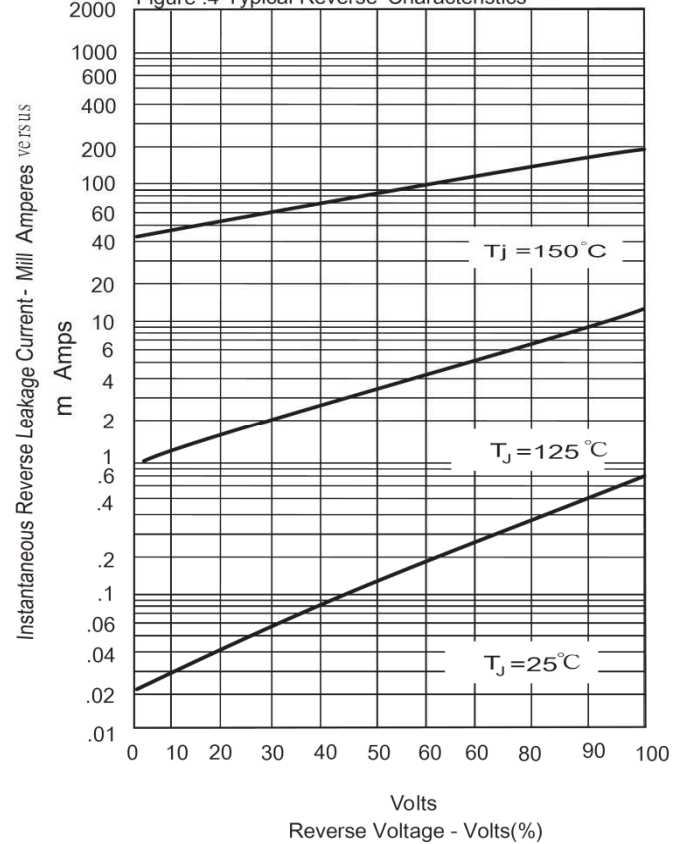
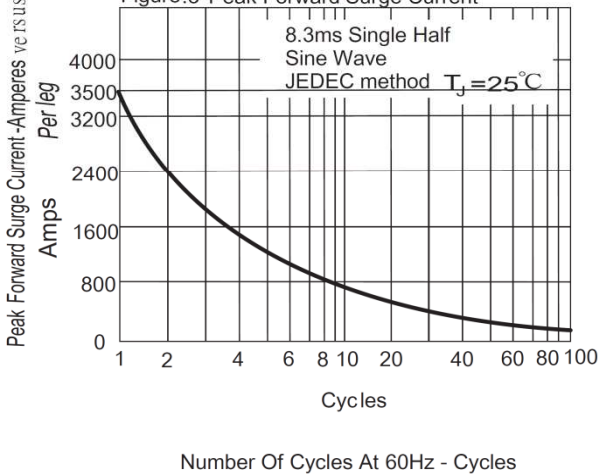
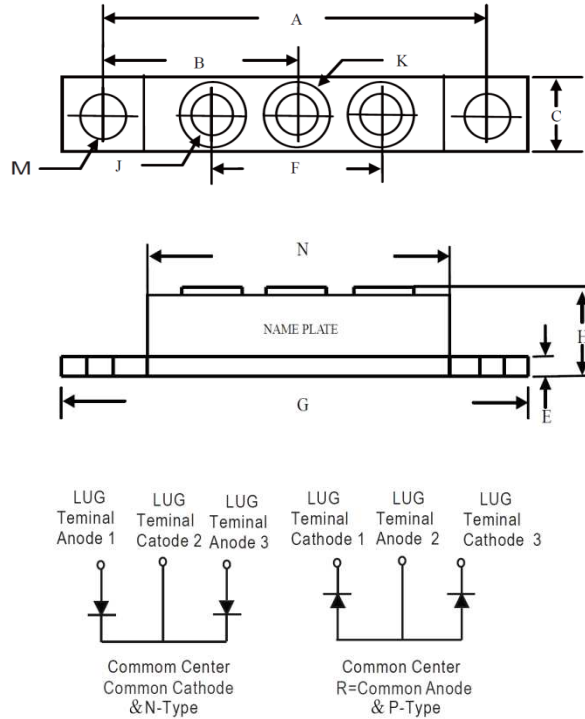


Figure.3-Peak Forward Surge Current



Package dimensions and terminal configuration

Product is marked with part number and terminal configuration.



DIM	Inches		Millimeters	
	Min	Max	Min	Max
A	3.150	NOM	80.01	NOM
B	1.565	1.585	39.75	40.26
C	.700	.800	17.78	20.32
E	.119	.132	3.02	3.35
F	1.327	REF	33.72	REF
G	3.55	3.65	90.17	92.71
H	----	.73	----	18.30
J	1/4-20 UNC FULL			
K	.472	.511	12	13
M	.275	.295	6.99	7.49
N	2.38	2.46	60.5	62.5