

Ultrafast Recovery Rectifier

MUR8100D

FEATURES

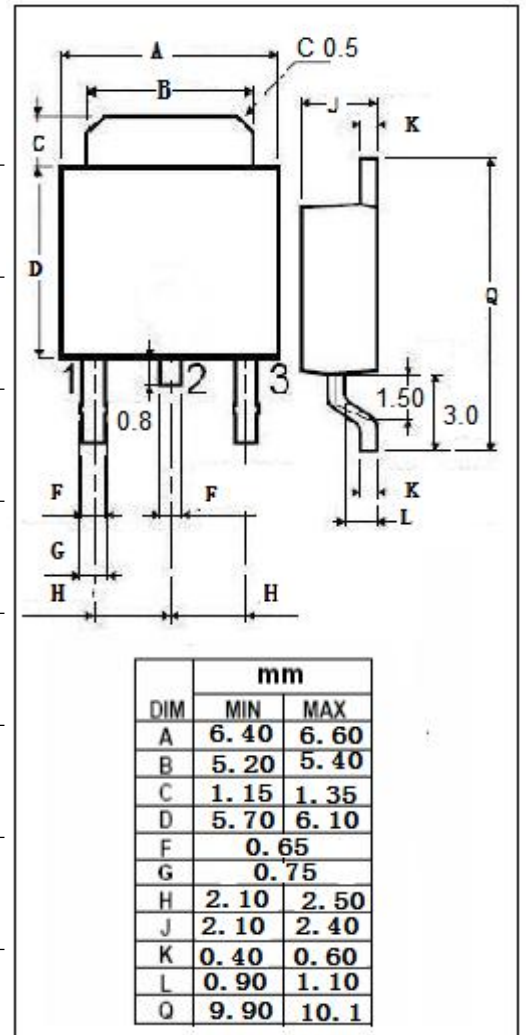
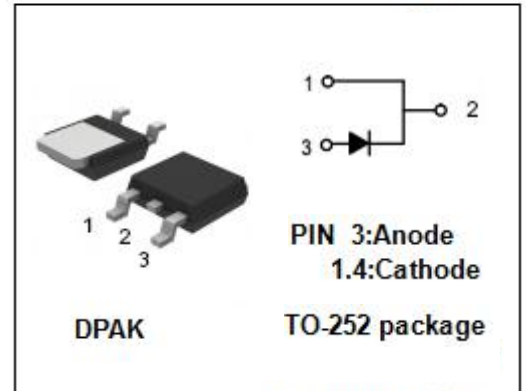
- Ultrafast Recovery Time
- Low Forward Voltage
- Low Leakage Current
- 175°C Operating Junction Temperature
- High Temperature Glass Passivated Junction
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

APPLICATIONS

- Designed for use in switching power supplies and other power Switching applications.

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	1000	V
$I_{F(AV)}$	Average Rectified Forward Current (Rated V_R)	8	A
I_{FM}	Peak Repetitive Forward Current (Rated V_R , Square Wave, 20kHz)	16	A
I_{FSM}	Nonrepetitive Peak Surge Current (Surge applied at rated load conditions half-wave, single phase, 60Hz)	100	A
P_D	Total Dissipation @ $T_c=25^\circ\text{C}$	50	W
T_J	Junction Temperature	-40~150	$^\circ\text{C}$
T_{stg}	Storage Temperature Range	-40~150	$^\circ\text{C}$



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THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
$R_{th\ j-c}$	Thermal Resistance, Junction to Case	2.5	°C/W

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

SYMBOL	PARAMETER	CONDITIONS	MAX	UNIT
V_F	Maximum Instantaneous Forward Voltage	$I_F=8\text{A}$	1.5	V
		$I_F=8\text{A}; T_C=150^{\circ}\text{C}$	1.3	V
I_R	Maximum Instantaneous Reverse Current	$V_R=V_{RRM}; T_C=25^{\circ}\text{C}$	20	μA
		$V_R=0.8V_{RRM}; T_C=25^{\circ}\text{C}$	10	μA
		$V_R=0.8V_{RRM}; T_C=125^{\circ}\text{C}$	1.5	mA
t_{rr}	Maximum Reverse Recovery Time	$I_F=1\text{A}$	50	ns

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