

Ultrafast Recovery Rectifier

MUR1020CT

FEATURES

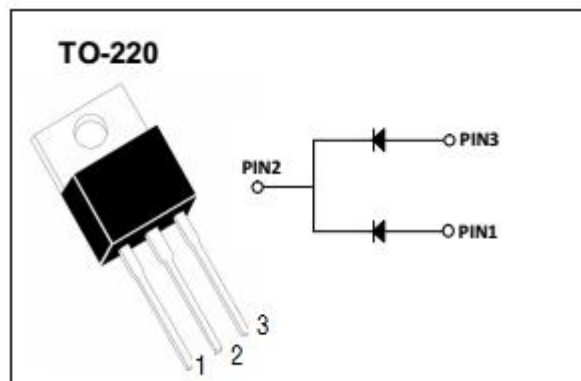
- Ultrafast Recovery Time
- Low Forward Voltage
- Low Leakage Current
- 175°C Operating Junction Temperature
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

MECHANICAL CHARACTERISTICS

- Case: Epoxy, Molded
- Finish: All External Surfaces Corrosion Resistant and Terminal Leads are Readily Solderable
- Lead Temperature for Soldering Purposes: 260°C Max for 10 Seconds

APPLICATIONS

- Designed for use in output rectification stage of SMPS, UPS, dc-to-dc converters as well as freewheeling diode in low voltage inverters and chopper motor drives.

ABSOLUTE MAXIMUM RATINGS($T_a=25^\circ\text{C}$)

SYMBOL	PARAMETER	VALUE	UNIT
V_{RRM} V_{RWM} V_R	Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage	200	V
$I_{F(AV)}$	Average Rectified Forward Current Per Leg (Rated V_R) Total Device	5 10	A
I_{FM}	Peak Repetitive Forward Current (Rated V_R , Square Wave, 20kHz) Per Diode Leg	10	A
I_{FSM}	Nonrepetitive Peak Surge Current (Surge applied at rated load conditions 8.3 half-sine Wave-According to JEDEC Method)	150	A
T_J	Junction Temperature	-40~175	°C
T_{stg}	Storage Temperature Range	-40~175	°C

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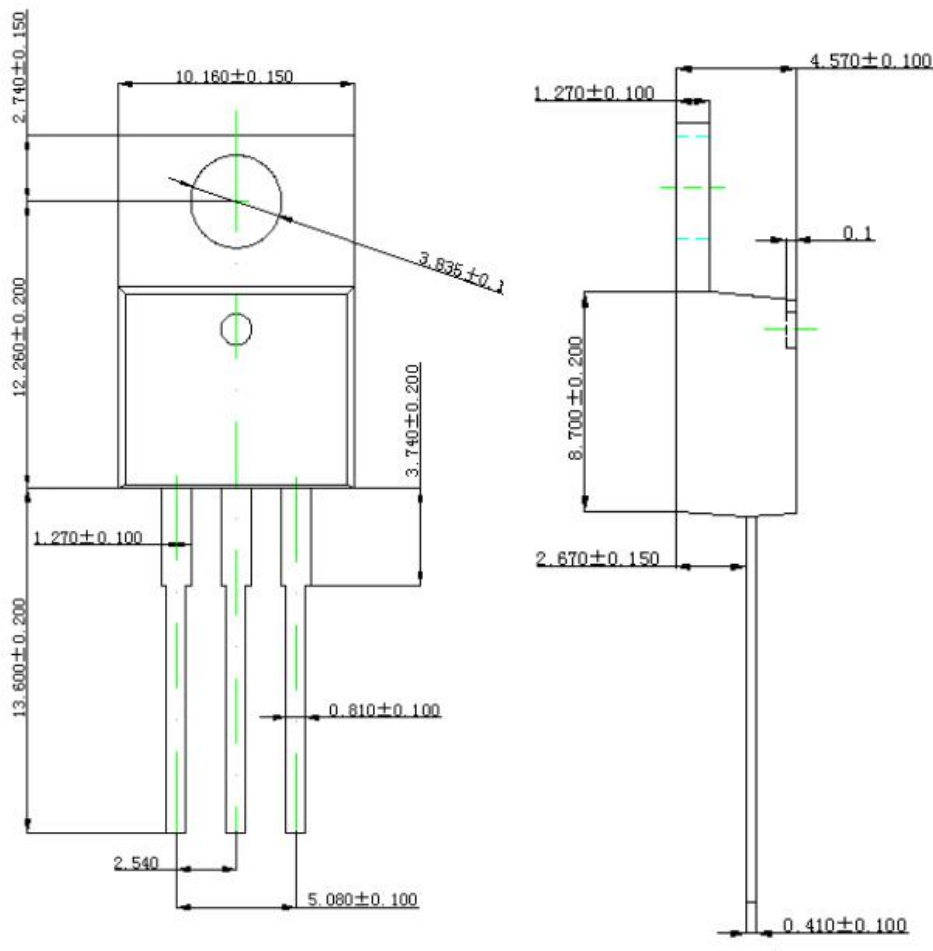
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THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
$R_{th\ j-c}$	Thermal Resistance, Junction to Case	2.0	$^{\circ}C/W$

ELECTRICAL CHARACTERISTICS($T_a=25^{\circ}C$) (Pulse Test: Pulse Width=300 μs , Duty Cycle $\leq 2\%$)

SYMBOL	PARAMETER	CONDITIONS	MAX	UNIT
V_F	Maximum Instantaneous Forward Voltage	$I_F = 5A$	0.9	V
I_R	Maximum Instantaneous Reverse Current	$V_{RRM} = 200V$	50	μA
t_{rr}	Maximum Reverse Recovery Time	$I_F = 0.5A, I_R = 1A, I_{REC} = 0.25A$	35	ns



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