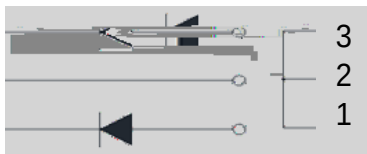
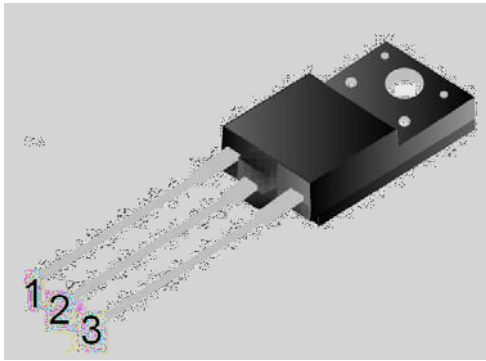


Ultra-Fast Recovery Diodes 10A*2 FRED



Features

- Adopt FRED chip
- Low forward Voltage drop
- Fast reverse recovery time
- High frequency operation
- High purity, high temperature epoxy encapsulation for enhanced mechanical strength and moisture resistance
- Guard ring for enhanced ruggedness and long term reliability

Typical Applications

- Typical applications are in switching power supplies, converters, freewheeling diodes, and reverse battery protection.

Mechanical Data

- **Package:** TO-3PF
Molding compound meets UL 94 V-0 flammability rating, RoHS-compliant
- **Terminals:** Tin plated leads, solderable per J-STD-002 and JESD22-B102
- **Polarity:** As marked

■Maximum Ratings (T_j=25 °C Unless otherwise specified)

PARAMETER	SYMBOL	UNIT	MUR2020FPT
Device marking code			MUR2020FPT
Repetitive Peak Reverse Voltage	V _{RRM}	V	200
Average Rectified Output Current @60Hz sine wave, R-load, T _c (FIG.1)	I _O	A	20
Surge(Non-repetitive)Forward Current @60Hz half sine-wave, 1 cycle, T _j =25 °C	I _{FSM}	A	120
Current Squared Time @1ms≤t≤8.3ms T _j =25 °C	I ² t	A ² s	60
Single Pulse Avalanche Energy @ Tp=40uS, T _j =25 °C, L=15mH	EAS	mJ	245
Storage Temperature	T _{stg}		-55 ~ +175
Junction Temperature	T _j		-55 ~ +175
Typical Junction capacitance @4V,1MHz	C _j	pF	150



MUR2020FPT

■Electrical Characteristics

PARAMETER	SYMBOL	UNIT	TEST CONDITIONS	Min	Typ	Max
Instantaneous forward voltage drop per diode	V_{FM}	V	$I_{FM}=10.0A$ @ $T_j=25$	-	0.90	1.0
			$I_{FM}=10.0A$ @ $T_j=150$		0.78	0.9
DC reverse current at rated DC blocking voltage per diode	I_{RRM1}	μA	$V_{RM}=V_{RRM}$ $T_j=25$	-	-	5
	I_{RRM2}		$V_{RM}=V_{RRM}$ $T_j=150$	-	30	100
Reverse Recovery Time	T_{rr}	ns	$I_F=0.5A$ $I_{RM}=1A$ $I_{RR}=0.25A$ $T_j=25$	-	25	35
			$T_j=25$	-	20	-
			$T_j=125$	-	35	-
Peak recovery current	I_{RRM}	A	$T_j=25$	-	3.0	-
			$T_j=125$	-	5.5	-
Reverse recovery charge	Q_{rr}	nC	$T_j=25$	-	30	-
			$T_j=125$	-	100	-

■Thermal Characteristics $T_j=25$ Unless otherwise specified

PARAMETER	SYMBOL	UNIT
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FIG.5: Diagram of circuit and Testing wave form of reverse recovery time

