

Silicon Super Fast Recovery Diode

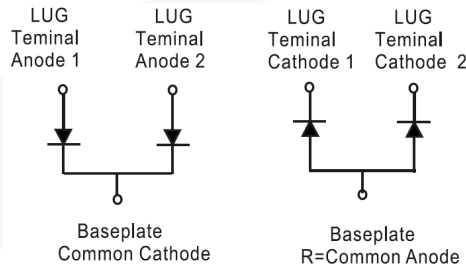
$V_{RRM} = 50\text{ V} - 200\text{ V}$

$I_{F(AV)} = 300\text{ A}$

Features

- High Surge Capability
- Types from 50 V to 200 V V_{RRM}
- Not ESD Sensitive

TO-244 Package



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

Parameter	Symbol	Conditions	MURF30005(R)	MURF30010(R)	MURF30020(R)	Unit
Repetitive peak reverse voltage	V_{RRM}		50	100	200	V
RMS reverse voltage	V_{RMS}		35	70	140	V
DC blocking voltage	V_{DC}		50	100	200	V
Operating temperature	T_j		-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	$^\circ\text{C}$

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

Parameter	Symbol	Conditions	MURF30005(R)	MURF30010(R)	MURF30020(R)	Unit
Average forward current (per pkg)	$I_{F(AV)}$	$T_C = 140\text{ }^\circ\text{C}$	300	300	300	A
Peak forward surge current (per leg)	I_{FSM}	$t_p = 8.3\text{ ms}$, half sine	2750	2750	2750	A
Maximum instantaneous forward voltage (per leg)	V_F	$I_{FM} = 150\text{ A}$, $T_j = 25\text{ }^\circ\text{C}$	1.0	1.0	1.0	V
Maximum reverse current at rated DC blocking voltage (per leg)	I_R	$T_j = 25\text{ }^\circ\text{C}$	25	25	25	μA
		$T_j = 125\text{ }^\circ\text{C}$	3	3	3	mA
Maximum reverse recovery time (per leg)	T_{rr}	$I_F = 0.5\text{ A}$, $I_R = 1.0\text{ A}$, $I_{RR} = 0.25\text{ A}$	100	100	100	nS

Thermal characteristics

Maximum thermal resistance, junction - case (per leg)	$R_{\theta JC}$		0.40	0.40	0.40	$^\circ\text{C/W}$
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Figure .1- Typical Forward Characteristics

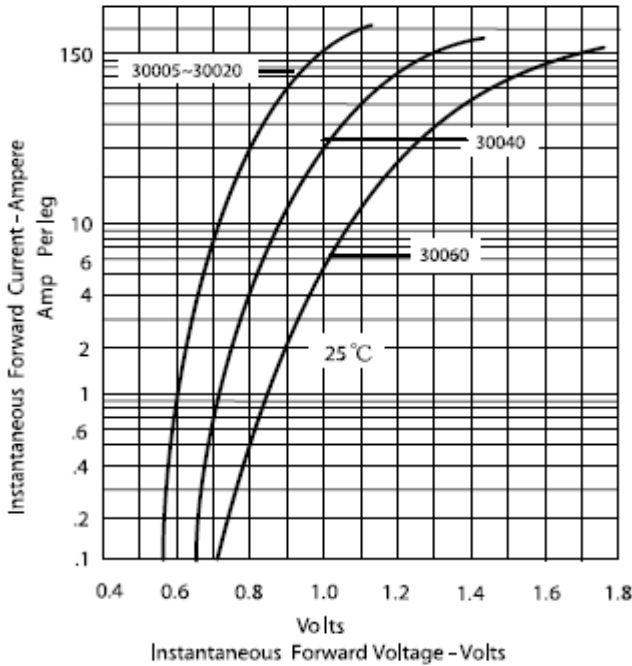


Figure .2- Forward Derating Curve

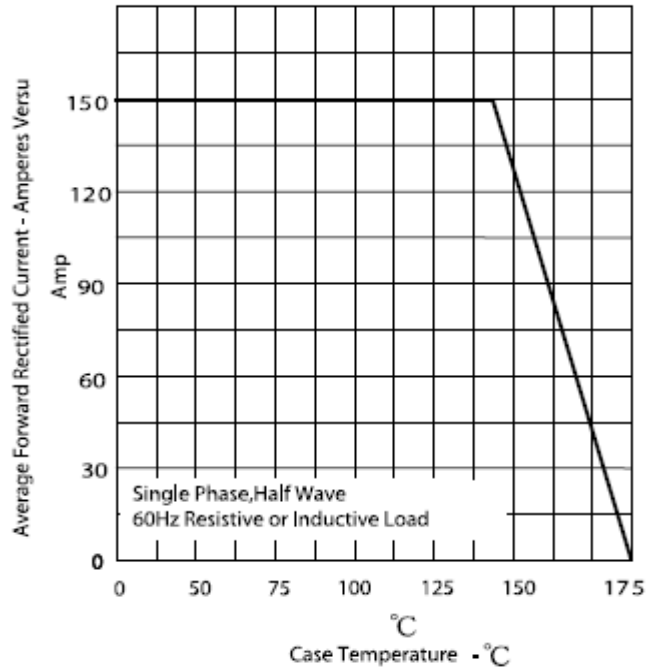


Figure.3- Peak Forward Surge Current

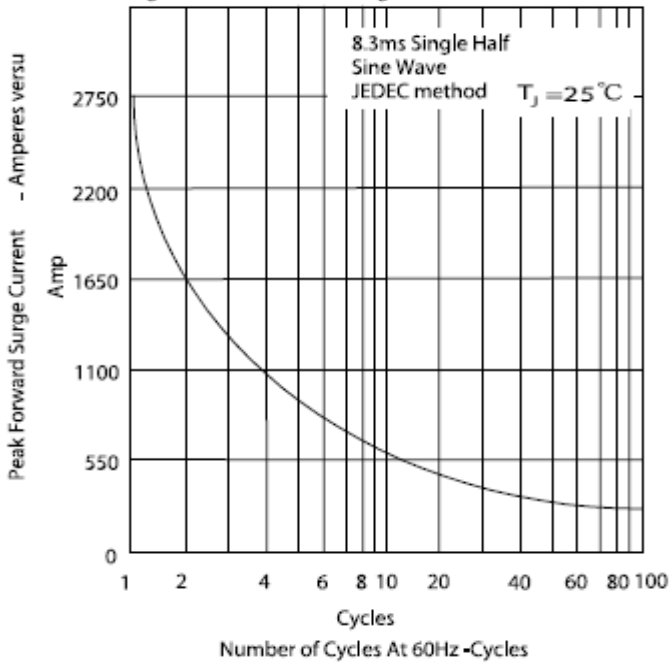
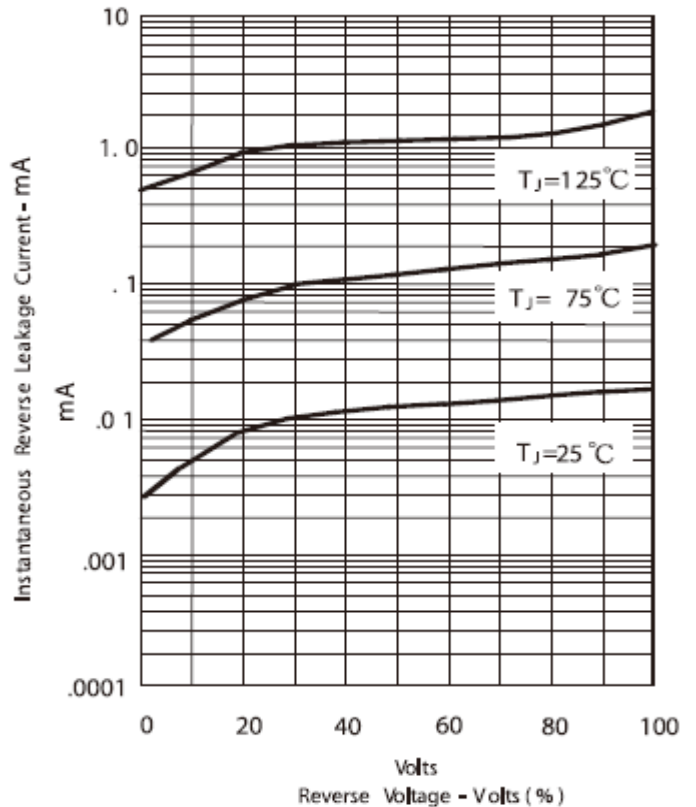
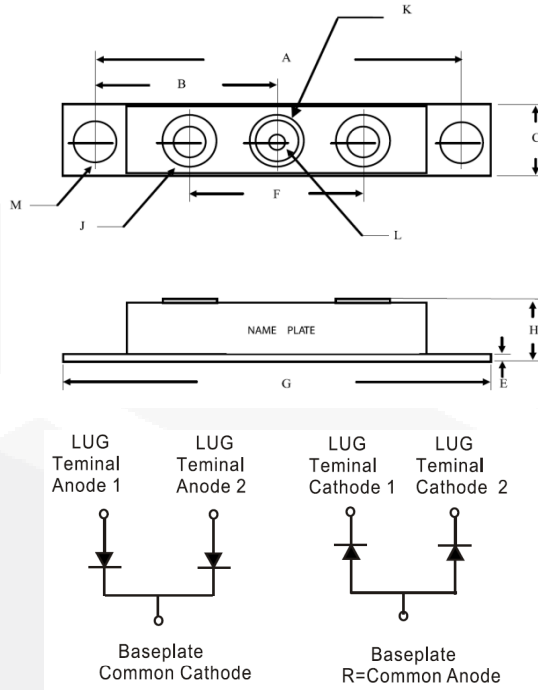


Figure .4-Typical Reverse Characteristics



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