

SFP2003

Super Fast Recovery Rectifier Diode

■ Product Character

- Super fast switching for high efficiency.
- Low reverse leakage.
- High forward surge current capability.
- RoHs Product.

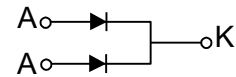
■ Summarize

- SFP2003 Device optimized for ultra-low forward voltage drop to maximize efficiency in Power Supply applications.

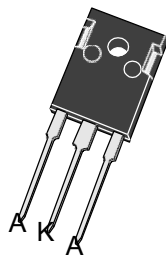
■ Primary Use

- Mainly used in switching power supply, PWM pulse width modulator, inverter as a freewheeling and other electronic circuits, high-frequency rectifier diode, diode or damping diode use

■ Equivalent Circuit



TO-247AB



SFP2003

SFP2003G*

G*=Green / Halogen Free

Absolute Maximum Ratings

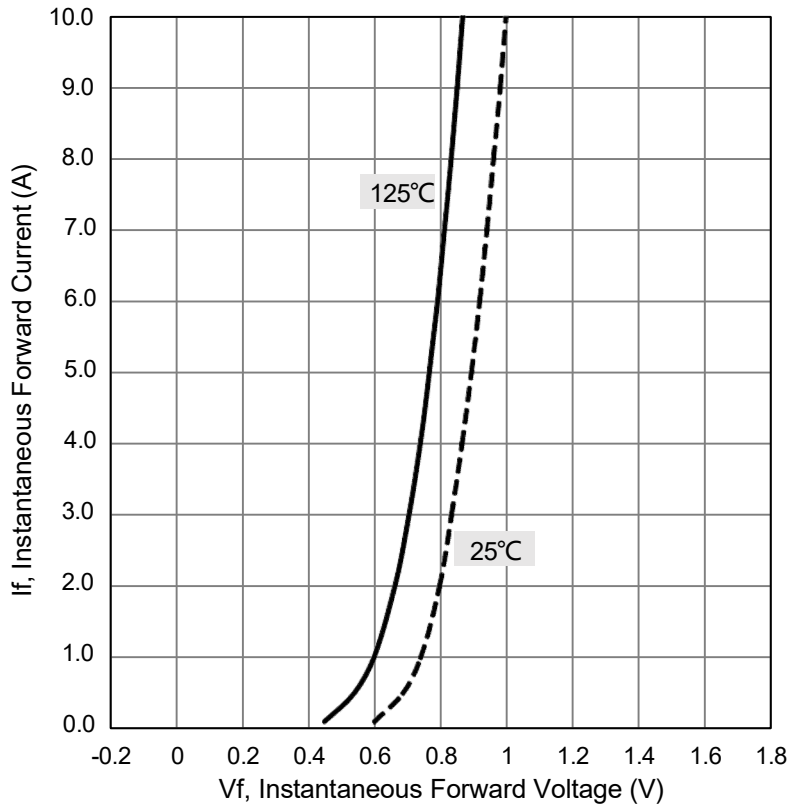
Item	Symbol	Data	Unit
Maximal Inverted Repetitive Peak Voltage	V_{RRM}	300	V
*Average Rectified Forward Current (Rated VR-20Khz Square Wave) - 50% duty cycle	I_{FAV}	20	A
Reverse Recovery Time($I_F=0.5A$ $I_R=1.0A$ $I_{REC}=0.25A$)	T_{RR}	≤ 35	nS
Forward Peak Surge Current(Rated Load 8.3 Half Mssine Wave-According to JEDEC Method)	I_{FSM}	180×2	A
Operating Junction Temperature	T_J	175	°C
Storage Temperature	T_{STG}	-40~150	°C
Typical Thermal Resistance(per leg)	Package=TO-247AB $R_{\theta JC}$	0.5	°C/W

Electricity Character

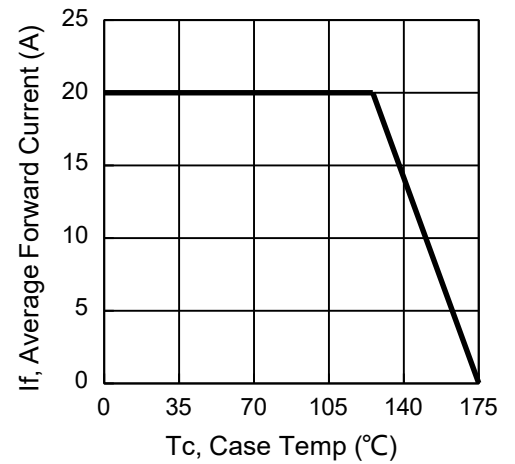
Item	Test Condition		Value(min)	Value(typ)	Value(max)	Unit
V_B	$T_J = 25^\circ C$	$I_R = 100\mu A$	300	---	---	V
I_R	$T_J = 25^\circ C$	$V_R = 300V$	---	---	0.01	mA
	$T_J = 125^\circ C$	$V_R = 300V$	---	---	0.10	mA
V_F	$T_J = 25^\circ C$	$I_F = 10A$	---	1	1.1	V
	$T_J = 125^\circ C$	($I_{FAV} = 10A \times 2$)	---	---	1	V

Characteristic Curves

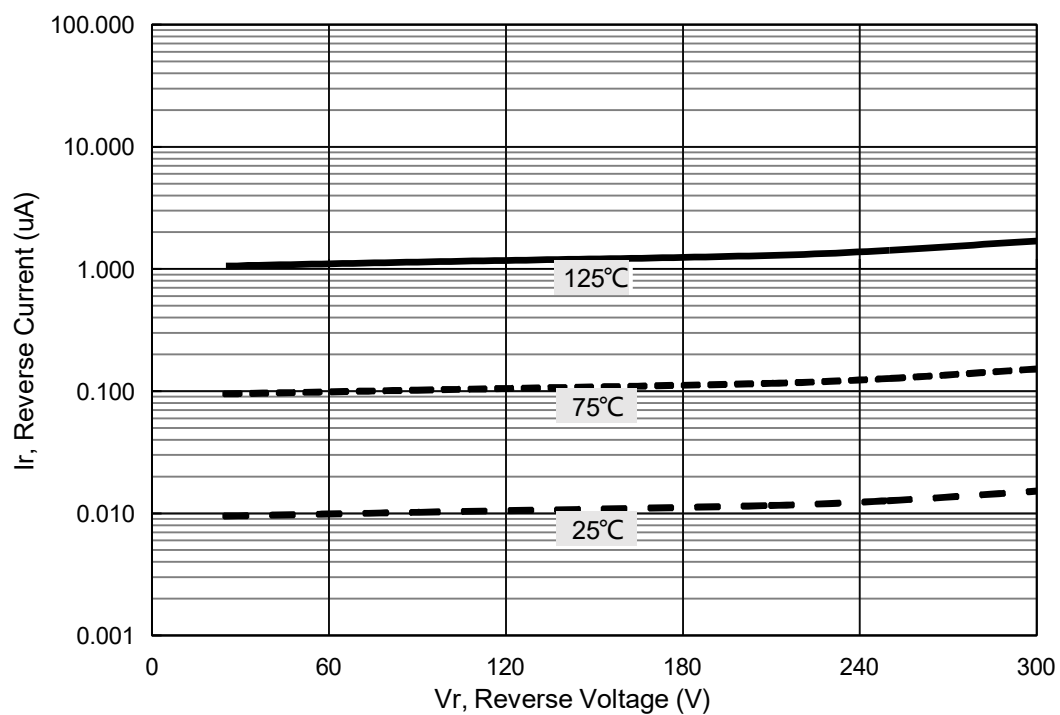
The forward voltage and forward current curve



Current derating curve, per element



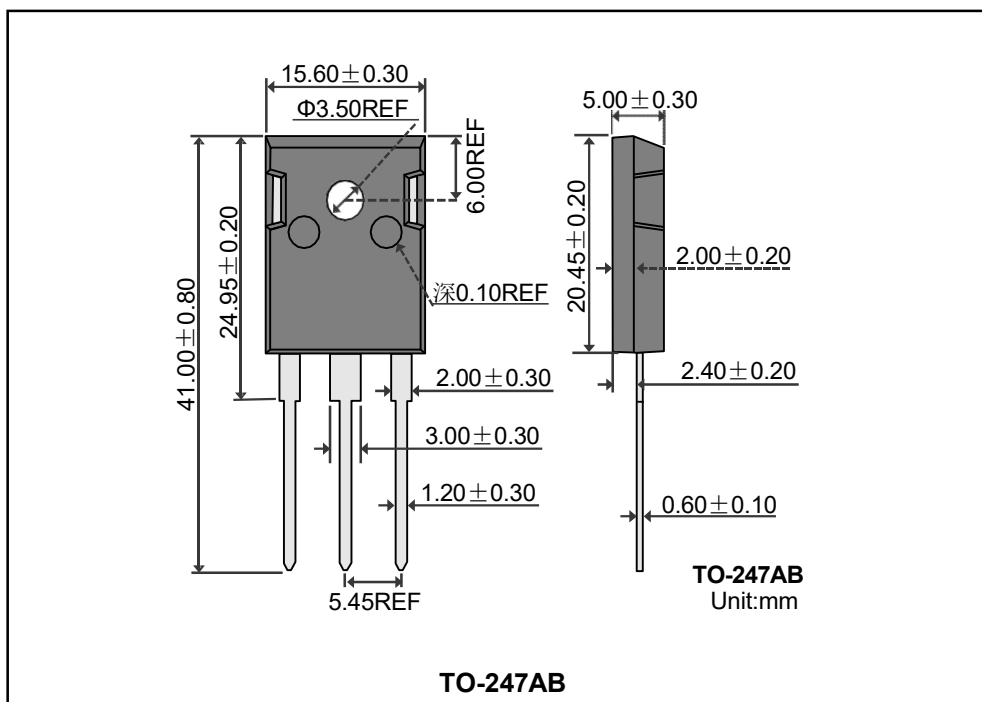
The reverse leak current and the reverse voltage (single-device) curve.



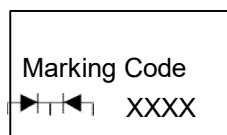
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Package Outline Dimensions



Marking Information



“Marking Code”= The Following
“XXXX”= Date Code Marking

Package	Pb-Free		Green / Halogen Free	
	Marking Code	Part Number	Marking Code	Part Number
TO-247AB	SFP2003	SFP2003	SFP2003G	SFP2003G*

Packing Information

Packaging	Package	Part Number	Quantity	Size
Tube	TO-247AB	Tube	30 pieces	495*45*7mm
		Inner Box	360 pieces	520*115*60mm
		Outer Box	1800 pieces	550*325*135mm