

## Silicon Power Schottky Diode

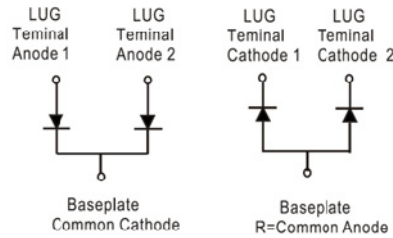
$V_{RRM} = 45\text{ V} - 100\text{ V}$

$I_{F(AV)} = 120\text{ A}$

### Features

- High Surge Capability
- Types from 45 V to 100 V  $V_{RRM}$
- Not ESD Sensitive

TO-244AB Package



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

Parameter	Symbol	Conditions	MBRF12045(R)	MBRF12060(R)	MBRF12080(R)	MBRF120100(R)	Unit
Repetitive peak reverse voltage	$V_{RRM}$		45	60	80	100	V
RMS reverse voltage	$V_{RMS}$		32	42	57	70	V
DC blocking voltage	$V_{DC}$		45	60	80	100	V
Operating temperature	$T_j$		-55 to 150	-55 to 150	-55 to 150	-55 to 150	$^\circ\text{C}$
Storage temperature	$T_{stg}$		-55 to 150	-55 to 150	-55 to 150	-55 to 150	$^\circ\text{C}$

### Electrical characteristics, at $T_j = 25\text{ }^\circ\text{C}$ , unless otherwise specified

Parameter	Symbol	Conditions	MBRF12045(R)	MBRF12060(R)	MBRF12080(R)	MBRF120100(R)	Unit
Average forward current (per pkg)	$I_{F(AV)}$	$T_C = 125\text{ }^\circ\text{C}$	120	120	120	120	A
Peak forward surge current (per leg)	$I_{FSM}$	$t_p = 8.3\text{ ms, half sine}$	800	800	800	800	A
Maximum forward voltage (per leg)	$V_F$	$I_{FM} = 60\text{ A, } T_j = 25\text{ }^\circ\text{C}$	0.70	0.75	0.84	0.84	V
Reverse current at rated DC blocking voltage (per leg)	$I_R$	$T_j = 25\text{ }^\circ\text{C}$	1	1	1	1	mA
		$T_j = 100\text{ }^\circ\text{C}$	10	10	10	10	
		$T_j = 150\text{ }^\circ\text{C}$	30	30	30	30	

### Thermal characteristics

Thermal resistance, junction-case (per leg)	$R_{\theta JC}$		0.80	0.80	0.80	0.80	$^\circ\text{C/W}$
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Figure .1- Typical Forward Characteristics

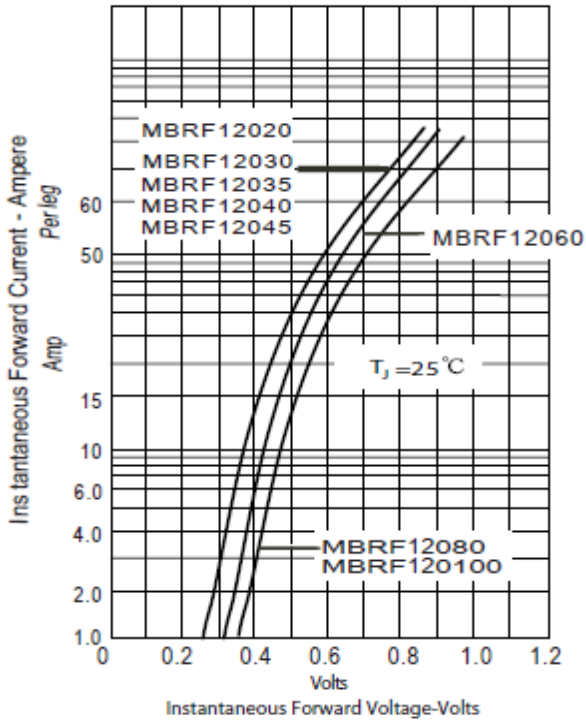


Figure .2- Forward Derating Curve

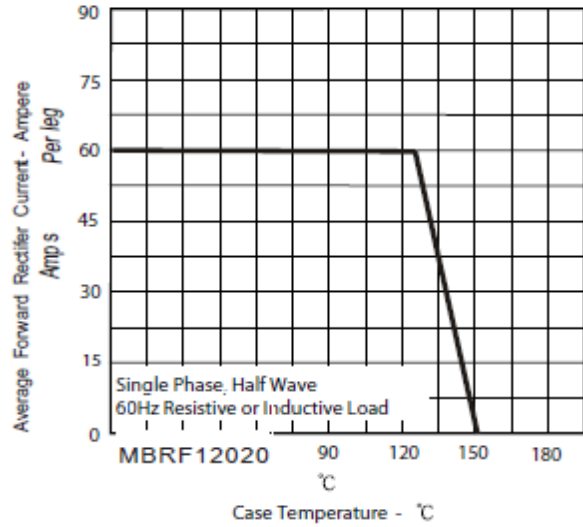


Figure.3-Peak Forward Surge Current

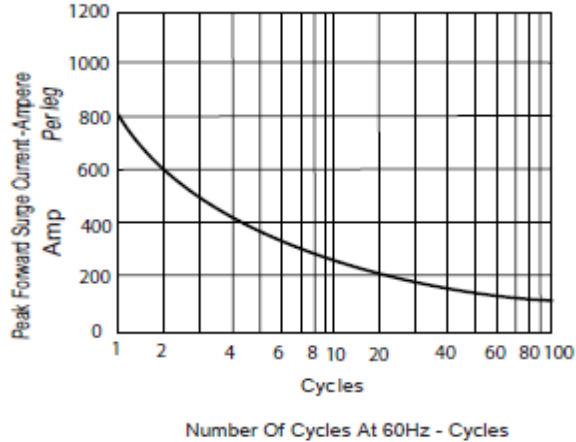
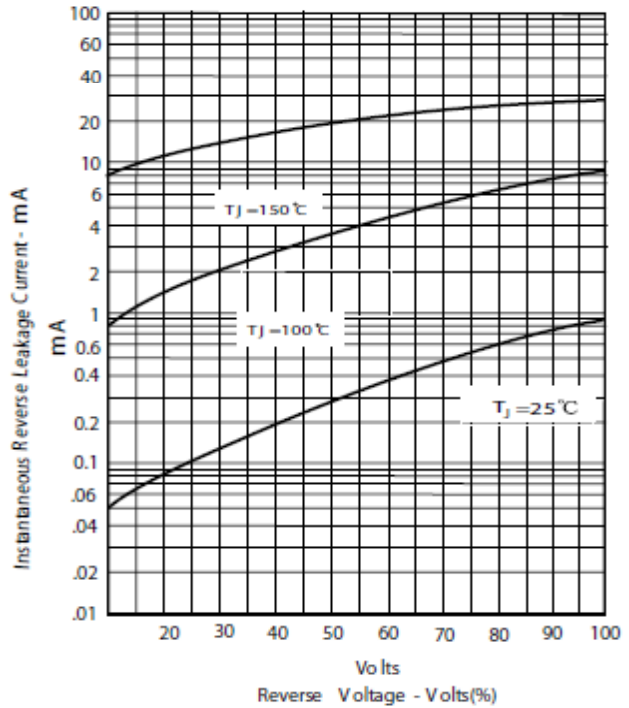
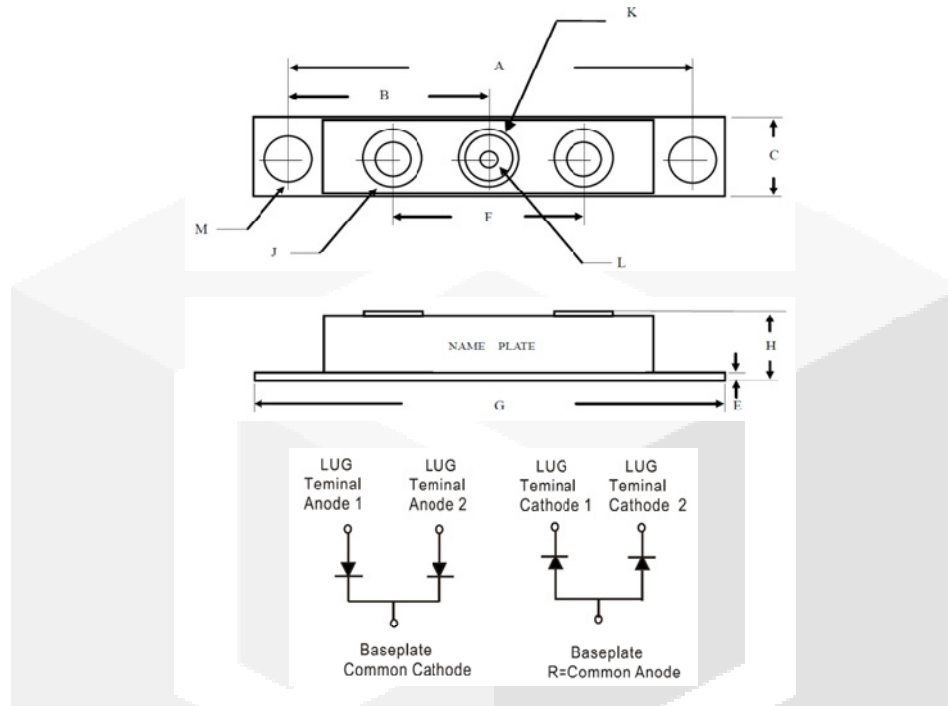


Figure .4- Typical Reverse Characteristics



## Package dimensions and terminal configuration

Product is marked with part number and terminal configuration.



DIM	Inches		Millimeters	
	Min	Max	Min	Max
A	3.144	NOM	79.85	NOM
B	1.565	1.585	39.75	40.26
C	0.700	0.800	17.78	20.32
E	0.119	0.14	3.02	3.50
F	1.358	REF.	34.50	REF.
G	3.55	3.65	90.17	92.71
H	0.604	0.65	15.35	16.51
J	1/4-20 UNC FULL			
K	0.380	0.410	9.65	10.41
L	0.185	0.195	4.70	4.95
M	0.275	0.295	6.99	7.49