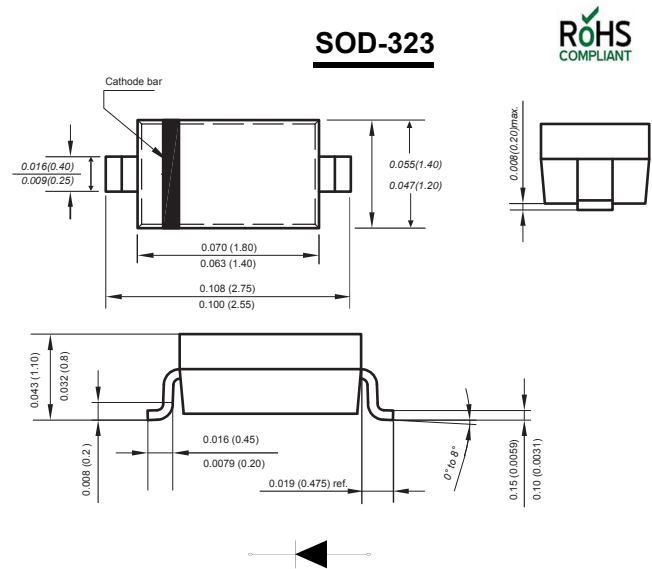


**SOD-323 Plastic-Encapsulate Diodes**
**RB501V-40 SCHOTTKY BARRIER DIODES**
**FEATURES**

- Guard ring protection
- Low forward voltage drop
- For use in low voltage, high frequency inverters

**Marking**


Dimensions in inches and (millimeters)

**Mechanical Data**
**Case** : SOD-323

**Terminals** : Solderable per MIL-STD-750, Method 2026

**Polarity** : Polarity symbol marking on body

**Mounting Position** : Any

**Weight** : 0.00019 ounce, 0.00548 grams

**Maximum Ratings and Electrical Characteristics, Single Diode @Ta=25°C**

Parameter	Symbol	Limit	Unit
Peak Reverse Voltage	$V_{RM}$	45	V
DC Blocking Voltage	$V_R$	40	V
Average Rectified Output Current	$I_O$	0.1	A
Non-Repetitive Peak Forward Surge Current @ $t=8.3\mu s$	$I_{FSM}$	2	A
Power Dissipation	$P_d$	200	mW
Thermal Resistance Junction to Ambient	$R_{\theta JA}$	500	°C/W
Junction Temperature	$T_j$	125	°C
Storage Temperature	$T_{STG}$	-55~+150	°C

**ELECTRICAL CHARACTERISTICS (Ta=25°C unless otherwise specified)**

Parameter	Symbol	Min	Typ	Max	Unit	Conditions
Forward voltage	$V_F$			0.55 0.34	V	$I_F=100mA$ $I_F=10mA$
Reverse current	$I_R$			30	$\mu A$	$V_R=10V$
Capacitance between terminals	$C_T$		6	10	pF	$V_R=10V, f=1MHZ$

The above data are for reference only.

## Typical Characteristics

Fig.1 Derating curve

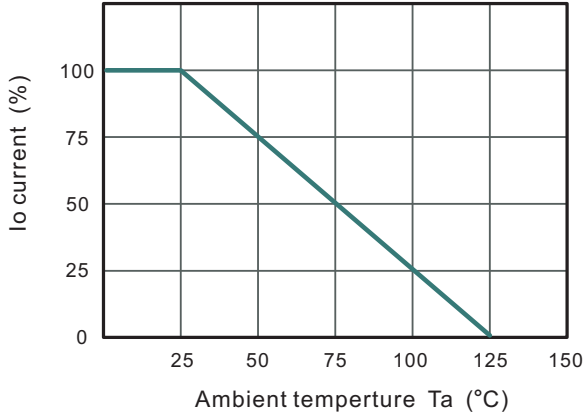


Fig.2 Typical Reverse Characteristics

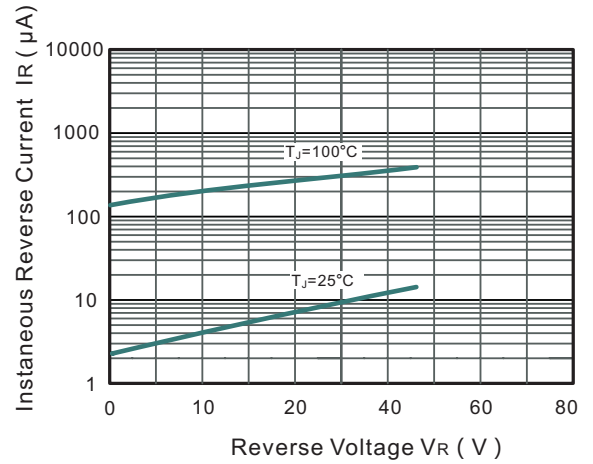


Fig.3 TYPICAL FORWARD VOLTAGE

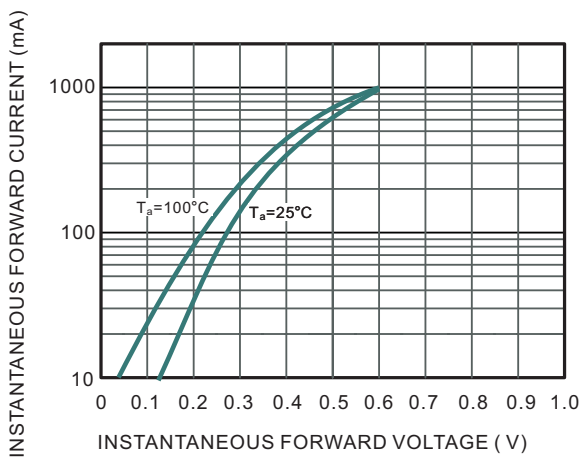


Fig.4 Typical Junction Capacitance

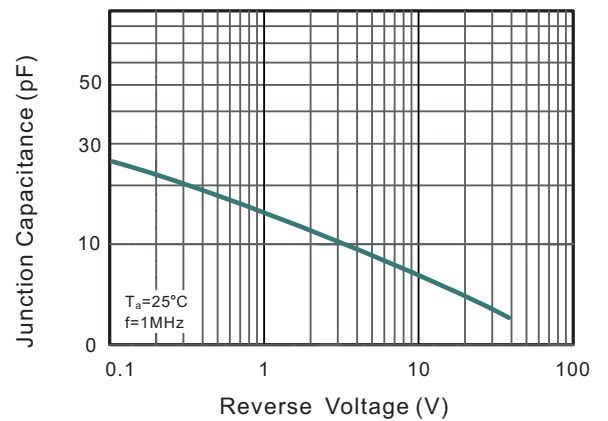
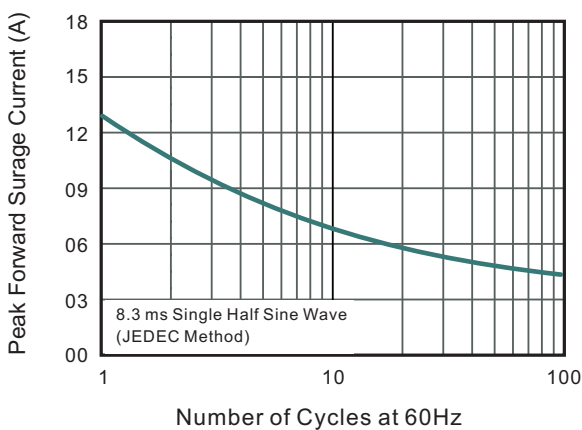
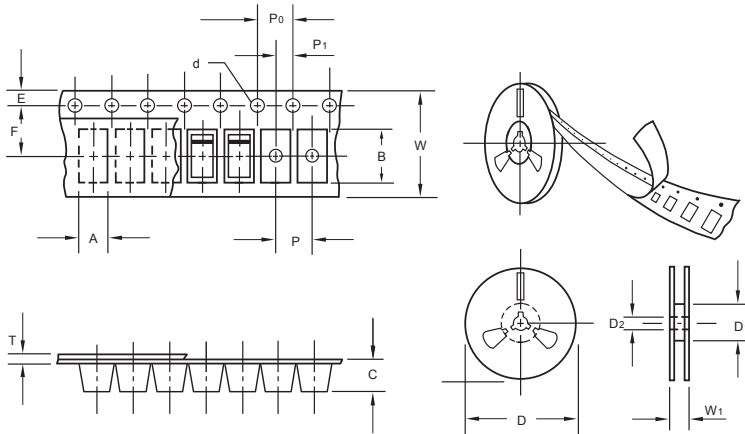


Fig.5 Maximum Non-Repetitive Peak Forward Surge Current



The curve above is for reference only.

## Packing information



unit:mm

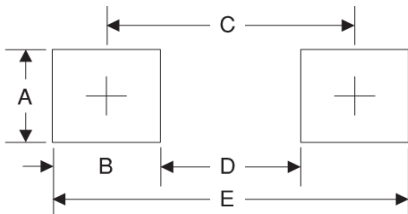
Item	Symbol	Tolerance	SOD-323
Carrier width	A	0.1	1.46
Carrier length	B	0.1	2.90
Carrier depth	C	0.1	1.25
Sprocket hole	d	0.05	1.50
13" Reel outside diameter	D	2.0	330.00
13" Reel inner diameter	D <sub>1</sub>	min	50.00
7" Reel outside diameter	D	2.0	178.00
7" Reel inner diameter	D <sub>1</sub>	min	54.40
Feed hole diameter	D <sub>2</sub>	0.5	13.00
Sprocket hole position	E	0.1	1.75
Punch hole position	F	0.1	3.50
Punch hole pitch	P	0.1	4.00
Sprocket hole pitch	P <sub>0</sub>	0.1	4.00
Embossment center	P <sub>1</sub>	0.1	2.00
Overall tape thickness	T	0.1	0.06
Tape width	W	0.3	8.00
Reel width	W <sub>1</sub>	1.0	12.30

Note: Devices are packed in accordance with EIA standard RS-481-A and specifications listed above.

## Reel packing

PACKAGE	REEL SIZE	REEL (pcs)	COMPONENT SPACING (m/m)	BOX (pcs)	INNER BOX (m/m)	REEL DIA. (m/m)	CARTON SIZE (m/m)	CARTON (pcs)	APPROX. GROSS WEIGHT (kg)
SOD-323	7"	3,000	4.0	45,000	210*208*203	178	430*430*235	180,000	9.0

## Suggested Pad Layout



Symbol	Unit (mm)	Unit (inch)
A	1.2	0.047
B	1.2	0.047
C	2.6	0.102
D	1.4	0.055
E	3.8	0.149