SZCJ Shenzhen Changji Semiconductor Co., LTD.

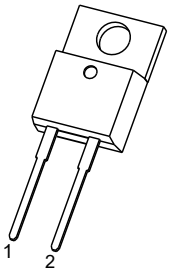
TO-220-2L Plastic-Encapsulate Diode

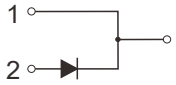
MUR10H60 HYPERFAST RECTIFIER,FRED

MAIN CHARACTERISTICS

I_O	10A
V_{RRM}	600V
T_{rr}	24ns
T_j	175℃
$V_{F(typ)}$	1.06V(@T_j=150℃)

TO-220-2L





1. CATHODE
2. ANODE

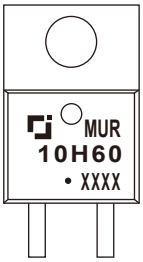
FEATURES

- Ultrafast Recovery Times and Low Recovery Loss
- Low Forward Voltage
- Low Reverse Leakage Current

APPLICATIONS

Specifically designed to improve efficiency of PFC and output rectification stages of EV / HEV battery charging stations, booster stage of solar inverters and UPS applications, these devices are perfectly matched to operate with MOSFETs or high speed IGBTs.

MARKING



MUR10H60 = Device code
Solid dot = Green molding compound device
if none, the normal device
XXXX = Code

MAXIMUM RATINGS (T_C=25℃ unless otherwise noted)

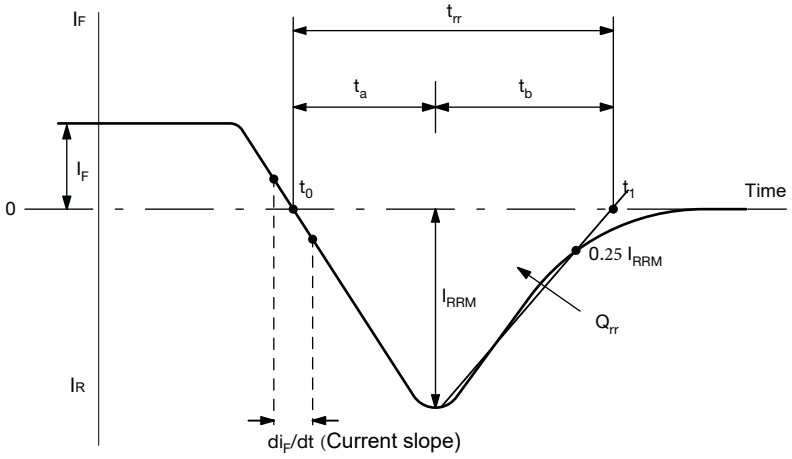
Symbol	Parameter	MUR10H60	Unit
V_{RRM}	Peak Repetitive Reverse Voltage	600	V
V_R	DC Blocking Voltage		
$I_{F(AV)}$	Average Forward Current(T_C=146℃)	10	A
$I_{F(RMS)}$	RMS Forward Current(T_C=146℃)	14	A
I_{FSM}	Non-Repetitive Surge Forward Current (8.3ms)	160	A
P_D	Power dissipation	62. 5	W
$R_{\Theta JC}$	Thermal Resistance From Junction to Case	2.4	℃/W
T_j	Operating Junction Temperature Range	-55 ~ +175	℃
T_{stg}	Storage Temperature Range	-55 ~ +175	℃

ELECTRICAL CHARACTERISTICS (T_C=25℃ unless otherwise specified)

Symbol	Parameter	Test Conditions		Min.	Typ.	Max.	Unit
$V_{(BR)}$	Reverse Voltage	IR=100μA		600			V
I_R	Reverse Current	VR=600V	T_j=25℃			10	μA
			T_j=150℃			500	μA
V_F	Forward Voltage	IF=10A	T_j=25℃		1.3	1.6	V
			T_j=150℃		1.06		V
C_{tot}	Total Capacitance	VR=200V, f=1MHz			12		pF
trr	Reverse Recovery time	IF=0.5A, IR=1A,Irr=0.25A			32		ns
		IF=1A,VR=30V, di_F/dt =200A/us			24		ns

ELECTRICAL CHARACTERISTICS (T_C=25℃ unless otherwise specified)

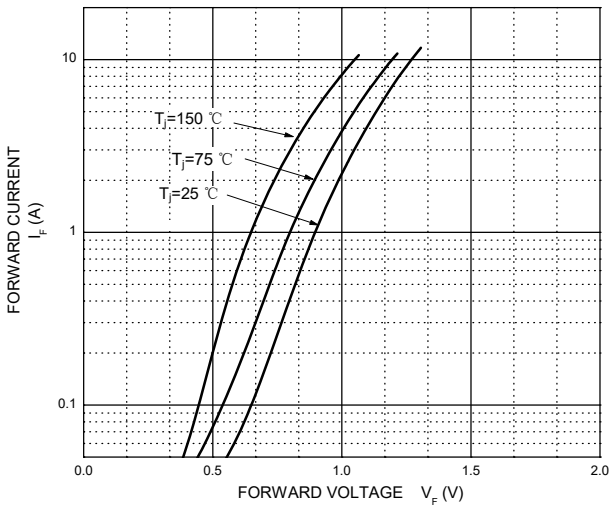
Symbol	Parameter	Test Comditions	Min.	Typ.	Max.	Unit
trr	Reverse Recovery Time	IF=10A, VR=400V, di_F/dt=200A/μs		76		ns
I_{RRM}	Max. Reverse Recovery Current			4.8		A
Qrr	Reverse Recovery Charge			223		nC
trr	Reverse Recovery Time	IF=10A, VR=400V, di_F/dt=200A/μs, T_j=125℃		105		ns
I_{RRM}	Max. Reverse Recovery Current			8		A
Qrr	Reverse Recovery Charge			495		nC
trr	Reverse Recovery Time	IF=10A, VR=400V, di_F/dt=600A/μs, T_j=125℃		60		ns
I_{RRM}	Max. Reverse Recovery Current			19		A
Qrr	Reverse Recovery Charge			646		nC



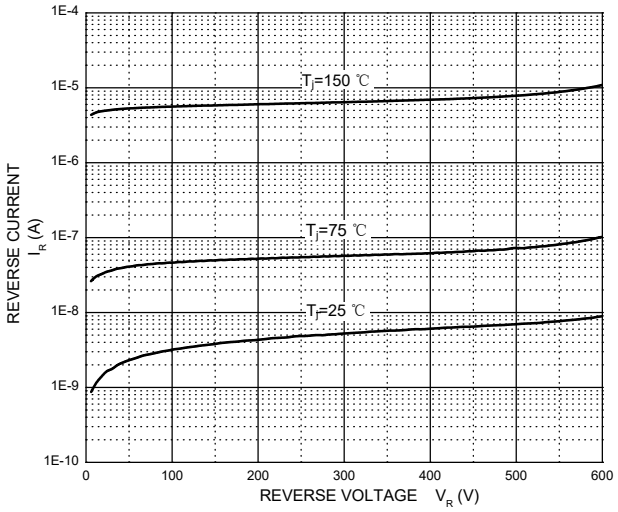
Reverse Recovery Waveform and Definitions

Typical Characteristics

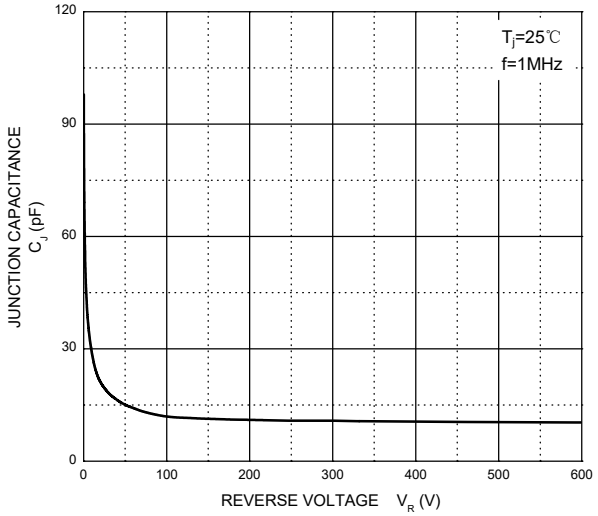
Forward Characteristics



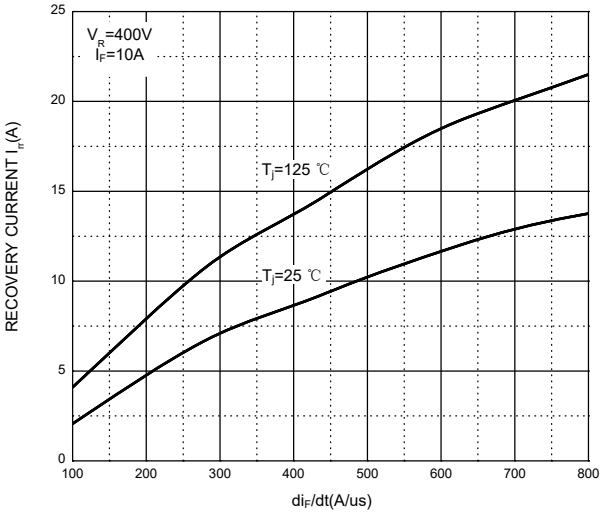
Reverse Characteristics



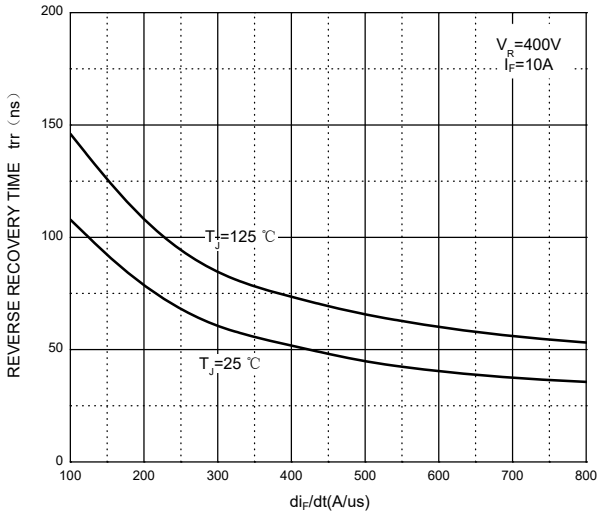
Capacitance Characteristics



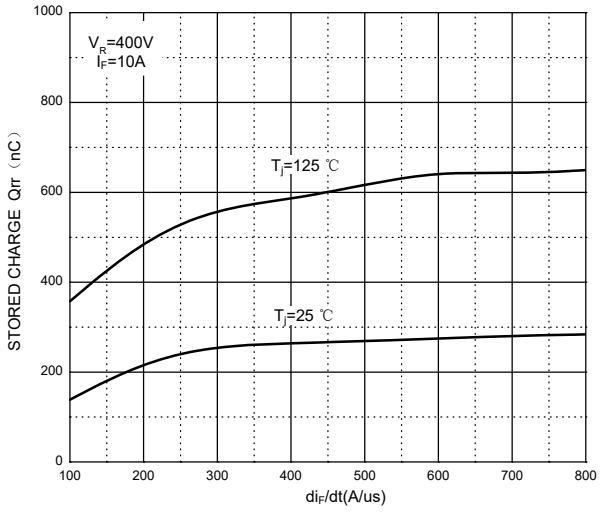
Recovery Current vs. di_F/dt



Reverse Recovery Time vs. di_F/dt

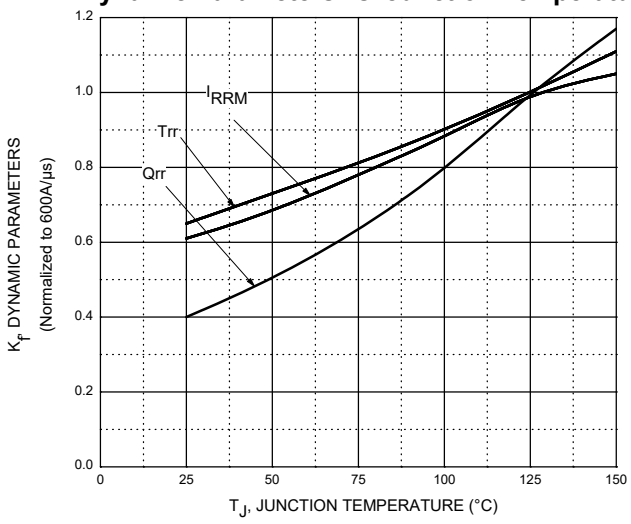


Stored Charge vs. di_F/dt

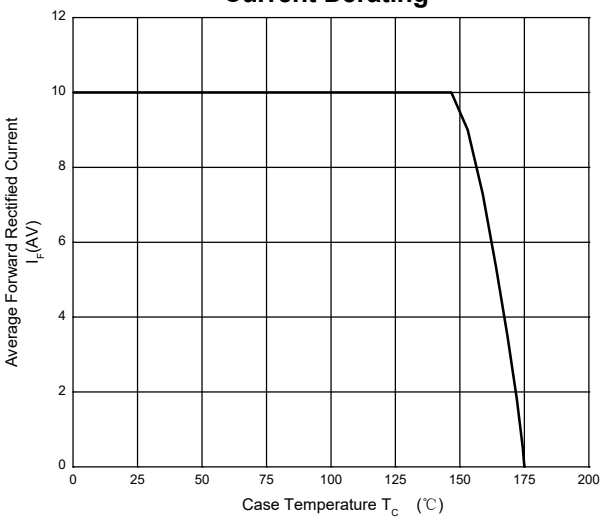


Typical Characteristics

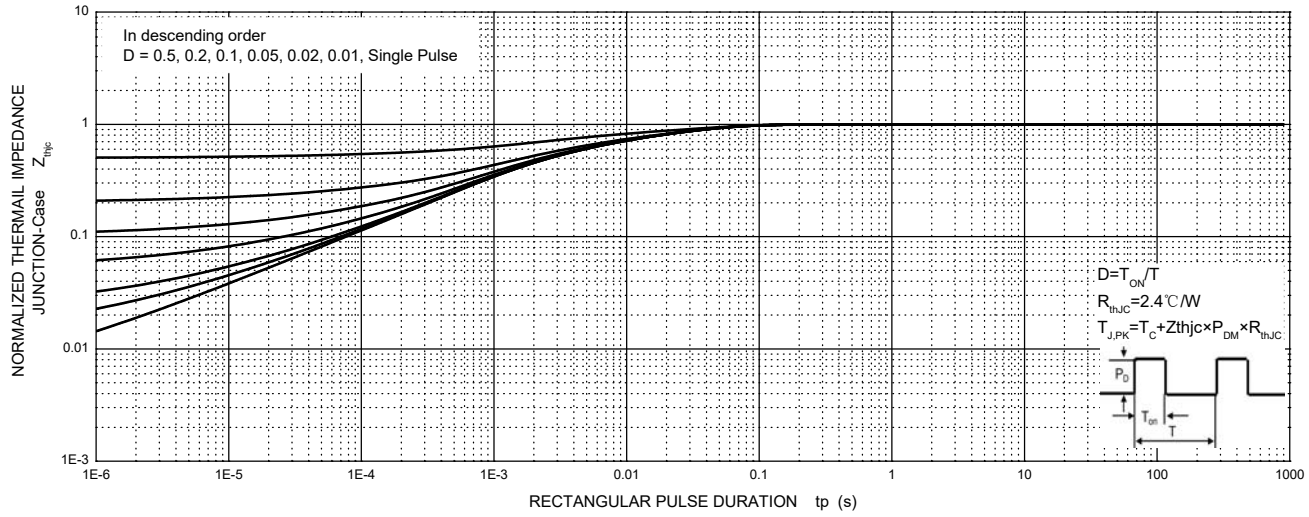
Dynamic Parameters vs. Junction Temperature



Current Derating



MUR10H60 Transient Thermal Impedance, Junction-Case



TO-220-2L Package Outline Dimensions

