

General Description

MUR1040CT device optimized for recovery characteristics to improve efficiency in power supply applications.

Features

- Common Cathode
- Super fast switching for high efficiency
- High forward surge current capability
- RoHS Compliant

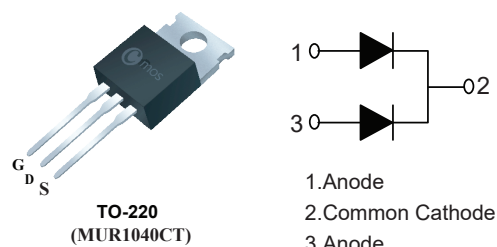
Product Summary

V_{RRM}	V_F	$I_{F(AV)}$
400V	1.3V	10A

Applications

- Switched Mode Power Supplies (SMPS)
- inverter

TO-220 Pin Configuration



Absolute Maximum Ratings

Symbol	Parameter	Rating	Units
V_{RRM}	Peak Repetitive Reverse Voltage	400	V
$I_{F(AV)}$	Average Rectified Forward Current (Rated VR-20Khz Square Wave) - 50% duty cycle	5 (Per Leg) 10 (Total)	A
T_{RR}	Reverse Recovery Time($I_F=0.5A$, $I_R=1A$, $I_{REC}=0.25A$)	35	nS
I_{FSM}	Forward Peak Surge Current(Rated Load 8.3ms Half Mssine Wave-According to JEDEC Method)	120X2	A
dv/dt	Voltage rate of change (Rated VR)	10000	V/ μ S
I_{RRM}	Peak Repetitive Reverse Surge Current (2 μ S, 1Khz)	0.5	A
T_J	Operating Junction Temperature	150	$^{\circ}$ C
T_{STG}	Storage Temperature	-40 to 150	$^{\circ}$ C

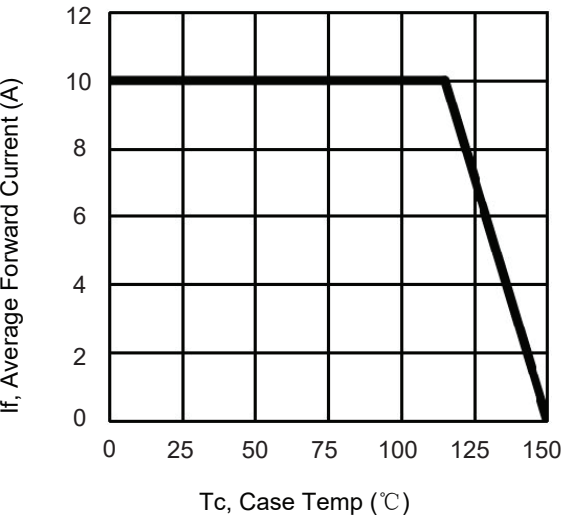
Thermal Data

Symbol	Parameter	Typ.	Max.	Unit
$R_{\theta JC}$	Thermal Resistance, Junction to Case(Per Leg)	2	---	$^{\circ}$ C/W

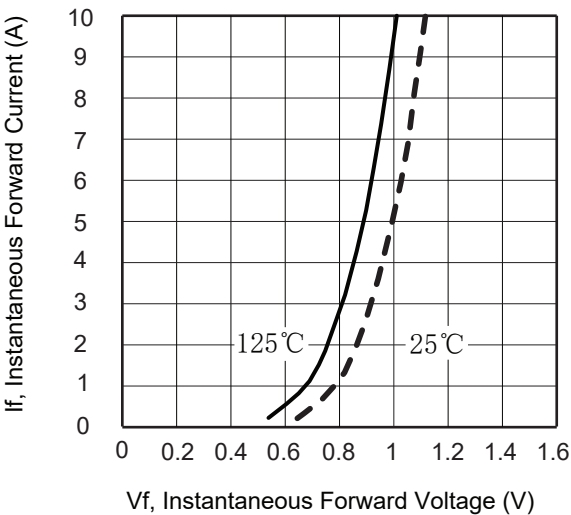
Electrical Characteristics

Symbol	Parameter	Conditions	Min.	Typ.	Max.	Unit
V_F	Forward Voltage Drop per diode	$I_F=10A, T_C=25^{\circ}C$	---	1.11	1.3	V
		$I_F=10A, T_C=125^{\circ}C$	---	---	1.1	
I_R	Reverse Leakage Current per diode	$V_R=400V, T_C=25^{\circ}C$	---	---	0.01	mA
		$V_R=400V, T_C=125^{\circ}C$	---	---	0.1	

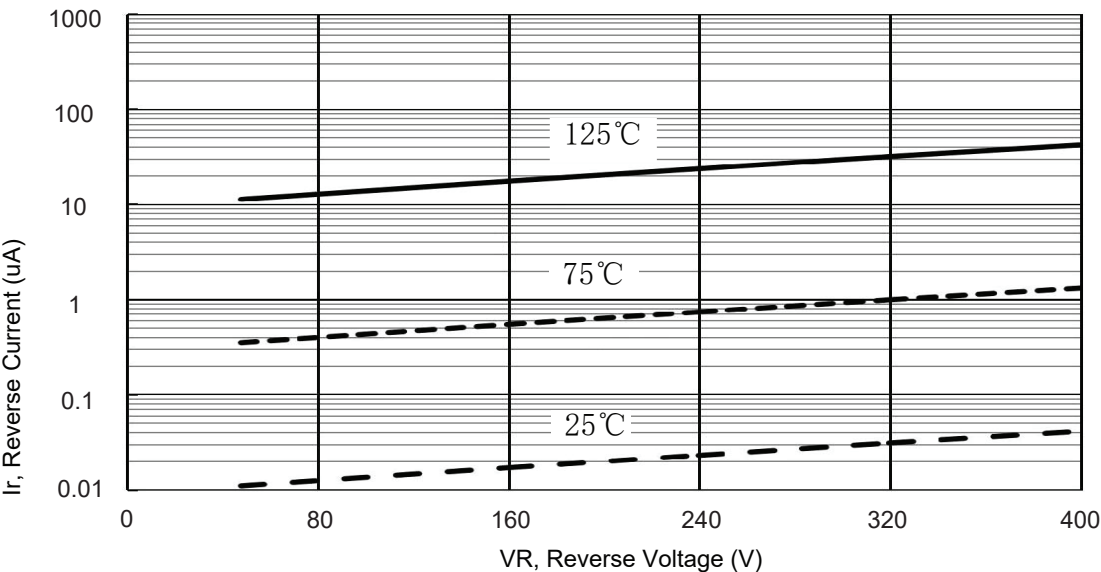
Characteristic Curves



Current derating curve, per element



The forward voltage and forward current curve



The reverse leak current and the reverse voltage (single-device) curve

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