MUR3040

Preferred Device

SWITCHMODE™ Power Rectifier

. . . designed for use in switching power supplies, inverters and as free wheeling diodes, these state−of−the−art devices have the following features:

- Ultrafast 100 Nanosecond Recovery Time
- 175°C Operating Junction Temperature
- High Voltage Capability to 400 Volts
- Low Forward Voltage Drop
- High Temperature Glass Passivated Junction

Mechanical Characteristics

- Case: Epoxy, Molded
- Weight: 4.3 grams (approximately)
- Finish: All External Surfaces Corrosion Resistant and Terminal Leads are Readily Solderable
- Lead Temperature for Soldering Purposes: 260°C Max. for 10 Seconds
- Shipped 30 Units Per Plastic Tube
- Marking: U3040

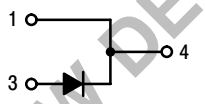
MAXIMUM RATINGS

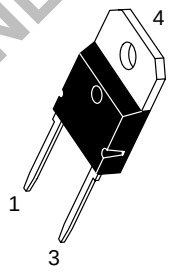
Rating	Symbol	Max	Unit
Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage	V_{RRM} V_{RWM} V_R	400	V
Average Rectified Forward Current (T_C = 70°C	$I_{F(AV)}$	30	A
Peak Repetitive Forward Current (Rated V_R, Square Wave, 20 kHz, T_C = 150°C)	I_{FRM}	30	A
Non−Repetitive Peak Surge Current (Surge Applied at Rated Load Conditions Halfwave, Single Phase, 60 Hz)	I_{FSM}	300	A
Operating Junction and Storage Temperature Range	T_J, T_{stg}	−65 to +175	°C

ON Semiconductor™

http://onsemi.com

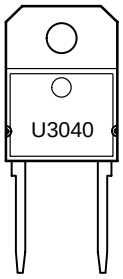
ULTRAFAST RECTIFIER 30 AMPERES 400 VOLTS





TO−218
CASE 340E
STYLE 1

MARKING DIAGRAM



U3040 = Device Code

ORDERING INFORMATION

Device	Package	Shipping
MUR3040	TO−218	30 Units/Rail

Preferred devices are recommended choices for future use and best overall value.

THERMAL CHARACTERISTICS

Rating	Symbol	Max	Unit
Thermal Resistance, Junction to Case	$R_{\theta JC}$	1.0	°C/W

ELECTRICAL CHARACTERISTICS

Instantaneous Forward Voltage (Note 1.) @ I_F = 30 Amps, T_C = 100°C @ I_F = 30 Amps, T_C = 25°C	V_F	 1.4 1.5	Volts
Instantaneous Reverse Current (Note 1.) @ Rated dc Voltage, T_C = 100°C @ Rated dc Voltage, T_C = 25°C	I_R	 6.0 35	 mA μA
Reverse Recovery Time I_F = 1.0 Amp, dI/dt = 15 Amp/μs	t_{RR}	100	ns

1. Pulse Test: Pulse Width = 300 μs, Duty Cycle ≤ 2.0%

TYPICAL ELECTRICAL CHARACTERISTICS

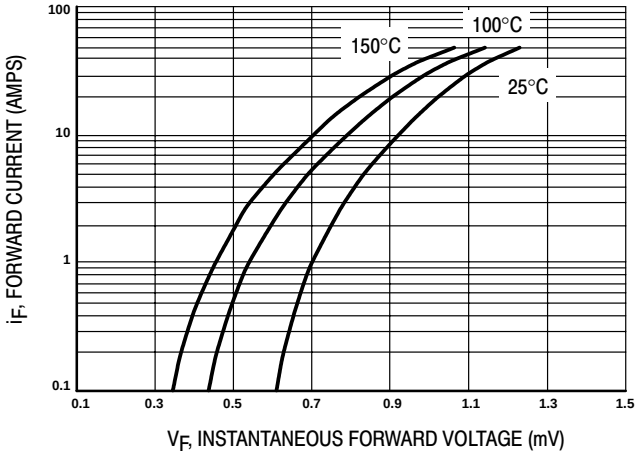


Figure 1. Typical Forward Voltage

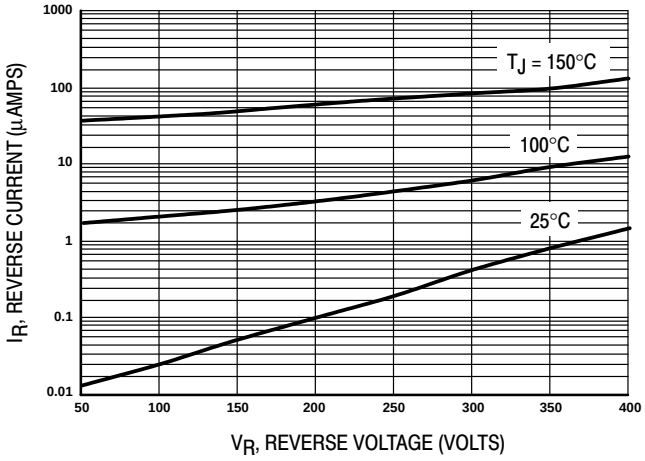


Figure 2. Typical Reverse Current

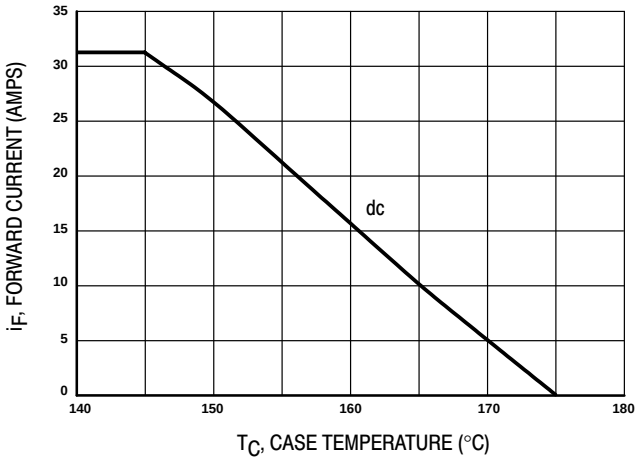


Figure 3. Current Derating, Case

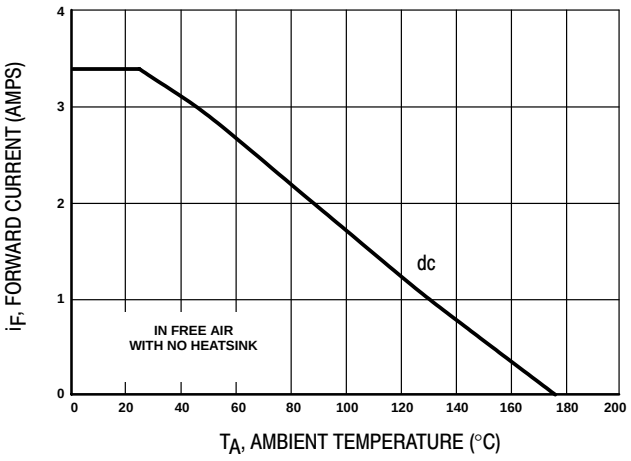


Figure 4. Current Derating, Ambient