MUR10120E

Preferred Device

SCANSWITCH™ Power Rectifier

For High and Very High Resolution Monitors

This state–of–the–art power rectifier is specifically designed for use as a damper diode in horizontal deflection circuits for high and very high resolution monitors.

- 1200 Volt Blocking Voltage
- 20 mJ Avalanche Energy (Guaranteed)
- 12 Volt (Typical) Peak Transient Overshoot Voltage
- 135 ns (Typical) Forward Recovery Time

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: U10120E

MAXIMUM RATINGS

Rating	Symbol	Value	Unit
Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage	V_{RRM} V_{RWM} V_R	1200	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 Temperature Range	T_J	–65 to +125	°C
Controlled Avalanche Energy	W_{AVAL}	20	mJ

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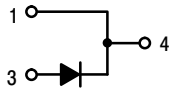
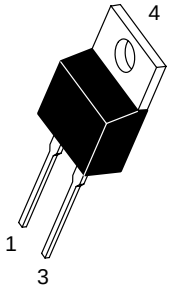
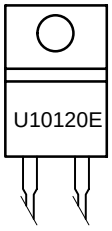
SCANSWITCH RECTIFIER 10 AMPERES 1200 VOLTS





TO–220AC
CASE 221B
STYLE 1

MARKING DIAGRAM



U10120E = Device Code

ORDERING INFORMATION

Device	Package	Shipping
MUR10120E	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	 2.0 2.2	Volts
Maximum Instantaneous Reverse Current (Note 1.) (Rated dc Voltage, T_J = 25°C) (Rated dc Voltage, T_J = 125°C)	i_R	 25 750	 100 1000	μA
Maximum Reverse Recovery Time (I_F = 1.0 A, di/dt = 50 Amps/μs)	t_{rr}	150	175	ns
Maximum Forward Recovery Time I_F = 6.5 Amps, di/dt = 12 Amps/μs (As Measured on a Deflection Circuit)	t_{fr}	135	175	ns
Peak Transient Overshoot Voltage	V_{RFM}	12	14	Volts

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

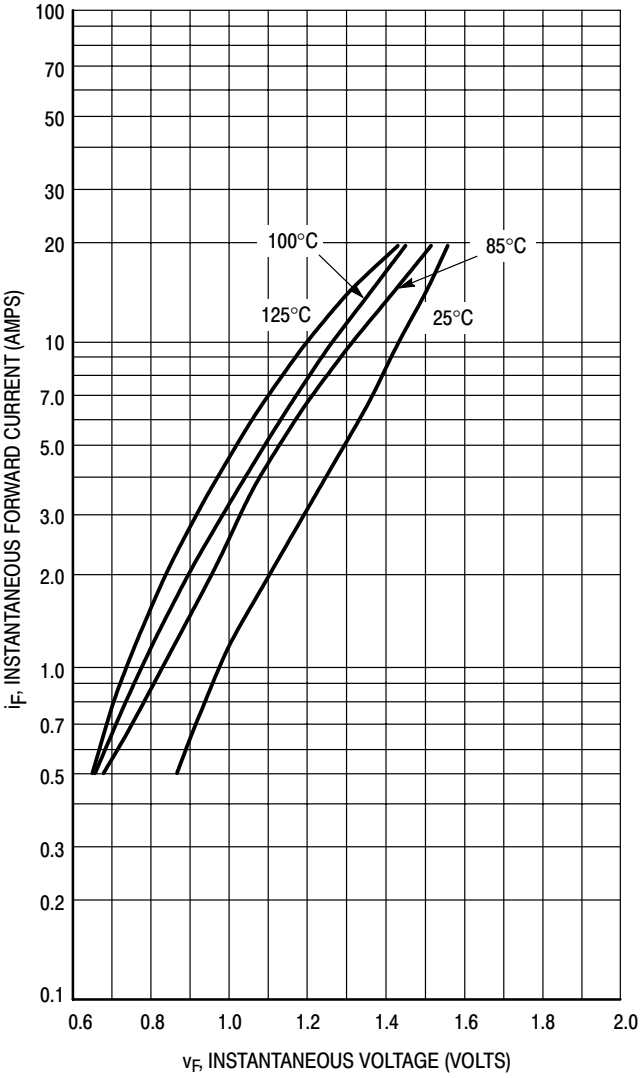


Figure 1. Typical Forward Voltage

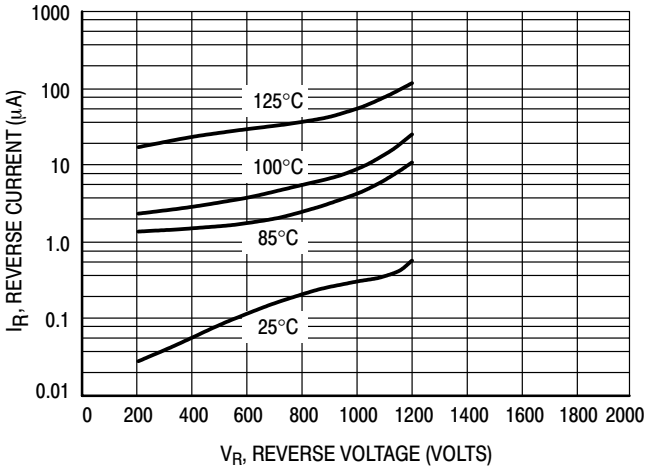


Figure 2. Typical Reverse Current

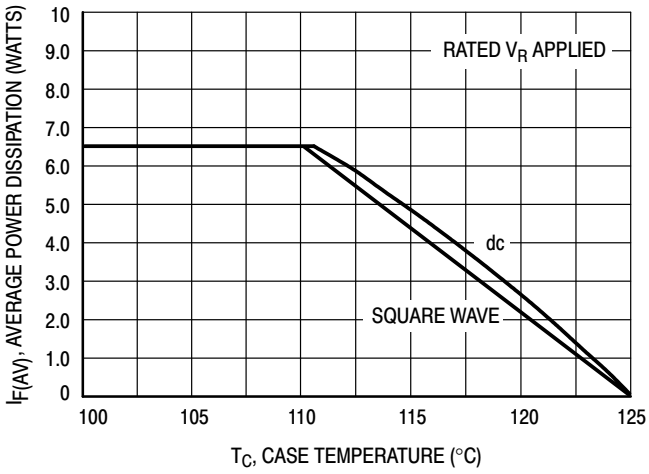


Figure 3. Current Derating, Case

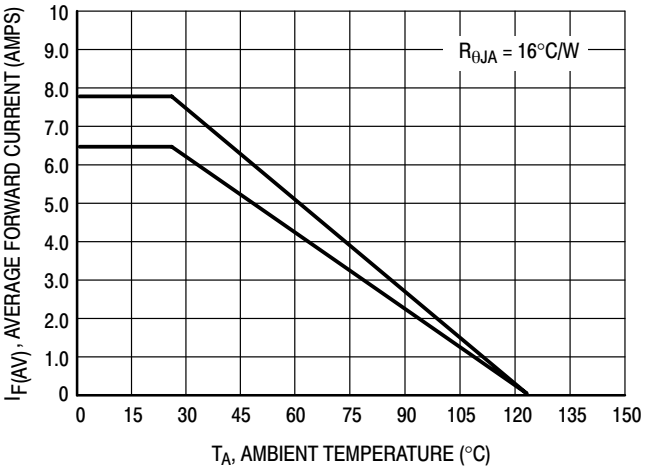


Figure 4. Current Derating, Ambient

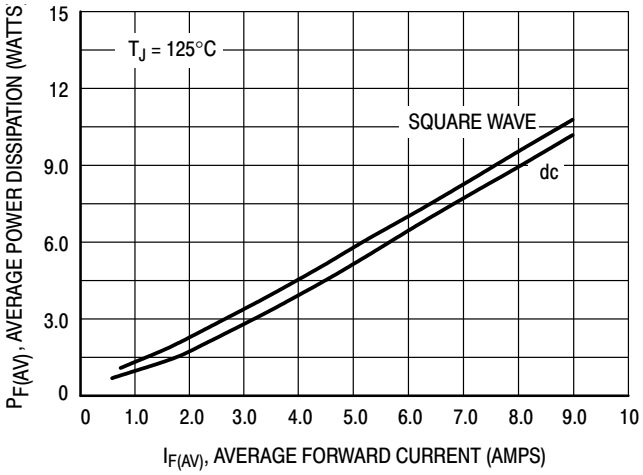


Figure 5. Power Dissipation

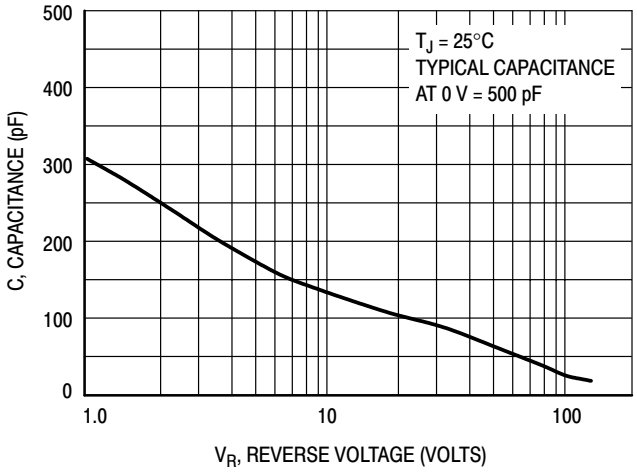
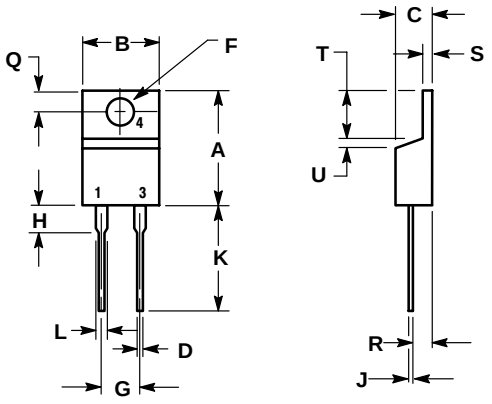


Figure 6. Typical Capacitance

MUR10120E

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

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PUBLICATION ORDERING INFORMATION

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