

# MURF1020

## Super Fast Rectifiers

### Features

- Low cost.
- Diffused junction
- Low forward voltage drop.
- High current capability.
- Easily cleaned with Alcohol, Isopropanol and Similar solvents.
- RoHS compliant package

### Mechanical Data

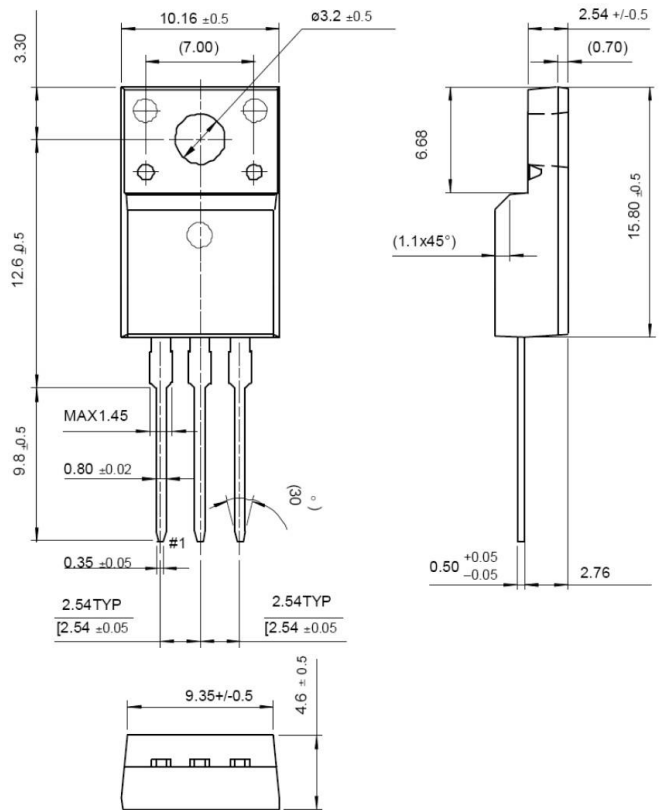
- Case: ITO-220AB
- Molding compound meets UL 94 V-0 flammability
- RoHS compliant, and commercial grade
- Terminals: Matte tin plated leads, solderable per J-STD-002 and JESD 22-B102
- Polarity: As marked
- Weight: 0.08ounce, 2.24 grams

### Packing & Order Information

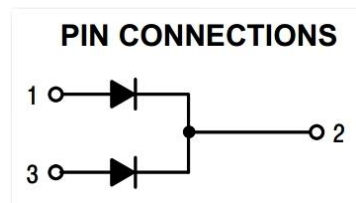
50/Tube ; 1,000/Box



**RoHS  
COMPLIANT**



### Graphic symbol



## MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

### Maximum Ratings (Tc=25°C unless otherwise noted)

Parameter	Symbol	MURF1020	Unit
Maximum repetitive peak reverse voltage	VRRM	200	V
Working peak reverse voltage	VRWM	140	V
Maximum DC blocking voltage	VDC	200	V
Maximum average forward rectified current	IF(AV)	10	A
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)	IFSM	60	A
Junction Capacitance	Cj	70	pF
Operating junction temperature range	TJ	-50 to +150	°C
Storage temperature range	TSTG	-50 to +150	°C

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### Electrical characteristics (Tc=25°C unless otherwise noted)

Parameter	Symbol	Value		Unit
		Typical	Max	
Instantaneous forward voltage at IF=8A, TA=25°C	VF	0.92	0.98	V
Maximum reverse current Tj=25°C	IR	5		uA
at working peak reverse voltage Tj=150°C		250		uA
Reverse Recovery Time IF=0.5A, IR=1A, Irr=0.25A	Trr	25		ns

### Thermal characteristics (Tc=25°C unless otherwise noted)

Parameter	Symbol	Value	Unit
Typical thermal resistance	Symbol	MURF1020	°C/W
	Rthja	3.0	

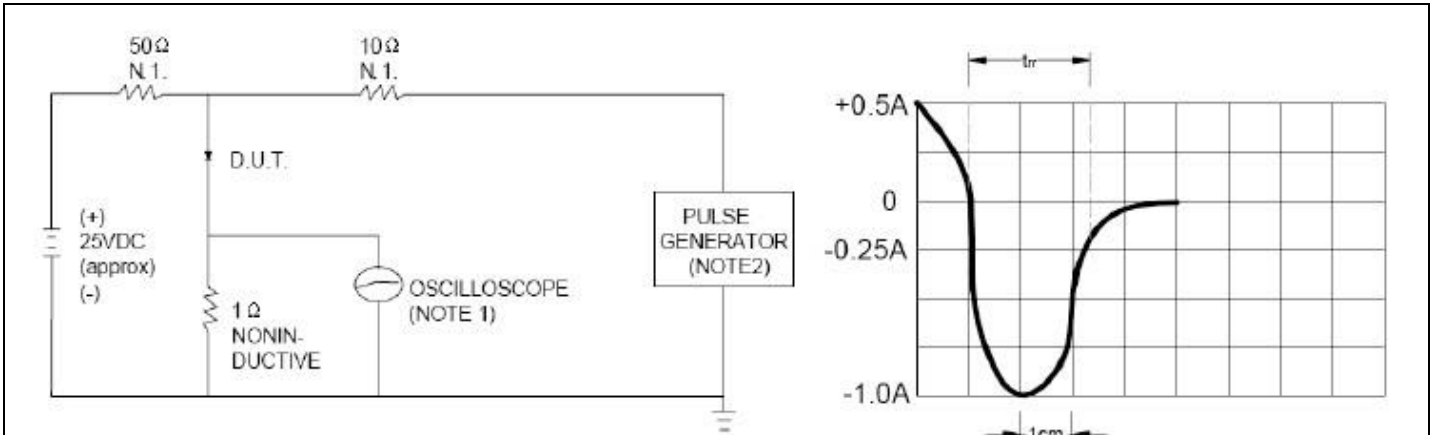
#### Notes:

- (1) Pulse test: 300 µs pulse width, 1 % duty cycle
- (2) Pulse test: Pulse width ≤ 40 ms
- (3) Cj Measured at 1.0MHz and reverse voltage of 4.0V DC

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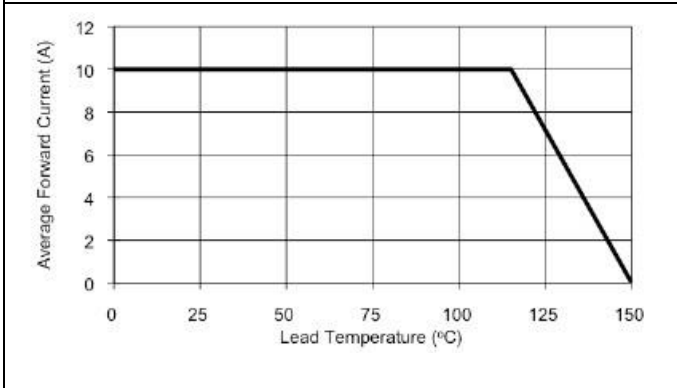
■ TYPICAL CHARACTERISTICS @ Ta=25°C unless otherwise specified



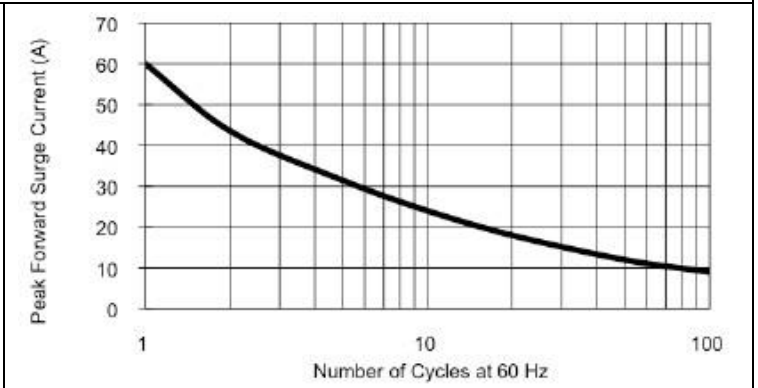
**NOTES:**

- 1. RISE TIME = 7ns MAX. INPUT IMPEDANCE = 1M . 22pF. SET TIME BASE FOR 10/20 ns/cm
- 2. RISE TIME = 10ns MAX. SOURCE IMPEDANCE = 50

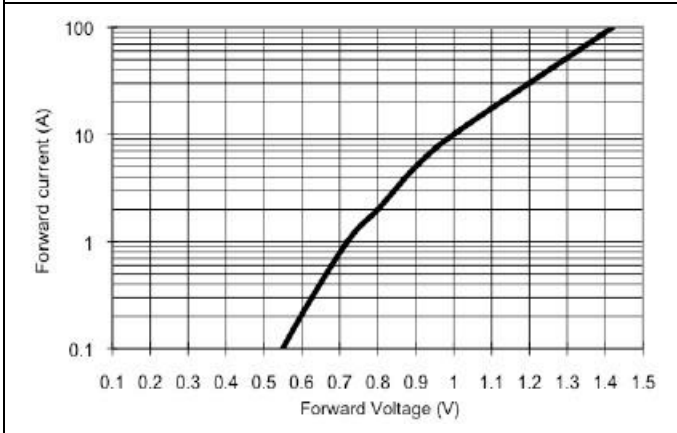
**FIG.1-TEST CIRCUIT DIAGRAM AND REVERSE RECOVERY TIME CHARACTERISTIC**



**FIG.2-MAXIMUM FORWARD CURRENT DERATING CURVE**



**FIG.3- MAXIMUM FORWARD SURGE CURVE**



**FIG.4-TYPICAL FORWARD CHARACTERISTICS**

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