Silicon Super Fast Recovery Diode

V_{RRM} = 50 V - 600 V

I_F = 400 A

Features

- High Surge Capability
- Types up to 600 V V_{RRM}

Twin Tower Package

Maximum ratings, at T_j = 25 ℃, unless otherwise specified ("R" devices have leads reversed)

Parameter	Symbol	Conditions	MUR40005CT (R)	MUR40010CT (R)	MUR40020CT (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
Continuous forward current	I_F	$T_C \leq 125$ °C	400	400	400	A
Surge non-repetitive forward current, Half Sine Wave	$I_{F,SM}$	T_C = 25 °C, t_p = 8.3 ms	2400	2400	2400	A
Operating temperature	T_j		-40 to 175	-40 to 175	-40 to 175	°C
Storage temperature	T_{stg}		-40 to 175	-40 to 175	-40 to 175	°C

Electrical characteristics, at Tj = 25 ℃, unless otherwise specified

Parameter	Symbol	Conditions	MUR40005CT (R)	MUR40010CT (R)	MUR40020CT (R)	Unit
Diode forward voltage	V_F	I_F = 125 A, T_j = 25 °C	1.3	1.3	1.3	V
Reverse current	I_R	V_R = 50 V, T_j = 25 °C	25	25	25	μA
		V_R = 50 V, T_j = 125 °C	3	3	3	mA
Recovery Time						
Maximum reverse recovery time	T_{RR}	I_F=0.5 A, I_R=1.0 A, I_{RR}= 0.25 A	90	90	90	nS
Thermal characteristics						
Thermal resistance, junction	R_{thJC}		0.14	0.14	0.14	°C/W

Figure .1- Typical Forward Characteristics

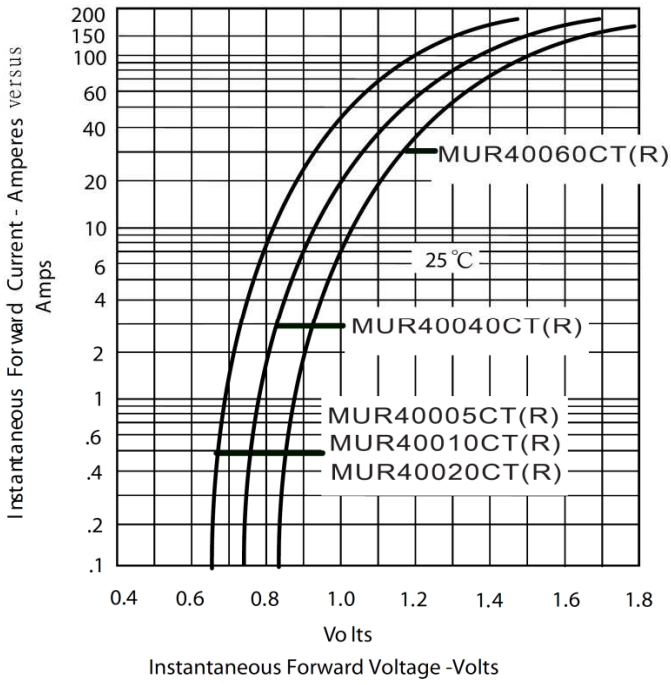


Figure .2- Forward Derating Curve

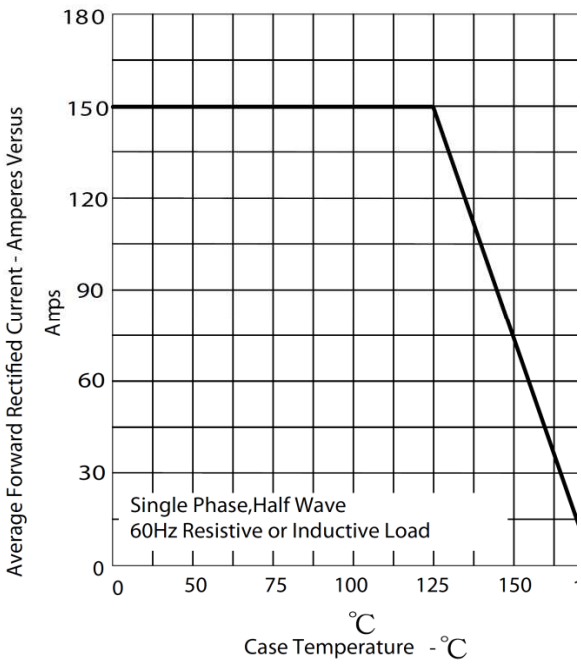


Figure.3- Peak Forward Surge Current

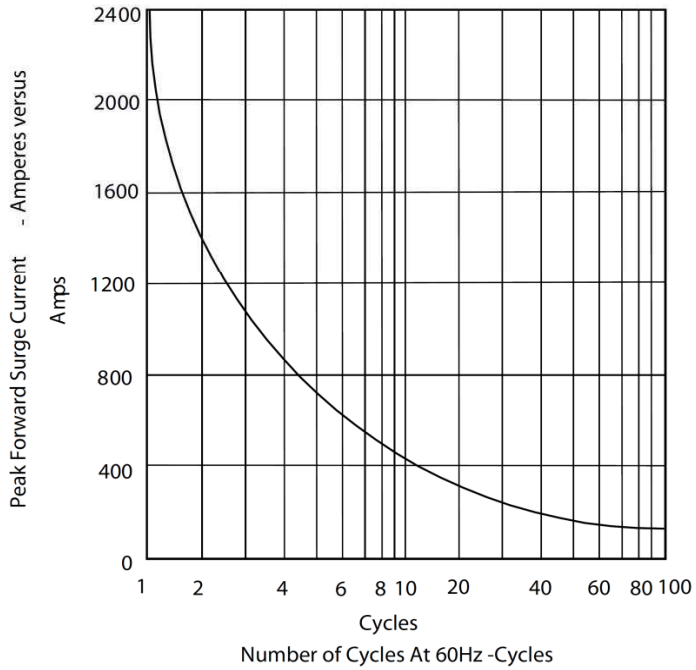
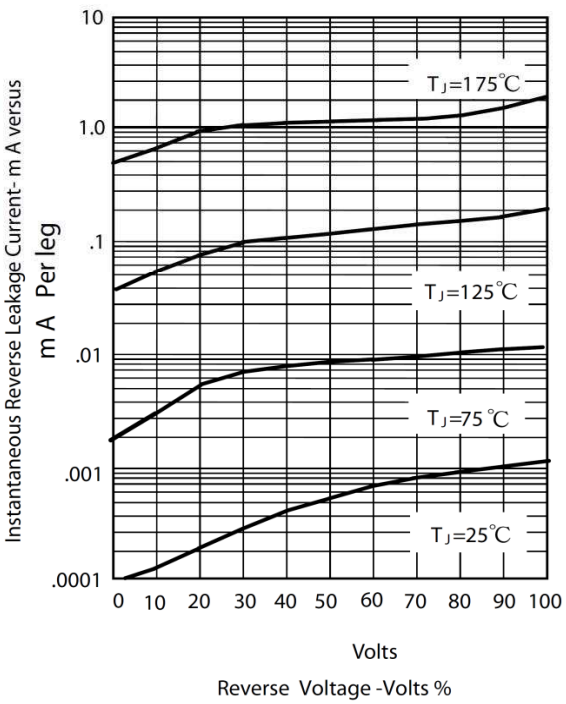
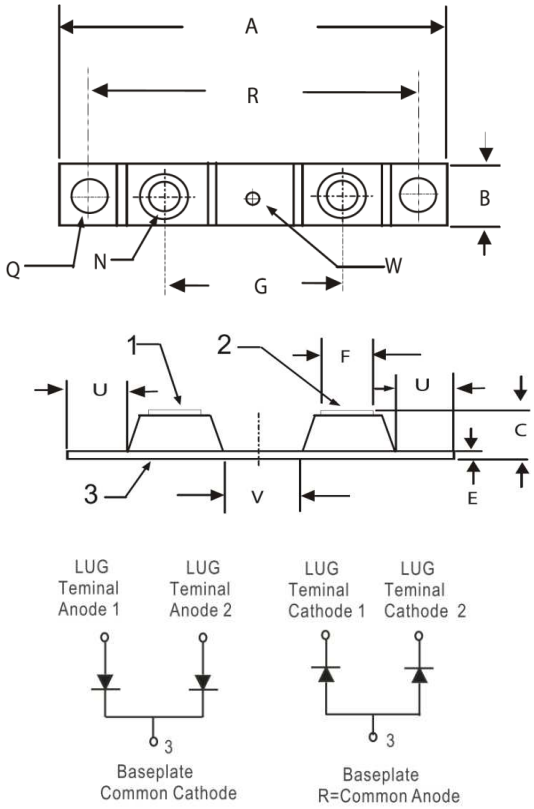


Figure.4- Typeical Reverse Characteristics



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