

Product Features

- Glass Passivated Protection Construction
- Ultrafast Recovery Time
- Soft Recovery Characteristics
- Low Forward Voltage and Low Leakage Current
- High Current capability and High reliability

Applications

- Freewheeling, Rectification, Clamp
- Snubber Diode
- Switch Power Supplies
- Motor Control
- Inverters, Frequency Converters
- Power Factor Correction

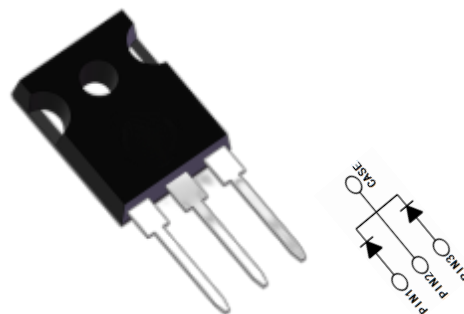
产品特点

- 玻璃钝化保护结构
- 超快恢复时间
- 软恢复特性
- 低正向压降，低漏电流
- 高的电流能力，高的可靠性

应用

- 续流、整流、箝位
- 缓冲二极管
- 开关电源
- 电动机控制
- 逆变器、变频器
- 功率因数校正（PFC）

Part Number 型号	Package 封装
MUR6020PT	TO-247-3L



Absolute Maximum Ratings (额定参数, Ta=25°C)

Symbol	Parameter	Test Conditions	Values	Unit
V_R	Maximum D.C. Reverse Voltage		200	V
V_{RRM}	Maximum Repetitive Reverse Voltage		200	V
$I_{F(AV)}$	Average Forward Current	$T_C=100^{\circ}\text{C}$, Per Diode	30	A
		$T_C=100^{\circ}\text{C}$, Per Package	60	A
$I_{F(RMS)}$	RMS Forward Current	$T_C=100^{\circ}\text{C}$, Per Diode	53	A
I_{FSM}	Non-Repetitive Surge Forward Current	$T_J=45^{\circ}\text{C}$, $t=10\text{ms}$, 50Hz, Sine	300	A
P_D	Power Dissipation		156	W
T_J	Junction Temperature		-40 to +150	$^{\circ}\text{C}$
T_{STG}	Storage Temperature Range		-40 to +150	$^{\circ}\text{C}$
Torque	Module-to-Sink	Recommended (M3)	1.1	N·m
$R_{\theta JC}$	Thermal Resistance	Junction-to-Case	0.8	$^{\circ}\text{C/W}$
Weight			6.0	g

Electrical Characteristics (电性能)

Symbol	Parameter	Test Conditions	Min.	Typ.	Max.	Unit
I_{RM}	Reverse Leakage Current	$V_R=200V$	--	--	25	μA
		$V_R=200V, T_J=125^{\circ}C$	--	--	250	μA
V_F	Forward Voltage	$I_F=30A$	--	0.86	1.1	V
		$I_F=30A, T_J=125^{\circ}C$	--	--	0.95	V
t_{rr}	Reverse Recovery Time	$I_F=1A, V_R=30V, di_F/dt=-200A/\mu s$	--	22	--	ns
t_{rr}	Reverse Recovery Time	$V_R=100V, I_F=30A$ $di_F/dt=-200A/\mu s, T_J=25^{\circ}C$	--	26	--	ns
I_{RRM}	Max. Reverse Recovery Current		--	2.3	--	A
t_{rr}	Reverse Recovery Time	$V_R=100V, I_F=30A$ $di_F/dt=-200A/\mu s, T_J=125^{\circ}C$	--	40	--	ns
I_{RRM}	Max. Reverse Recovery Current		--	4.1	--	A

Thermal Characteristics (热性能)

Package 封装	Parameter 参数	Symbol 符号	Max 最大值	Units 单位
TO-247-3	Thermal Resistance from Junction to Case 热阻 (结-壳)	R_{thJC}	0.85	$^{\circ}C/W$
	Thermal Resistance from Junction to Ambient 热阻 (结-环境)	R_{thJA}	68	$^{\circ}C/W$

特性曲线

RATONG and characteristic

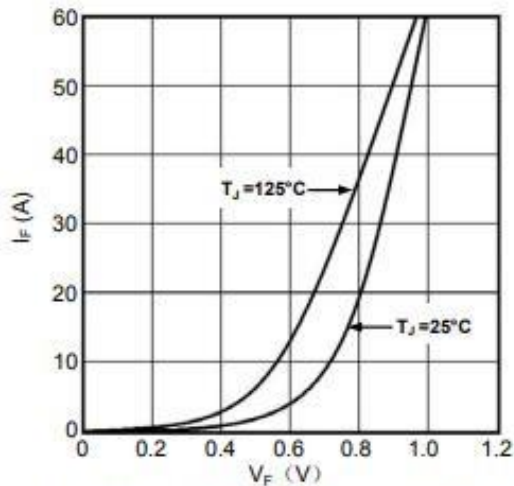


Fig1. Forward Voltage Drop vs Forward Current

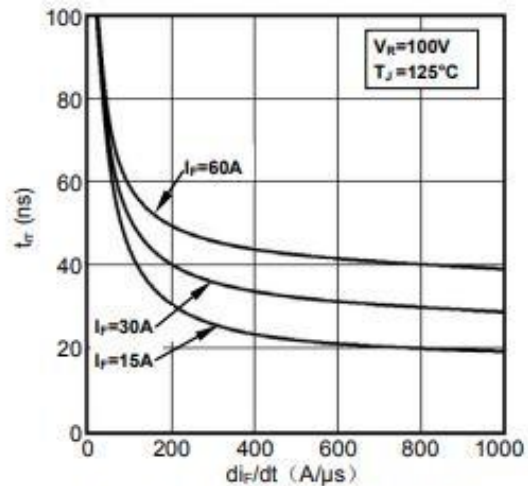


Fig2. Reverse Recovery Time vs di_F/dt

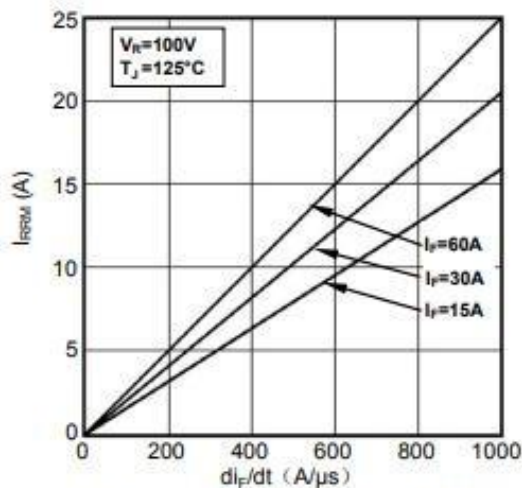


Fig3. Reverse Recovery Current vs di_F/dt

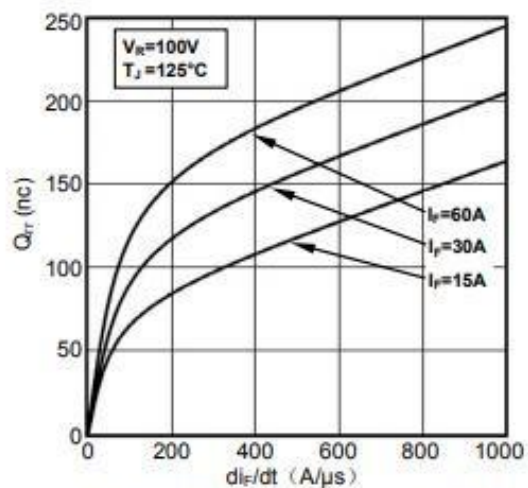


Fig4. Reverse Recovery Charge vs di_F/dt

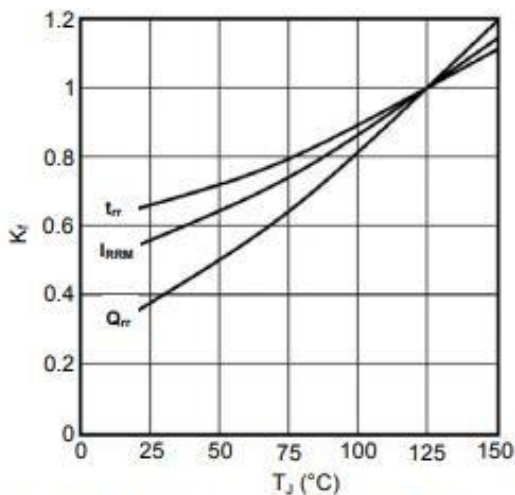


Fig5. Dynamic Parameters vs Junction Temperature

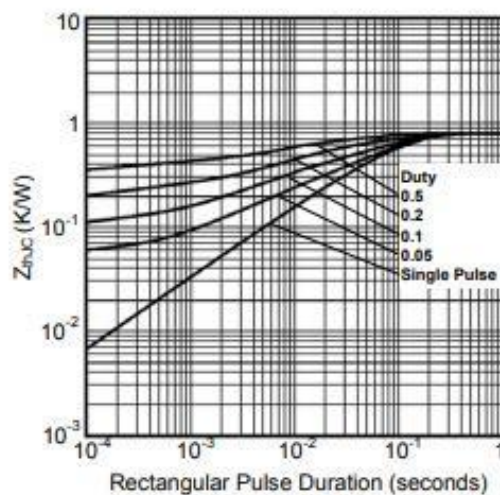


Fig6. Transient Thermal Impedance

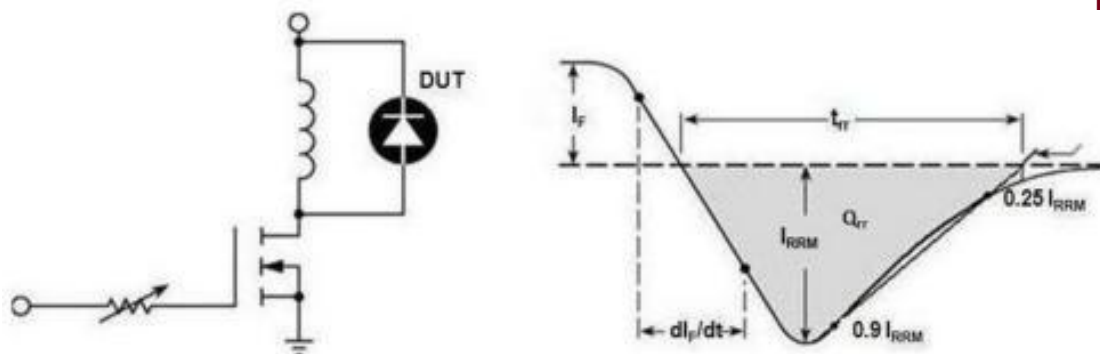
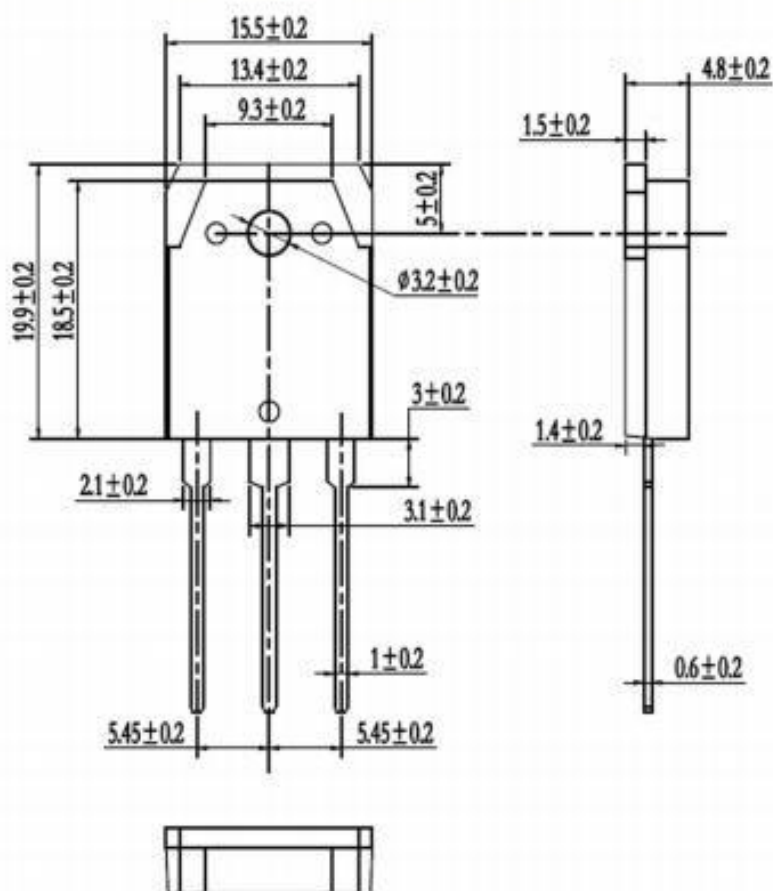


Figure 7. Diode Reverse Recovery Test Circuit and Waveform



Dimensions in (mm)
Figure 8. Package Outline