



MUR2040(F)CT

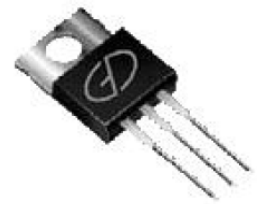
Ultrafast Recovery Planar Diode
Reverse Voltage 400 Volts Forward Current 20 Amperes

Features

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



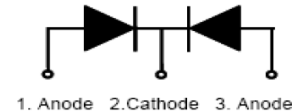
Package: ITO-220-AB



Package: TO-220-AB

Mechanical Data

- Case: Epoxy, Molded
- Weight: 1.9grams (approximately)
- Finish: All External Surfaces Corrosion Resistant and Terminal Leads are Readily Solderable
- Lead Temperature for Soldering Purposes: 260°C Max. for 10 sec
- Shipped 50 units per plastic tube



Maximum Ratings & Electrical Characteristics

($T_A=25^{\circ}\text{C}$ unless otherwise noted)

PARAMETER		TEST CONDITIONS		SYMBOL	MUR2040(F)CT	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				$I_F(AV)$	20 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}		T_{rr}	50	ns
Maximum instantaneous forward voltage per leg		$I_F=10\text{A}$ $I_F=10\text{A}$	$T_C=25^{\circ}\text{C}$ $T_C=125^{\circ}\text{C}$	V_F	1.50 1.40	V
Maximum reverse current per leg at working peak Reverse voltage			$T_J=25^{\circ}\text{C}$ $T_J=100^{\circ}\text{C}$	I_R	10 500	μA
Thermal Characteristics $T_A=25^{\circ}\text{C}$ unless otherwise noted						
Symbol	Parameter	TYP (TO-220-AB)		TYP (ITO-220-AB)		Unit
R θ JC	Thermal Resistance, Junction to Case per Leg	2.0		4.0		$^{\circ}\text{C}/\text{W}$
R θ 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%



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Ratings and Characteristics Curves

($T_A = 25^\circ\text{C}$ unless otherwise noted)

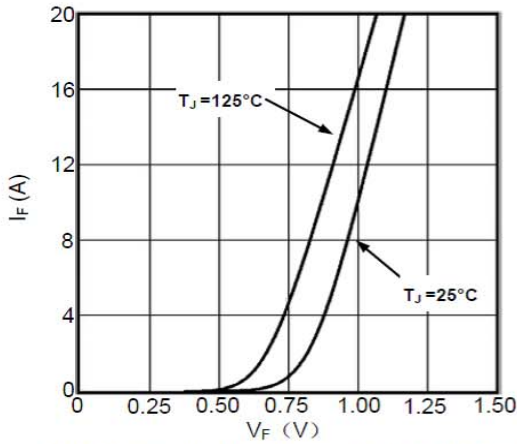


Fig1. Forward Voltage Drop vs Forward Current

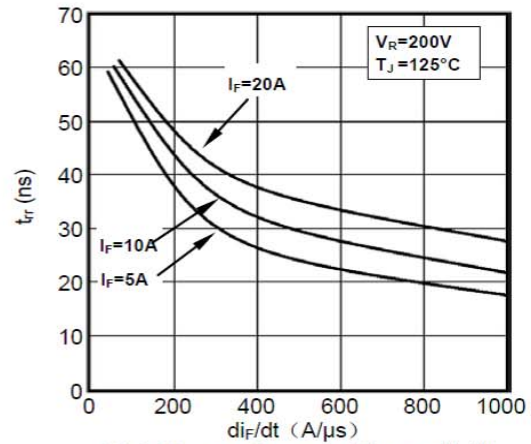


Fig2. Reverse Recovery Time vs di_F/dt

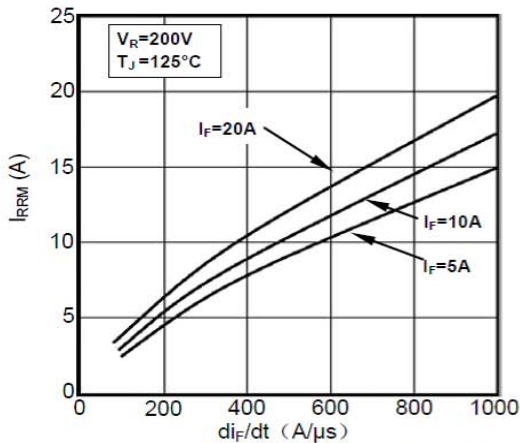


Fig3. Reverse Recovery Current vs di_F/dt

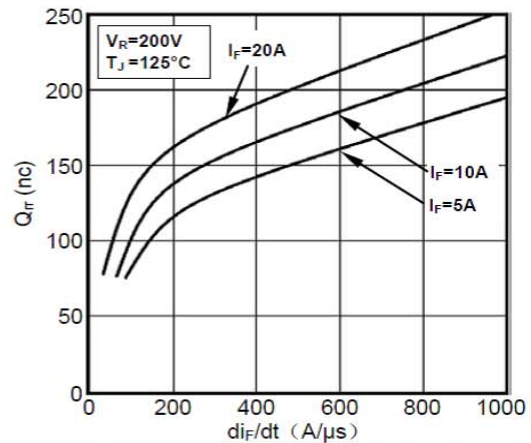


Fig4. Reverse Recovery Charge vs di_F/dt

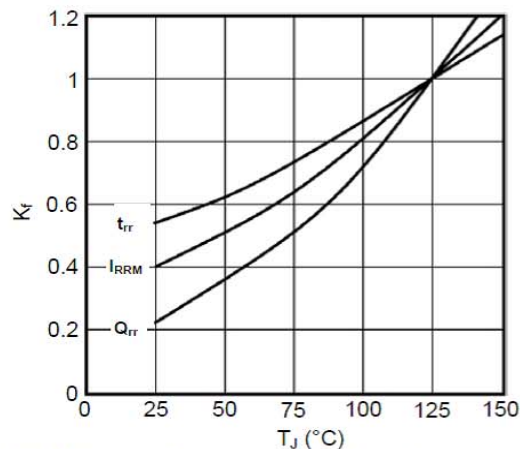


Fig5. Dynamic Parameters vs Junction Temperature

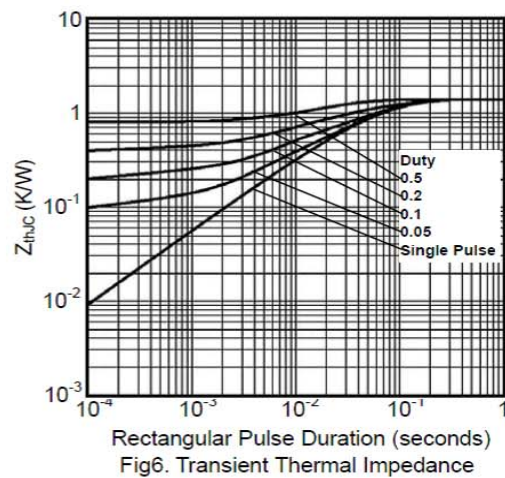


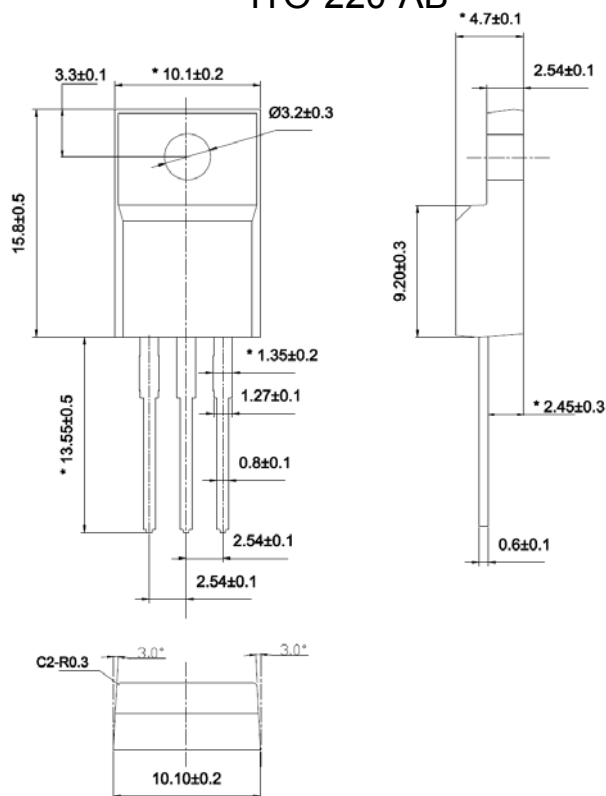
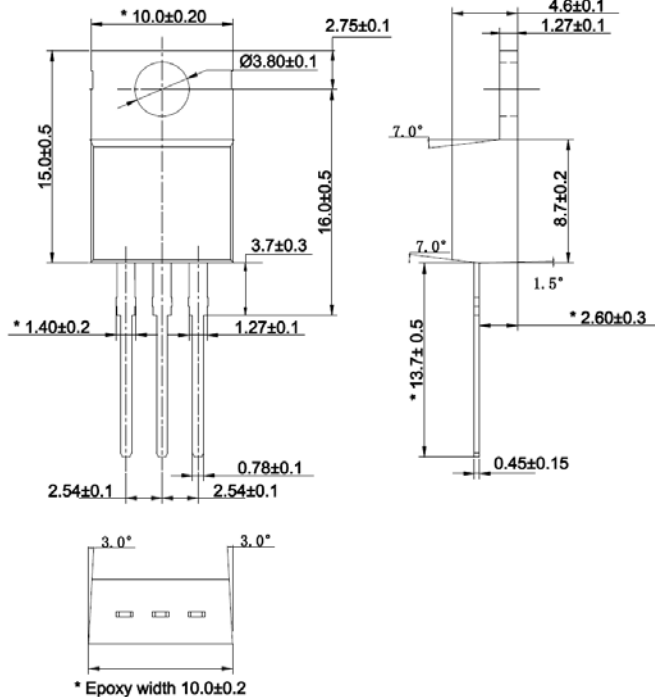
Fig6. Transient Thermal Impedance



Reverse Voltage 400 Volts Forward Current 20 Amperes

Unit: millimeters

ITO-220-AB





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