

XB0ASB03A1BR

ETR1602_001

Schottky Barrier Diode 500mA 30V Type

■ GENERAL DESCRIPTION

- Small package, SOD-323
- Suitable for compact, low profile circuit designs
- Low Forward Voltage ($V_F=400\text{mV}@I_F=500\text{mA}$)
- Short reverse recovery time ($t_{rr}=10\text{ns}$)

■ APPLICATIONS

- Rectification of compact DC/DC converter
- Surge absorption caused by counter force of compact motors
- Protection against reverse connection of battery

■ FEATURES

500mA, 30V Type

Low V_F 400mV @ 500mA (TYP.)

Small Package : SOD-323

■ ABSOLUTE MAXIMUM RATINGS

$T_a = 25^\circ\text{C}$

PARAMETER	SYMBOL	RATINGS	UNIT
Repetitive Peak Reverse Voltage	V_{RM}	30	V
Reverse Voltage (DC)	V_R	20	V
Forward Current (Average)	$I_{F(AV)}$	0.5	A
Non Continuous Forward Surge Current*1	I_{FSM}	5	A
Junction Temperature	T_J	125	$^\circ\text{C}$
Storage Temperature Range	T_{stg}	-55~+150	$^\circ\text{C}$

*1: Non continuous high amplitude 60Hz half-sine wave.

■ ELECTRICAL CHARACTERISTICS

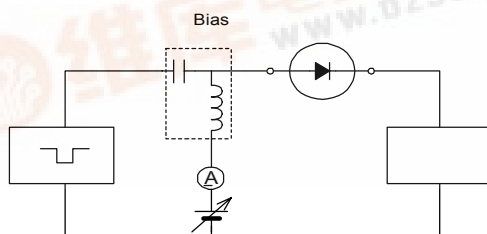
$T_a=25^\circ\text{C}$

PARAMETER	SYMBOL	TEST CONDITIONS	LIMITS			UNITS
			MIN.	TYP.	MAX.	
Forward Voltage (DC)	V_{F1}	$I_F=100\text{mA}$	—	—	0.36	V
	V_{F2}	$I_F=500\text{mA}$	—	0.4	0.46	V
Reverse Current (DC)	I_R	$V_R=20\text{V}$	—	—	100	μA
Inter-Terminal Capacity	C_t	$V_R=10\text{V}, f=1\text{MHz}$	—	12	—	pF
Reverse Recovery Time *2	t_{rr}	$I_F=I_R=10\text{mA}, i_{rr}=1\text{mA}$	—	10	—	ns

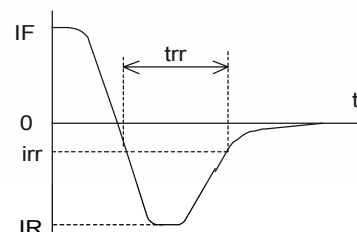
Note) 1. This product has a weakness for an electroshock such as electrostatic.

Please be careful of an electrification to human body and an electric leakage in the application.

2. *2 : t_{rr} measurement circuit

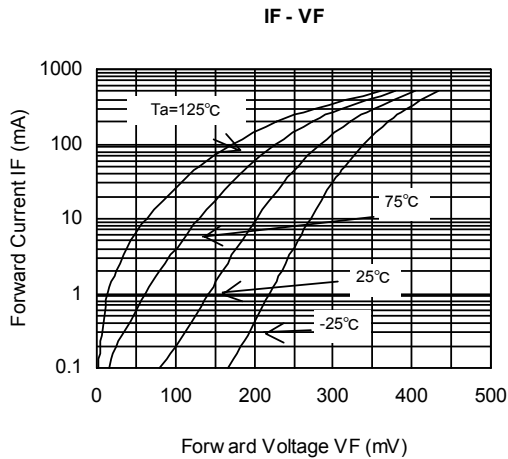


Oscilloscope

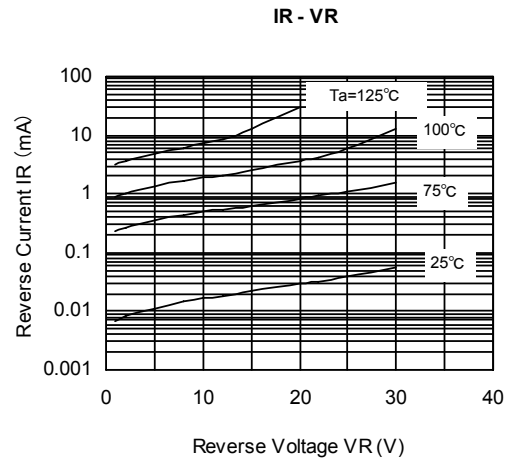


TYPICAL PERFORMANCE CHARACTERISTICS

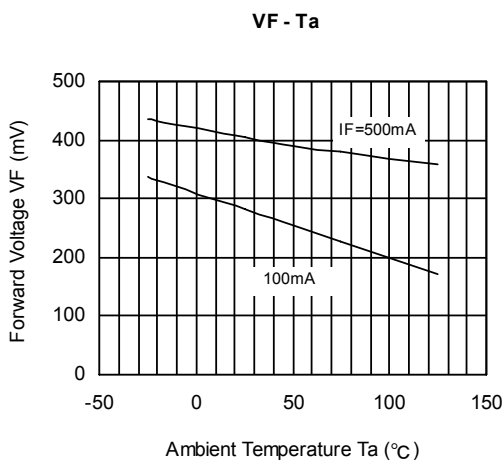
(1) Forward Voltage vs. Forward Current



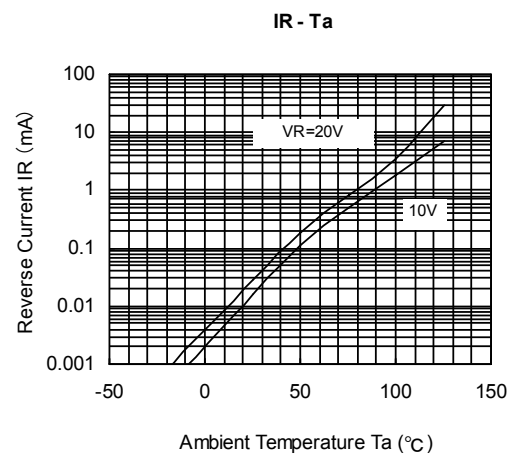
(2) Reverse Voltage vs. Reverse Current



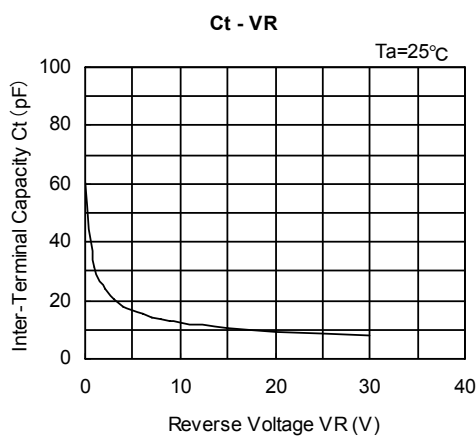
(3) Ambient Temperature vs. Forward Voltage



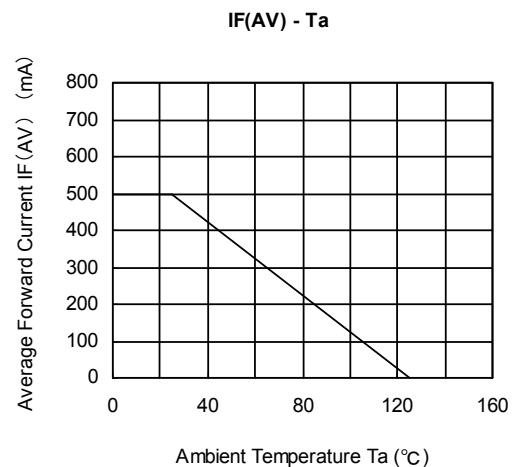
(4) Ambient Temperature vs. Reverse Current



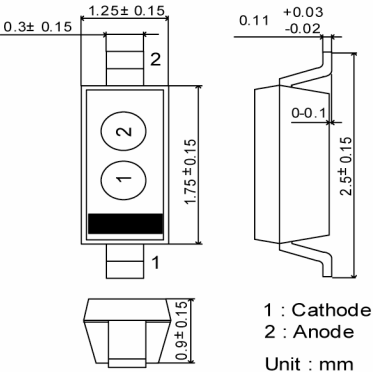
(5) Reverse Voltage vs. Inter-Terminal Capacity



(6) Ambient Temperature vs. Average Forward Current

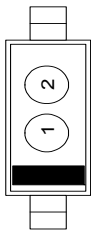


■ PACKAGING INFORMATION



SOD-323

■ MARKING RULE



- ①0 (Product Number)
- ②Assembly Lot Number

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