

General Description

MBRD20200CT Device optimized for ultra-low forward voltage drop to maximize efficiency in Power Supply applications. The device is intended for use in Switched Mode Power Supplies (SMPS), adapters and DC/DC converters.

Features

- Low forward voltage
- Low power loss/ high efficiency
- High Surge Current Capability
- RoHS Compliant

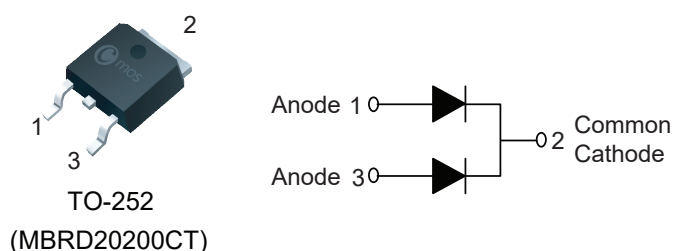
Product Summary

V_{RRM}	V_F	$I_{F(AV)}$
200V	0.95V	20A

Applications

- DC/DC converter
- Switched Mode Power Supplies (SMPS)
- Low Voltage High Frequency Invers Circuit

TO-252 Pin Configuration



Absolute Maximum Ratings

Symbol	Parameter	Rating	Units
V_{RRM}	Peak Repetitive Reverse Voltage	200	V
$I_{F(AV)}$	Average Rectified Forward Current (Rated VR-20KHz Square Wave) - 50% duty cycle	10 (Per Leg) 20 (Total)	A
dv/dt	Voltage rate of change (Rated VR)	10000	V/uS
I_{RRM}	Peak Repetitive Reverse Surge Current (2uS,1KHz)	0.5	A
I_{FSM}	Forward Peak Surge Current(Rated Load 8.3ms Half Mssine Wave-According to JEDEC Method)	250	A
T_J	Operating Junction Temperature	150	°C
T_{STG}	Storage Temperature	-40 to 150	°C

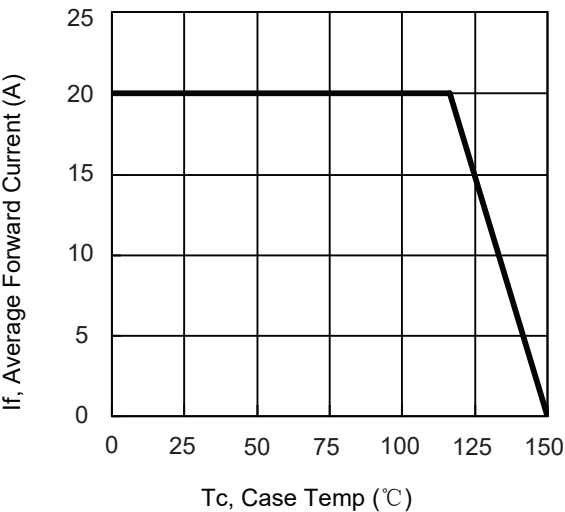
Thermal Data

Symbol	Parameter	Typ.	Max.	Unit
$R_{\theta JC}$	Thermal Resistance, Junction to Case(Per Leg)	3	---	°C/W

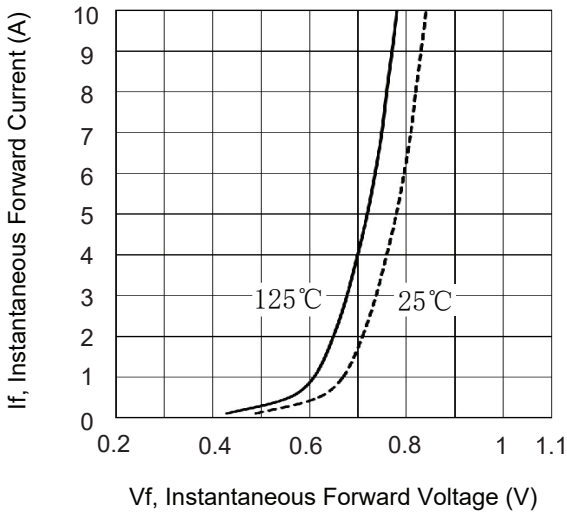
Electrical Characteristics

Symbol	Parameter	Conditions	Min.	Typ.	Max.	Unit
V_F	Forward Voltage Drop per diode	$I_F=10A, T_c=25^{\circ}C$	---	0.87	0.95	V
		$I_F=10A, T_c=125^{\circ}C$	---	---	0.8	
I_R	Reverse Leakage Current per diode	$V_R=200V, T_c=25^{\circ}C$	---	---	0.01	mA
		$V_R=200V, T_c=125^{\circ}C$	---	---	10	mA

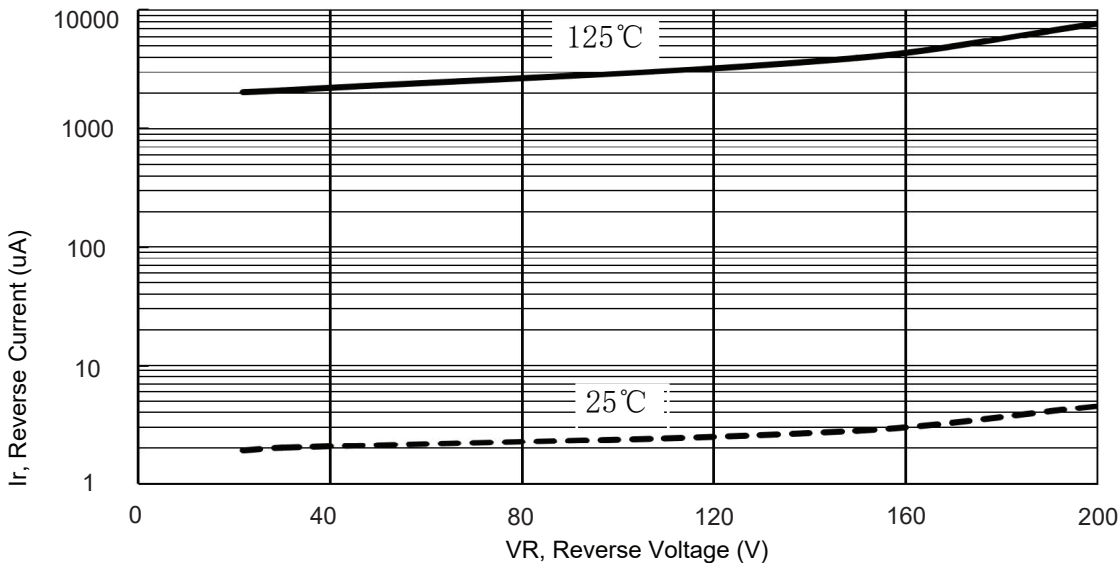
Typical Performance Characteristics



Current derating curve, per element



The forward voltage and forward current curve



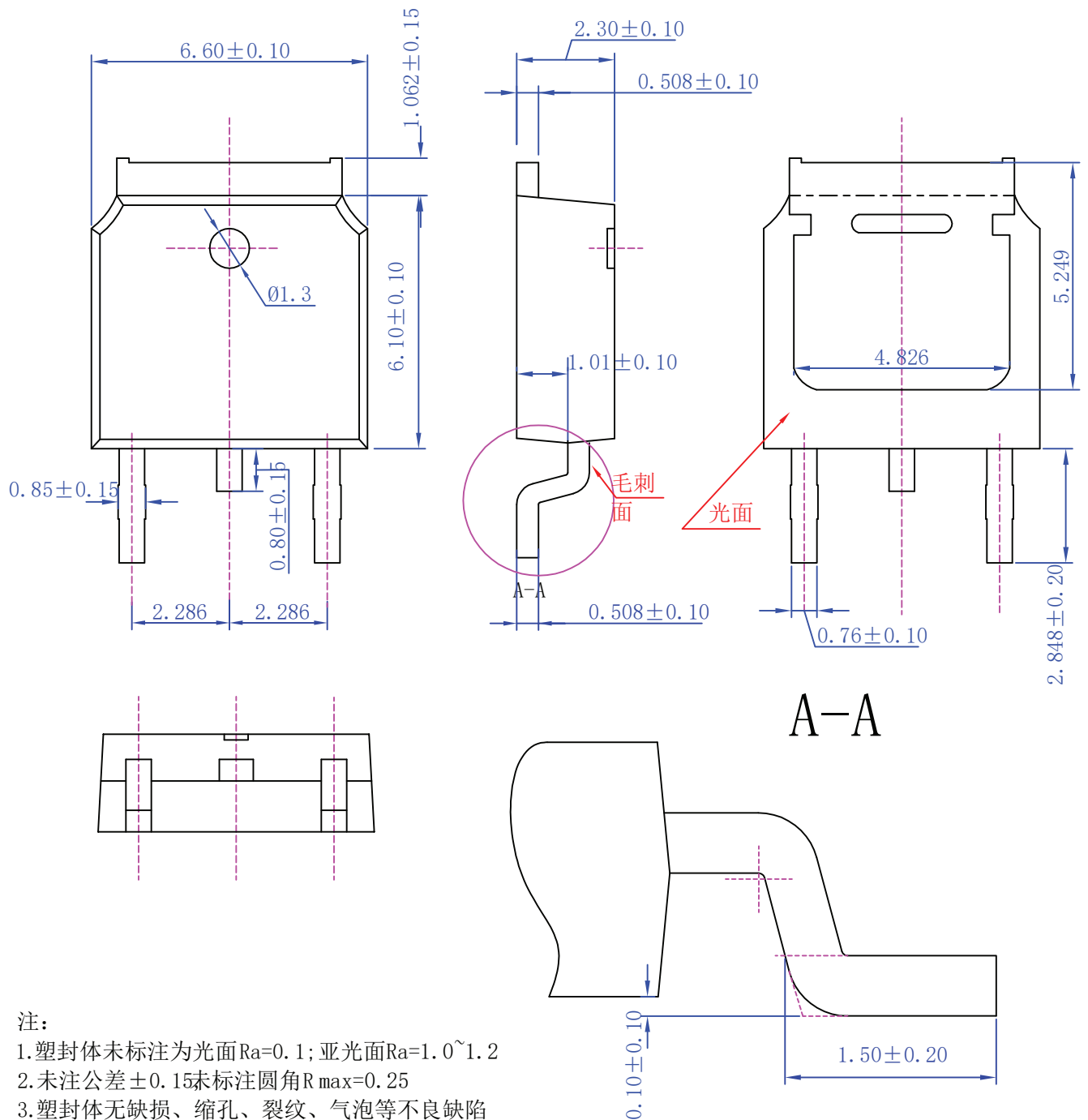
The reverse leak current and the reverse voltage (single-device) curve

This product has been designed and qualified for the consumer market.
Cmos assumes no liability for customers' product design or applications.
Cmos reserves the right to improve product design, functions and reliability without notice. Please refer to the latest version of specification.

Package Dimension

TO-252

Unit :mm



注:

1. 塑封体未标注为光面 $Ra=0.1$; 亚光面 $Ra=1.0 \sim 1.2$
2. 未注公差 ± 0.15 未标注圆角 $R_{max}=0.25$
3. 塑封体无缺损、缩孔、裂纹、气泡等不良缺陷
4. 标注单位mm
5. 顶针孔不允许凸出塑封体表面