

MURinx 0h- inxn5

Super Fast Recovery Planar Rectifier
 Reverse Voltage 400 V Forward Current 10A

Features

- FRED (Planar) wafer construction
- Low forward voltage drop, low power losses
- High efficiency operation
- Plastic package has underwriters Laboratory Flammability Classification 94V-0



MUR1040
 Package: TO-220-AC

MUR1040F
 Package: ITO-220-AC



Mechanical Data

- Case: Epoxy, Molded
- Weight: 1.9grams(approximately)
- Lead Temperature for Soldering Purposes: 260°C Max. for 10 sec
- Shipped 50 units per plastic tube

i u R t i n s ($T_A = 25^\circ\text{C}$ unless otherwise noted)

PARAMETER	TEST CONDITIONS		SYMBOL	Y. 2	UNIT
Maximum Repetitive Peak Reverse Voltage			V_{RRM}	400	V
Working Peak Reverse Voltage			V_{RWM}	400	V
Maximum DC Blocking Voltage			V_{DC}	400	V
Maximum Average Forward Rectified Current at $T_c=105^\circ\text{C}$ total device per diode			$I_{F(AV)}$	10	A
Peak Forward Surge Current (8.3ms single half sine-wave superimposed on rated load per diode)			I_{FSM}	125	A
Voltage Rate of Change(rated V_R)			DV/dt	10000	V/us
Operating Junction Temperature Range			T_J	- 55 to+150	$^\circ\text{C}$
Storage Temperature Range			T_{STG}	- 55 to+150	$^\circ\text{C}$
Maximum Reverse Recover Time ($I_F=0.5\text{Amp}$, $I_R=1.0\text{Amp}$, $I_{rec}=0.25\text{Amp}$)			T_{rr}	35	ns
Maximum Instantaneous Forward Voltage per Leg	$I_F=10\text{A}$	$T_C=25^\circ\text{C}$	V_F	1.40	V
	$I_F=10\text{A}$	$T_C=125^\circ\text{C}$		1.30	
Maximum Reverse Current per Leg at working peak reverse voltage	$T_J=25^\circ\text{C}$		I_R	10	μA
	$T_J=100^\circ\text{C}$			500	μA
Thermal Characteristics $T_A=25$ Unless otherwise noted					
Symbol	Parameter	TYP.(TO-220-AC)		TYP.(ITO-220-AC)	Unit
$R_{\theta JC}$	Thermal Resistance, Junction to Case per Leg	2.0		4.0	$^\circ\text{C} / \text{W}$
$R_{\theta JA}$	Thermal Resistance, Junction to Ambient per Leg	62.5		62.5	$^\circ\text{C} / \text{W}$

Note: Pulse test:300us pulse width, duty cycle=2%

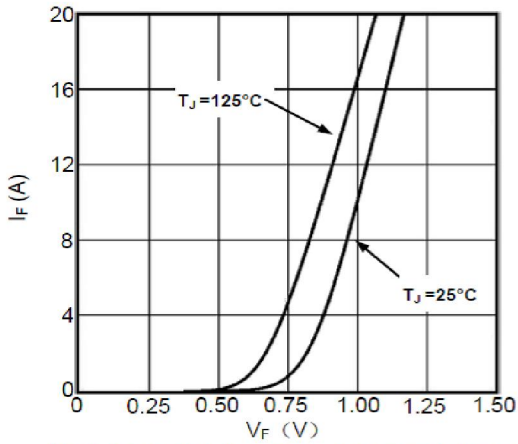


Fig1. Forward Voltage Drop vs Forward Current

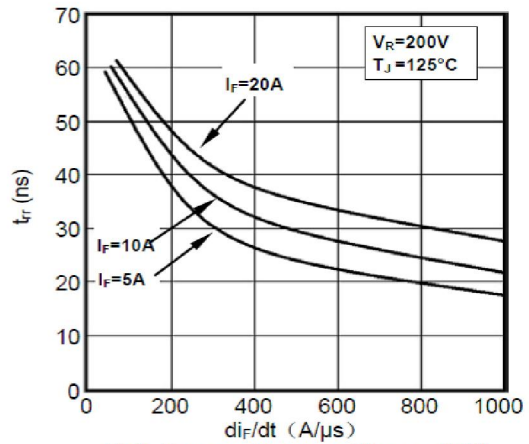


Fig2. Reverse Recovery Time vs di_F/dt

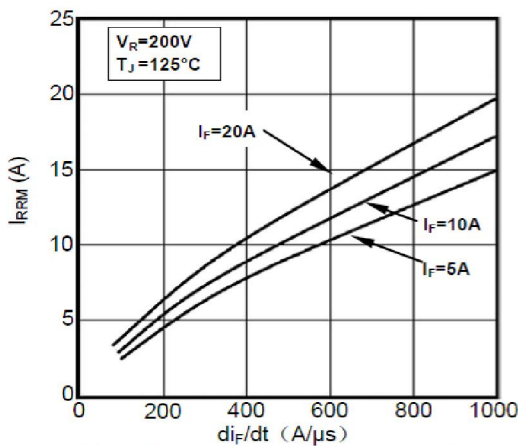


Fig3. Reverse Recovery Current vs di_F/dt

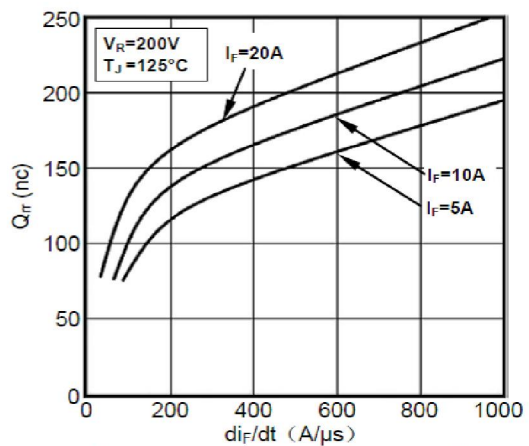


Fig4. Reverse Recovery Charge vs di_F/dt

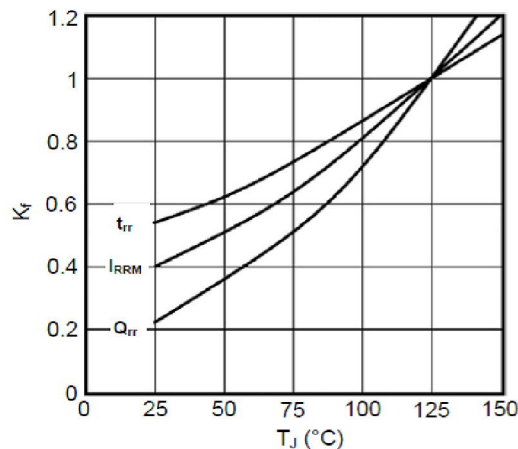


Fig5. Dynamic Parameters vs Junction Temperature

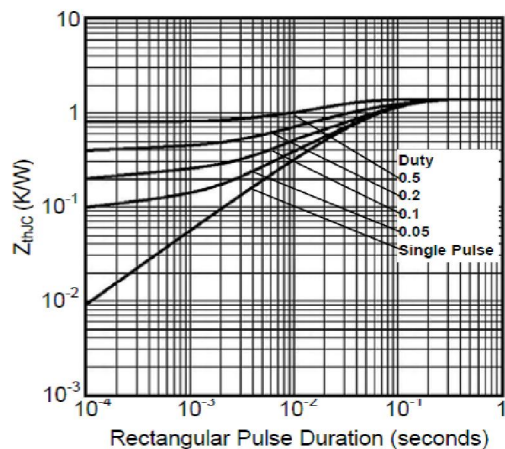


Fig6. Transient Thermal Impedance

Unit: millimeters

TO-220-AC

ITO-220-AC

