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	٧
Average Rectified Forward Current (Rated V_R , $T_C = 125$ °C)	I _{F(AV)}	10	Α
$ \begin{array}{lll} \mbox{Peak Repetitive Forward Current} \\ \mbox{(Rated V_R, Square Wave,} \\ \mbox{20 kHz, $T_C = 125^{\circ}$C)} & \mbox{Per Leg} \end{array} $	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

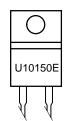
SCANSWITCH RECTIFIER 10 AMPERES 1500 VOLTS





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	Тур	Max	Unit
Maximum Instantaneous Forward Voltage (Note 1.)	VF			Volts
$(i_F = 6.5 \text{ Amps}, T_J = 125^{\circ}\text{C})$		1.7	2.2	
$(i_F = 6.5 \text{ Amps}, T_J = 25^{\circ}C)$		1.9	2.4	
Maximum Instantaneous Reverse Current (Note 1.)	i _R	750	4000	μΑ
(Rated dc Voltage, T _J = 125°C)		750	1000	
(Rated dc Voltage, $T_J = 25^{\circ}C$)		25	100	
Maximum Reverse Recovery Time ($I_F = 1.0 \text{ Amp, di/dt} = 50 \text{ Amps/}\mu s$)	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 $\mu s,$ Duty Cycle $\leq 2.0\%$

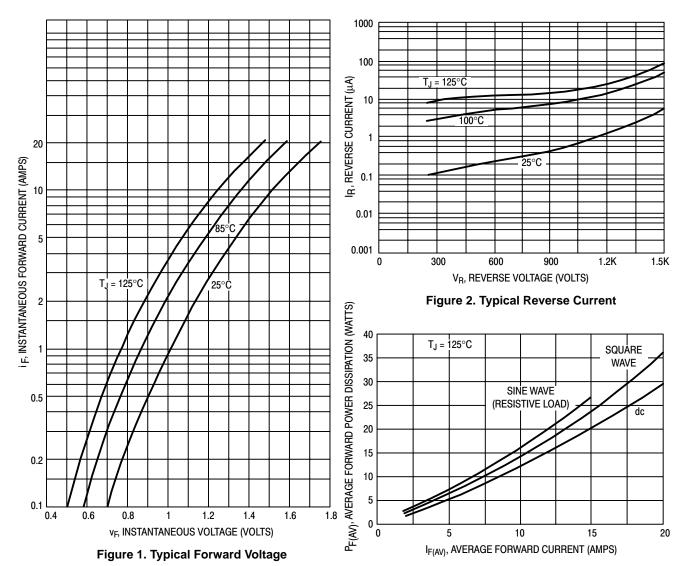


Figure 3. Forward Power Dissipation

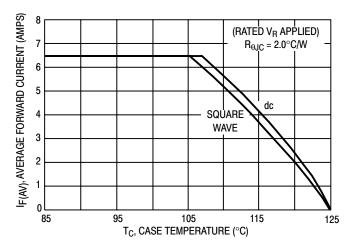


Figure 4. Current Derating Case

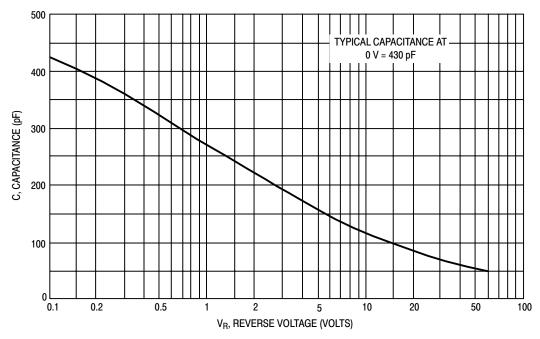


Figure 5. Typical Capacitance

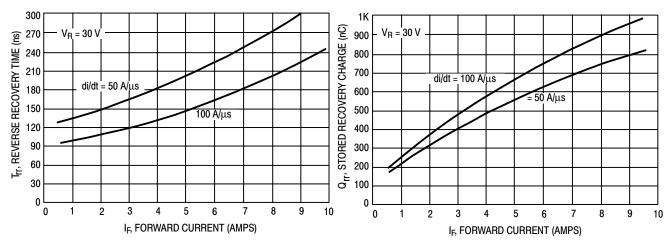


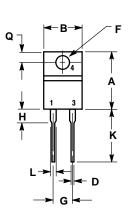
Figure 6. Typical Reverse Recovery Time

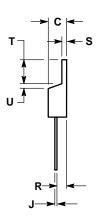
Figure 7. Typical Stored Recovery Charge

PACKAGE DIMENSIONS

TO-220 TWO-LEAD

CASE 221B-04 ISSUE D





NOTES:

- DIMENSIONING AND TOLERANCING PER ANSI
 V14 FM 1092
- Y14.5M, 1982.
 2. CONTROLLING DIMENSION: INCH.

	INCHES		MILLIMETERS		
DIM	MIN	MAX	MIN	MAX	
Α	0.595	0.620	15.11	15.75	
В	0.380	0.405	9.65	10.29	
С	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	
Н	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

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