MUR10150E

Preferred Device

SCANSWITCH™ Power Rectifier

For Use As A Damper Diode In High and Very High Resolution Monitors

The MUR10150E is a state-of-the-art Power Rectifier specifically designed for use as a damper diode in horizontal deflection circuits for high and very high resolution monitors.

- 1500 V Blocking Voltage
- 20 mJ Avalanche Energy Guaranteed
- Peak Transient Overshoot Voltage Specified, 14 Volts (typical)
- Forward Recovery Time Specified, 135 ns (typical)
- Epoxy Meets UL94, V_O at 1/8″

Mechanical Characteristics

- Case: Epoxy, Molded
- Weight: 1.9 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 50 units per plastic tube
- Marking: U10150E

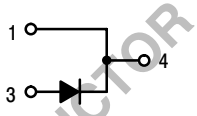
MAXIMUM RATINGS

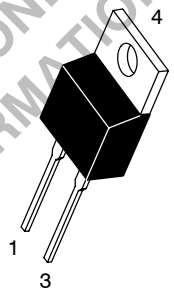
Rating	Symbol	Value	Unit
Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage	V_{RRM} V_{RWM} V_R	1500	V
Average Rectified Forward Current (Rated V_R, T_C = 125°C)	$I_{F(AV)}$	10	A
Peak Repetitive Forward Current (Rated V_R, Square Wave, 20 kHz, T_C = 125°C) Per Leg	I_{FRM}	20	A
Non−Repetitive Peak Surge Current (Surge Applied at Rated Load Conditions Halfwave, Single Phase, 60 Hz)	I_{FSM}	100	A
Operating Junction and Storage Temperature Range	T_J, T_{stg}	−65 to +125	°C
Controlled Avalanche Energy	W_{AVAL}	20	mJ

ON Semiconductor™

http://onsemi.com

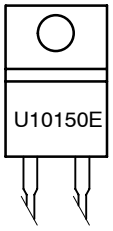
SCANSWITCH RECTIFIER
10 AMPERES, 1500 VOLTS





TO−220AC
CASE 221B
STYLE 1

MARKING DIAGRAM



U10150E = Device Code

ORDERING INFORMATION

Device	Package	Shipping
MUR10150E	TO−220	50 Units/Rail

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

THERMAL CHARACTERISTICS

Rating	Symbol	Value	Unit
Thermal Resistance — Junction to Case	$R_{\theta JC}$	2.0	°C/W

ELECTRICAL CHARACTERISTICS

Characteristic	Symbol	Typ	Max	Unit
Maximum Instantaneous Forward Voltage (Note 1.) (i_F = 6.5 Amps, T_J = 125°C) (i_F = 6.5 Amps, T_J = 25°C)	v_F	 1.7 1.9	 2.2 2.4	Volts
Maximum Instantaneous Reverse Current (Note 1.) (Rated dc Voltage, T_J = 125°C) (Rated dc Voltage, T_J = 25°C)	i_R	 750 25	 1000 100	μA
Maximum Reverse Recovery Time (I_F = 1.0 Amp, di/dt = 50 Amps/μs)	t_{rr}	150	175	ns
Maximum Forward Recovery Time (I_F = 6.5 Amps, di/dt = 12 Amps/μs)	t_{fr}	135	175	ns
Peak Transient Overshoot Voltage	V_{RFM}	14	16	Volts

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

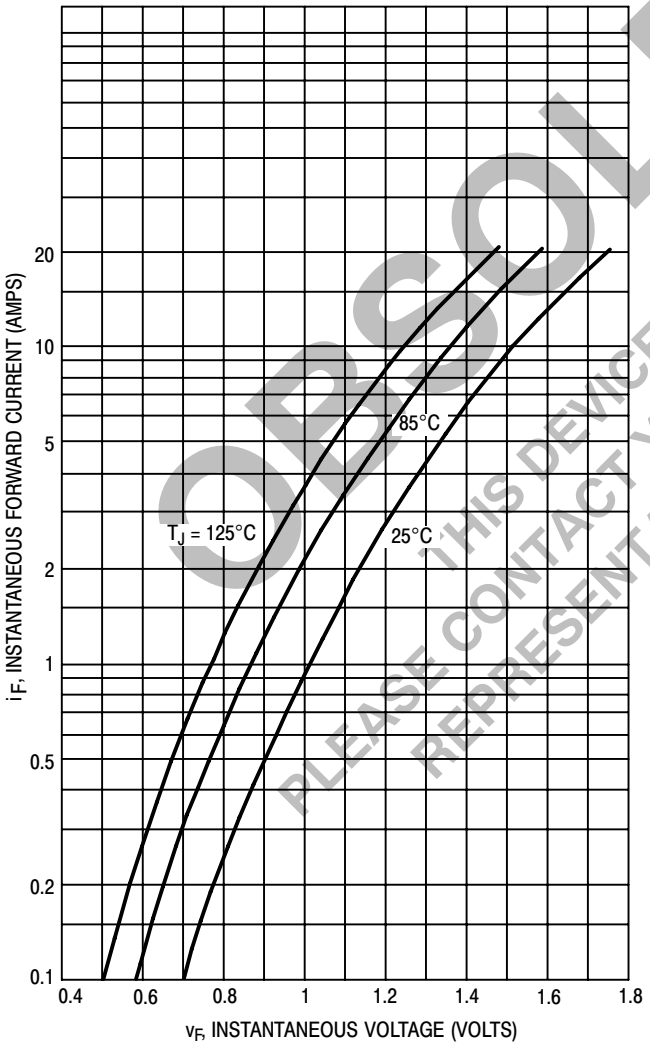


Figure 1. Typical Forward Voltage

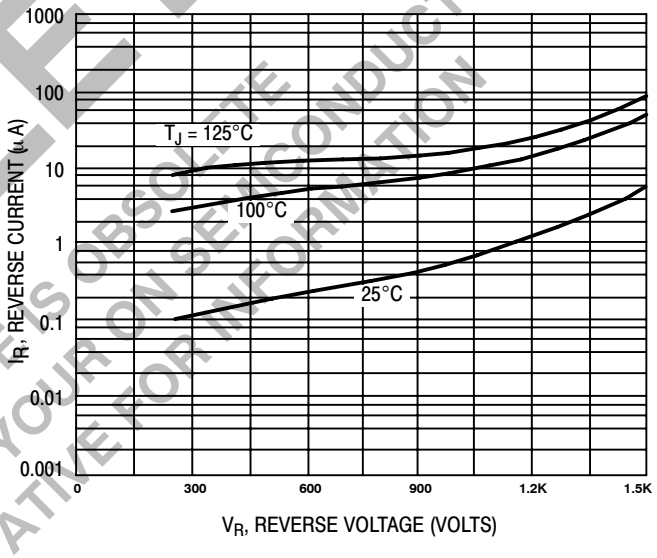


Figure 2. Typical Reverse Current

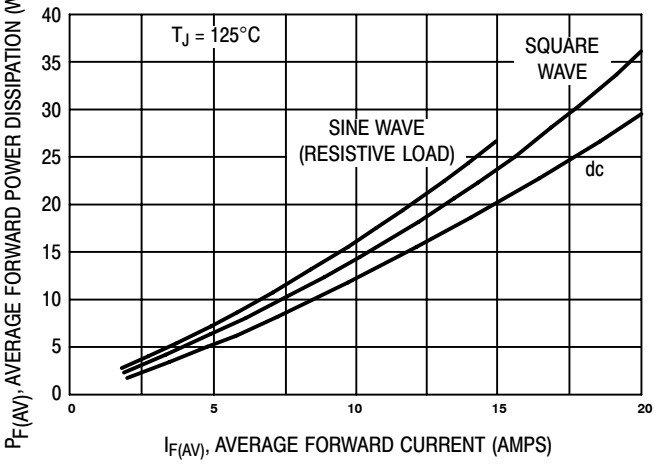


Figure 3. Forward Power Dissipation

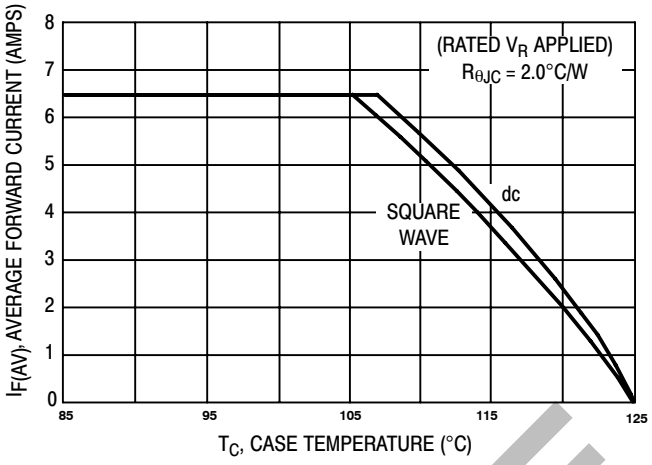


Figure 4. Current Derating Case

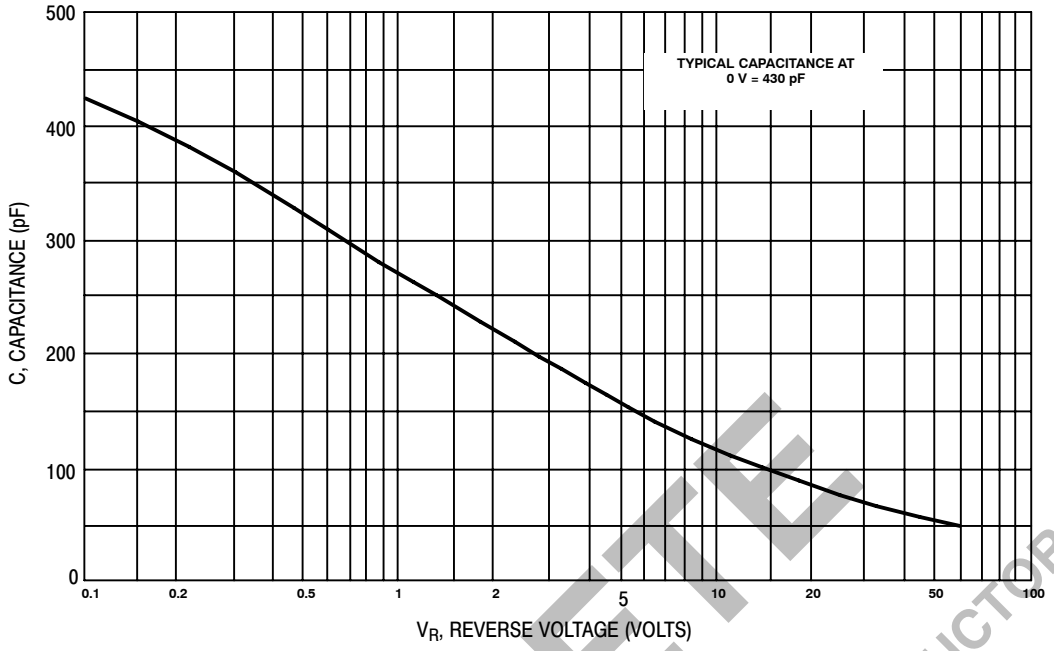


Figure 5. Typical Capacitance

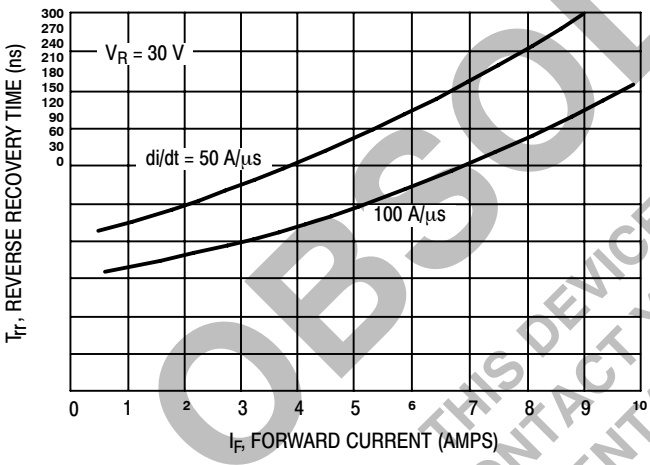


Figure 6. Typical Reverse Recovery Time

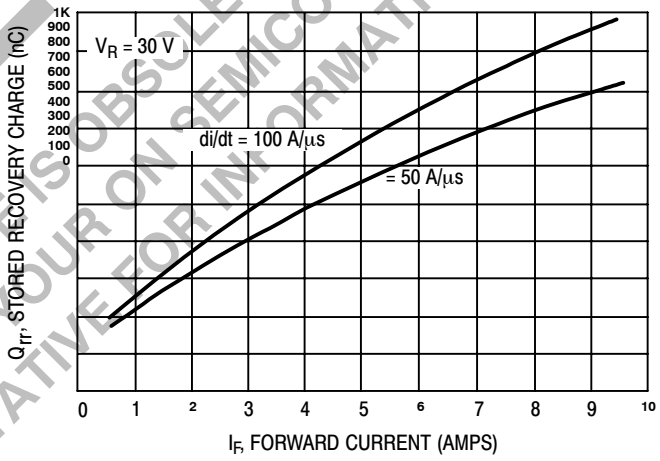
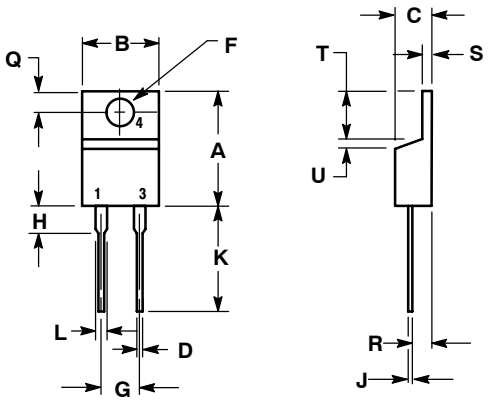


Figure 7. Typical Stored Recovery Charge

MUR10150E

PACKAGE DIMENSIONS

TO−220 TWO−LEAD
CASE 221B−04
ISSUE D



NOTES:
1. DIMENSIONING AND TOLERANCING PER ANSI Y14.5M, 1982.
2. CONTROLLING DIMENSION: INCH.

	INCHES		MILLIMETERS	
DIM	MIN	MAX	MIN	MAX
A	0.595	0.620	15.11	15.75
B	0.380	0.405	9.65	10.29
C	0.160	0.190	4.06	4.82
D	0.025	0.035	0.64	0.89
F	0.142	0.147	3.61	3.73
G	0.190	0.210	4.83	5.33
H	0.110	0.130	2.79	3.30
J	0.018	0.025	0.46	0.64
K	0.500	0.562	12.70	14.27
L	0.045	0.060	1.14	1.52
Q	0.100	0.120	2.54	3.04
R	0.080	0.110	2.04	2.79
S	0.045	0.055	1.14	1.39
T	0.235	0.255	5.97	6.48
U	0.000	0.050	0.000	1.27

STYLE 1:
PIN 1. CATHODE
2. N/A
3. ANODE
4. CATHODE

PUBLICATION ORDERING INFORMATION

LITERATURE FULFILLMENT:
Literature Distribution Center for ON Semiconductor
P.O. Box 5163, Denver, Colorado 80217 USA
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