

Silicon Power Schottky Diode

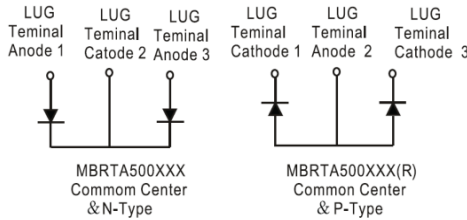
$V_{RRM} = 45\text{ V} - 100\text{ V}$

$I_{F(AV)} = 500\text{ A}$

Features

- High Surge Capability
- Types from 45 V to 100 V V_{RRM}
- Isolation Type Package
- Electrically Isolated Base Plate
- Not ESD Sensitive

Heavy Three Tower Package



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

Parameter	Symbol	Conditions	MBRTA50045(R)	MBRTA50060(R)	MBRTA50080(R)	MBRTA500100(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
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	MBRTA50045(R)	MBRTA50060(R)	MBRTA50080(R)	MBRTA500100(R)	Unit
Average forward current (per pkg)	$I_{F(AV)}$	$T_C = 100\text{ }^\circ\text{C}$	500	500	500	500	A
Peak forward surge current (per leg)	I_{FSM}	$t_p = 8.3\text{ ms, half sine}$	3500	3500	3500	3500	A
Maximum instantaneous forward voltage (per leg)	V_F	$I_{FM} = 250\text{ A, } T_j = 25\text{ }^\circ\text{C}$	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		
		$T_j = 150\text{ }^\circ\text{C}$	50	50	50		

Thermal characteristics

Thermal resistance, junction - case (per leg)	$R_{\theta JC}$		0.30	0.30	0.30	0.30	$^\circ\text{C/W}$
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Figure.1-Typical Forward Characteristics

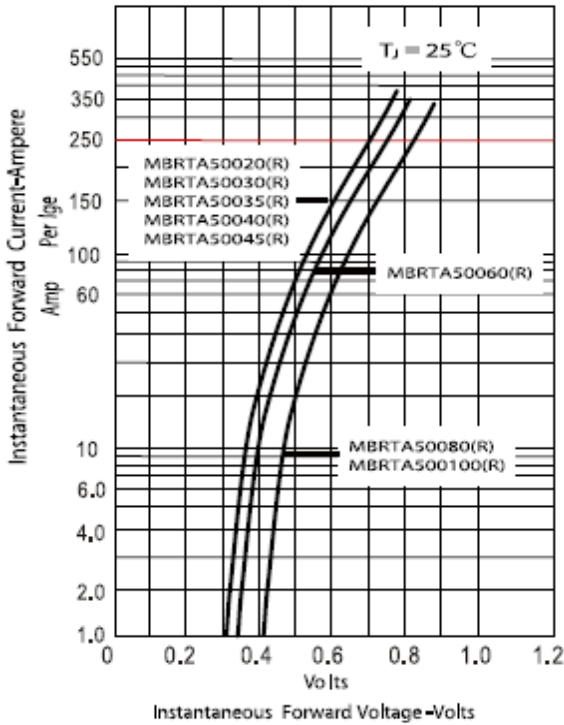


Figure.2-Forward Derating Curve

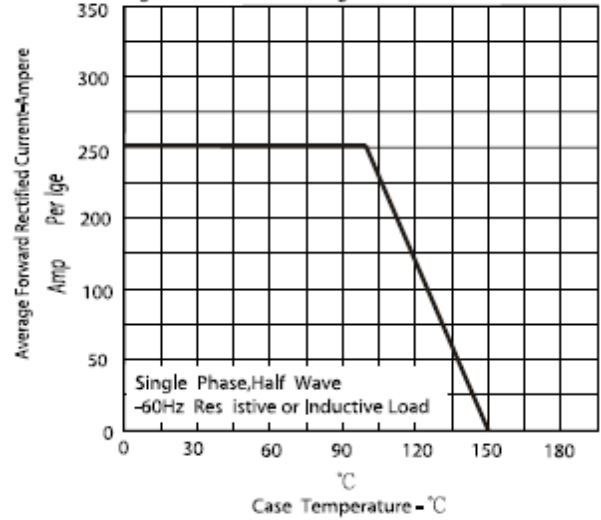


Figure.3-Peak Forward Surge Current

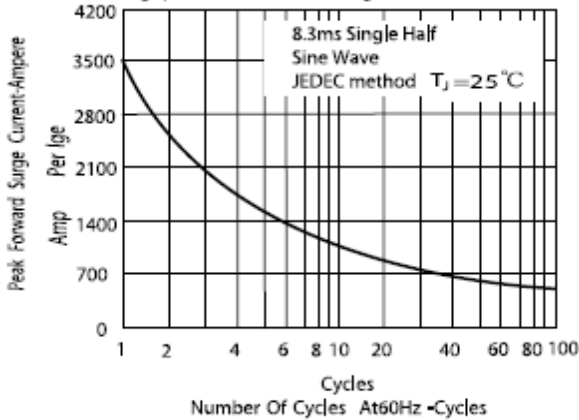
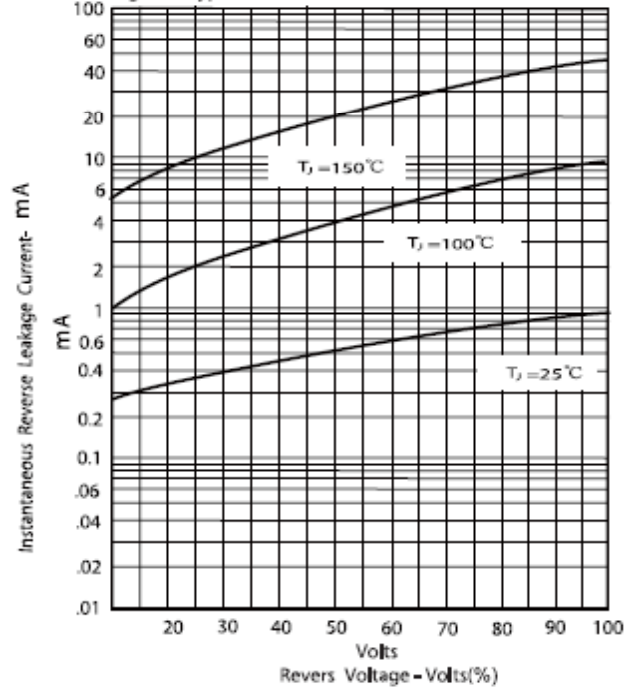
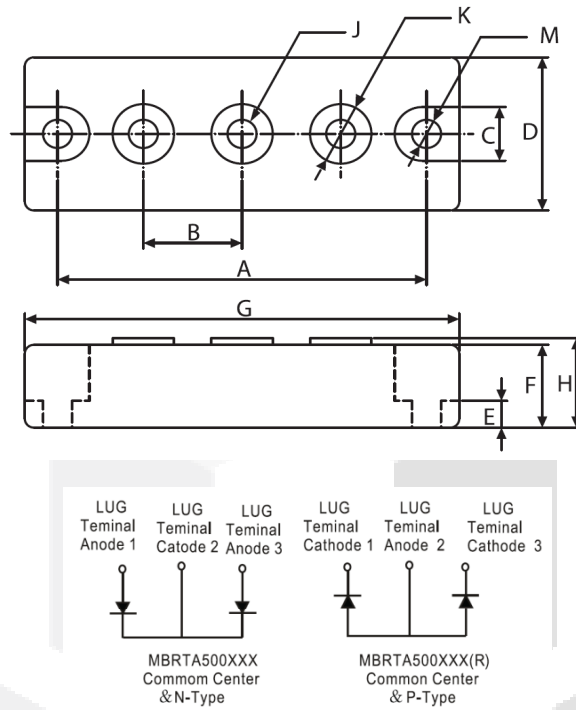


Figure.4-Typical Reverse Characteristics



Package dimensions and terminal configuration

Product is marked with part number and terminal configuration.



DIMENSIONS				
	INCHES		MM	
	MIN	MAX	MIN	MAX
A	3.150	NOM	80.01	NOM
B	.872	.892	22.15	22.65
C	.465	.479	11.82	12.18
D	1.337	1.356	33.95	34.45
E	.230	.234	5.84	6.16
F	.725	REF	18.42	REF
G	3.668	3.768	93.17	95.71
H	----	.791	---	20.10
J	1/4 - 20 UNC FULL			
K	.509	.538	12.92	13.68
M	.238	.258	6.05	6.55