



MUR1040(F)

Ultrafast Recovery Planar Diode
Reverse Voltage 400 Volts Forward Current 10 Amperes

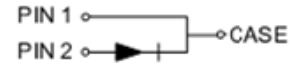
Features

- 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: TO-220-AC

Package: ITO-220-AC



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°C unless otherwise noted)

PARAMETER		TEST CONDITIONS		SYMBOL	MUR1040(F)	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°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	°C
Storage temperature range				T _{STG}	—55 to+150	°C
Maximum Reverse Recover Time (If=0.5Amp, IR=1.0Amp,Irec=0.25Amp)		T _{rr}		T _{rr}	35	ns
Maximum instantaneous forward voltage per leg		I _F =10A	T _C =25°C	V _F	1.40	V
		I _F =10A	T _C =125°C		1.30	
Maximum reverse current per leg at working peak Reverse voltage			T _J =25°C	I _R	10	uA
			T _J =100°C		500	uA
Thermal Characteristics T _A =25°C unless otherwise noted						
Symbol	Parameter	TYP (TO-220-AC)		TYP (ITO-220-AC)		Unit
RθJC	Thermal Resistance, Junction to Case per Leg	2.0		4.0		°C /W
RθJA	Thermal Resistance, Junction to Ambient per Leg	62.5		62.5		°C /W

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

Ratings and Characteristics Curves

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

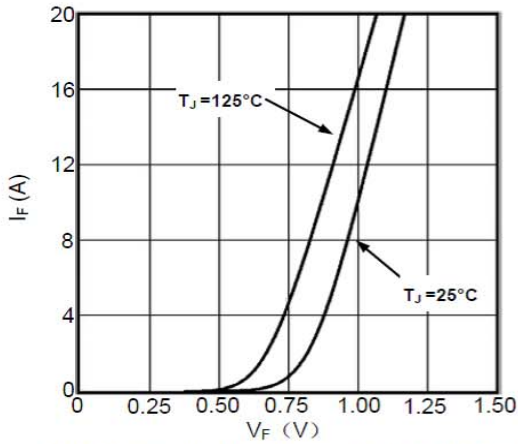


Fig1. Forward Voltage Drop vs Forward Current

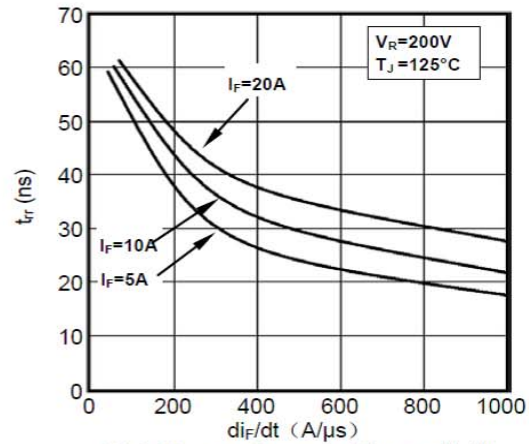


Fig2. Reverse Recovery Time vs di_F/dt

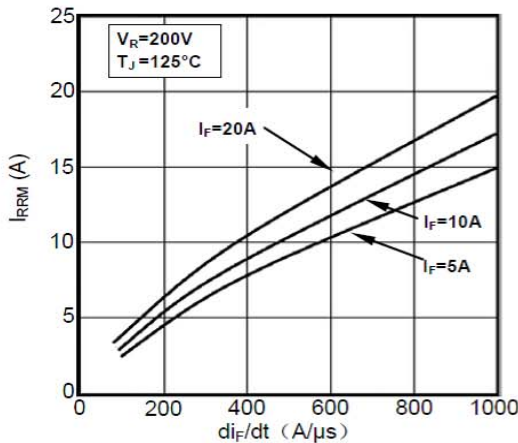


Fig3. Reverse Recovery Current vs di_F/dt

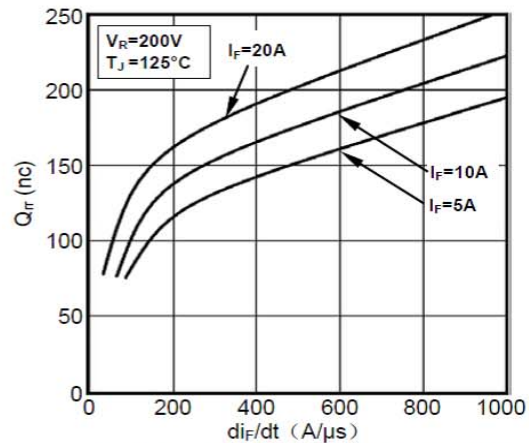


Fig4. Reverse Recovery Charge vs di_F/dt

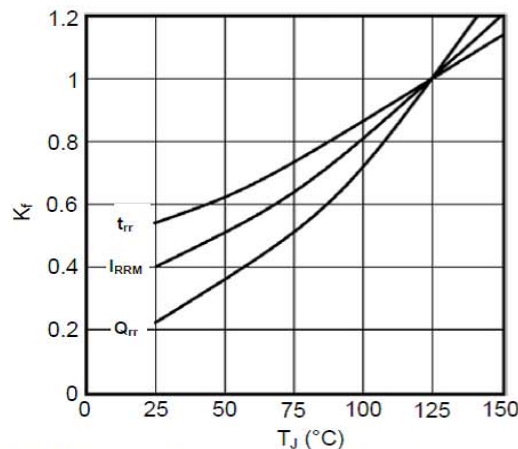


Fig5. Dynamic Parameters vs Junction Temperature

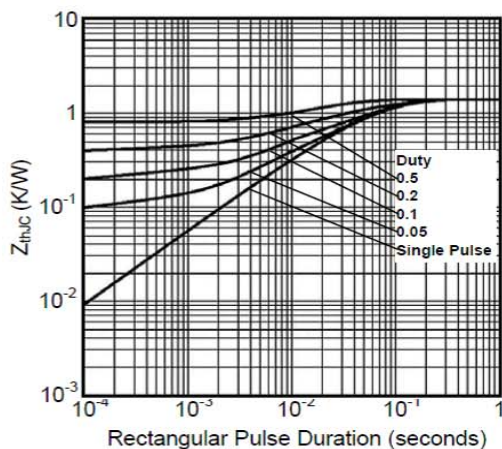


Fig6. Transient Thermal Impedance



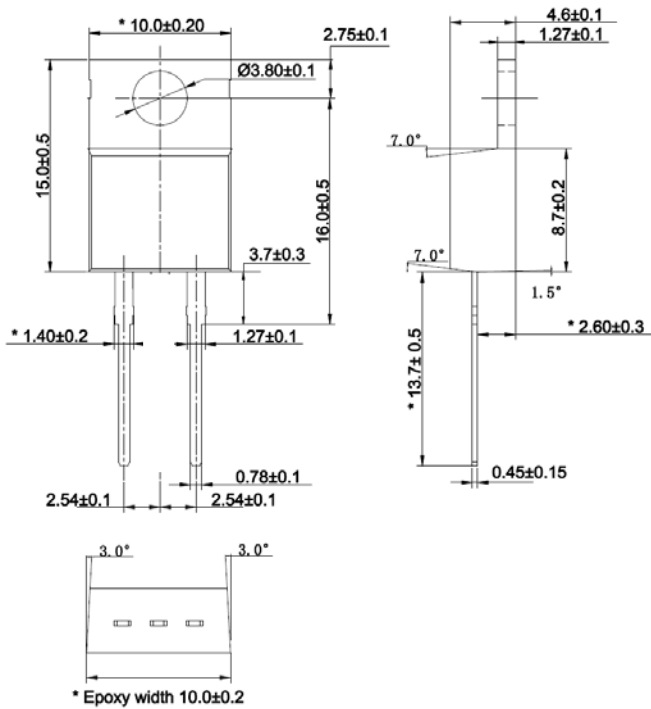
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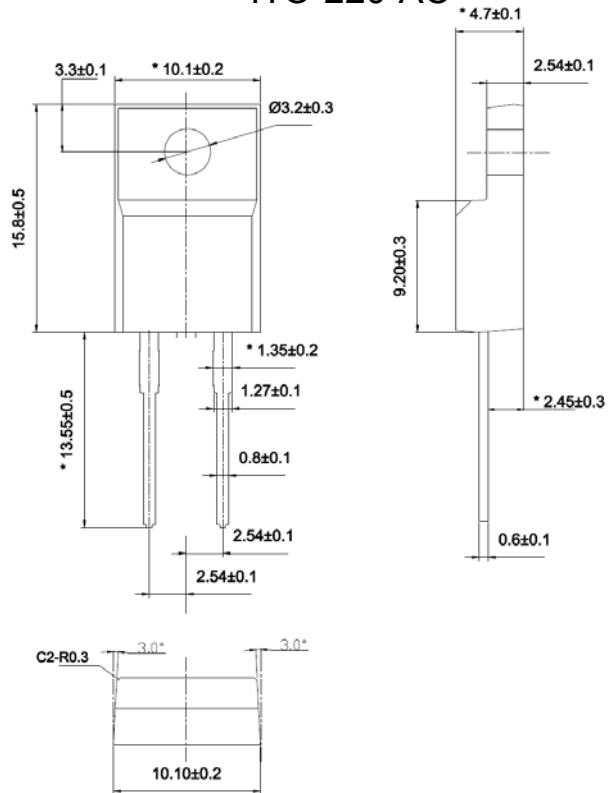
Package Outline Dimensions

Unit: millimeters

TO-220-AC



ITO-220-AC





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