

SMUR1060/SMUR1060F

Super Fast Recovery Planar Rectifier
Reverse Voltage 600V 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

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



SMUR1060
Package: TO-220-AC

SMUR1060F
Package: ITO-220-AC



Maximum Ratings (T_A = 25°C unless otherwise noted)

PARAMETER	TEST CONDITIONS	SYMBOL	VALUE	UNIT
Maximum Repetitive Peak Reverse Voltage		V _{RRM}	600	V
Working Peak Reverse Voltage		V _{RWM}	600	V
Maximum DC Blocking Voltage		V _{DC}	600	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 (I _F =0.5Amp, I _R =1.0Amp,I _{rec} =0.25Amp)		T _{rr}	30	ns
Maximum Instantaneous Forward Voltage per Leg	I _F =10A T _C =25°C	V _F	1.70	V
	I _F =10A T _C =125°C		1.60	
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
R _{θJC}	Thermal Resistance, Junction to Case per Leg	2.0	4.0	°C/W
R _{θJA}	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)

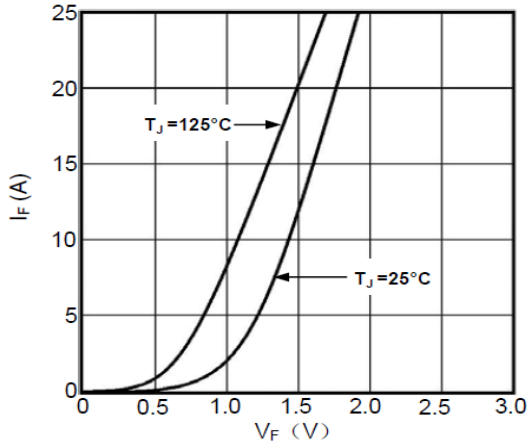


Fig1. Forward Voltage Drop vs Forward Current

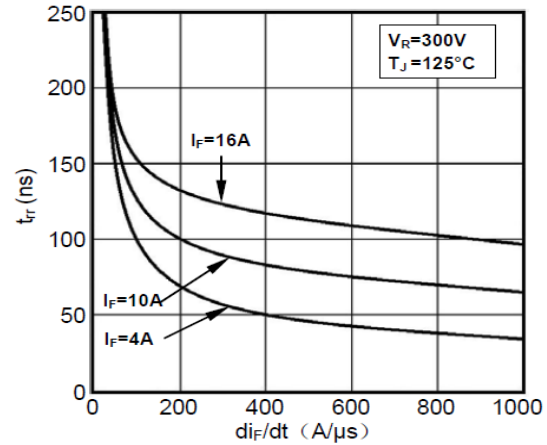


Fig2. Reverse Recovery Time vs di_F/dt

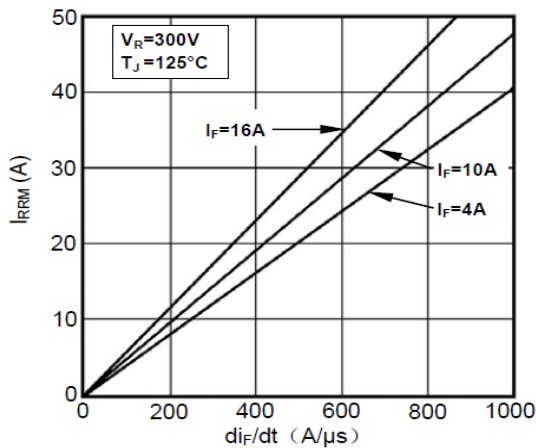


Fig3. Reverse Recovery Current vs di_F/dt

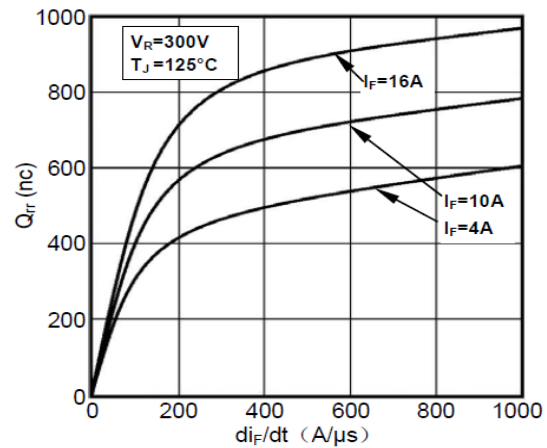


Fig4. Reverse Recovery Charge vs di_F/dt

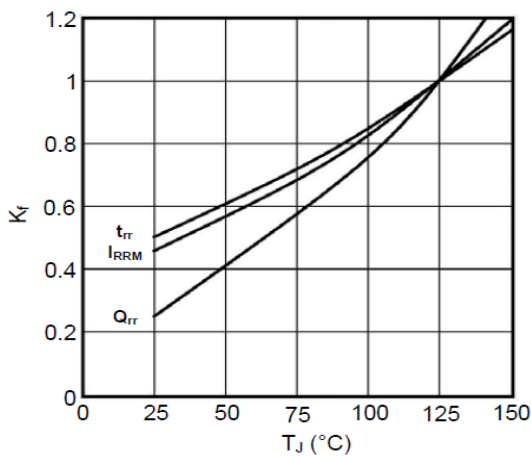


Fig5. Dynamic Parameters vs Junction Temperature

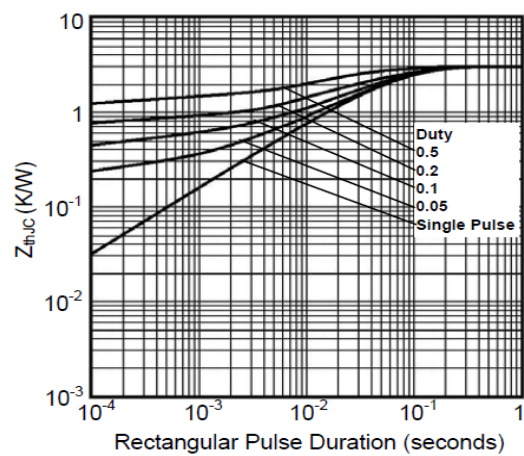


Fig6. Transient Thermal Impedance

Package Outline Dimensions

Unit: millimeters

TO-220-AC

ITO-220-AC

