

Small Signal Product

400mW Trigger Diode (DIAC)

FEATURES

- Surface Mount Device SOD-123 packaged
- $V_{BO}=32V$ DB3
- Max. $P_D=400mW$

MECHANICAL DATA

- Case: Plastic gull wing SOD-123 package
- High temperature soldering guaranteed: 260°C/10s
- Weight: 10.55mg (approximately)
- Moisture sensitivity level (MSL): 1
- Pb free and RoHS compliant



SOD-123



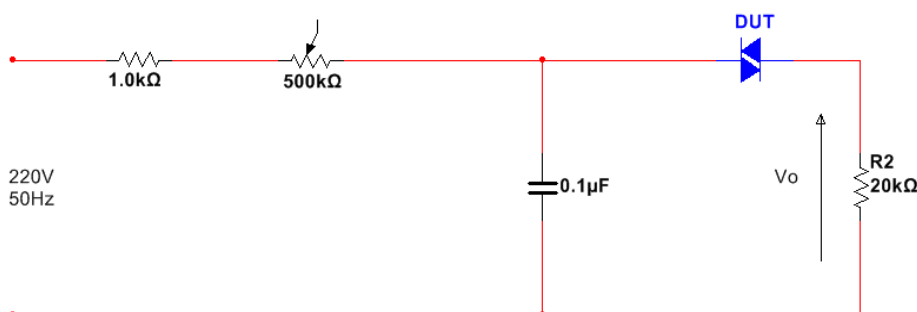
APPLICATION

- These diacs are intended for use in thyristors phase control, circuits for lamp dimming, universal motor speed control, and heat control

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS (T _A =25°C unless otherwise noted)				
PARAMETER	SYMBOL	VALUE	UNIT	
Repetitive Peak on-state Current tp=20µs, f=100Hz	I _{TRM}	2	A	
Power Dissipation	P _D	400	mW	
Junction Temperature	T _J	- 40 to +125	°C	
Storage Temperature Range	T _{STG}	- 40 to +125	°C	

PARAMETER	SYMBOL	MIN	TYP	MAX	TEST CONDITION	UNIT
Reverse Breakdown Voltage	V _{BO}	28	32	36	C=22nF	V
		30	32	34		
Breakdown Voltage Symmetry	[+V _{BO1} - -V _{BO2}]			±3	C=22nF	V
				±2		
Dynamic Breakdown Voltage	ΔV±	5			ΔI=[I _{BO} to I _F =10mA]	V
		9				
Repetitive Peak on-state Current	I _{TRM}	2			t _p =20µs, f=100Hz	A
Output Voltage	V _O	5			Note	V
Leakage Current	I _R	-		10	V _B = 0.5V _{BO}	µA
Rest Time	t _r		1.5			µs
Breakdown current	I _{BO}			100	C=22nF	µA
		-		15		

Note: Test circuit for output voltage



Small Signal Product

RATINGS AND CHARACTERISTICS CURVES

($T_A=25^\circ\text{C}$ unless otherwise noted)

Fig.1 Relative variation of V_{BO} vs. junction temperature

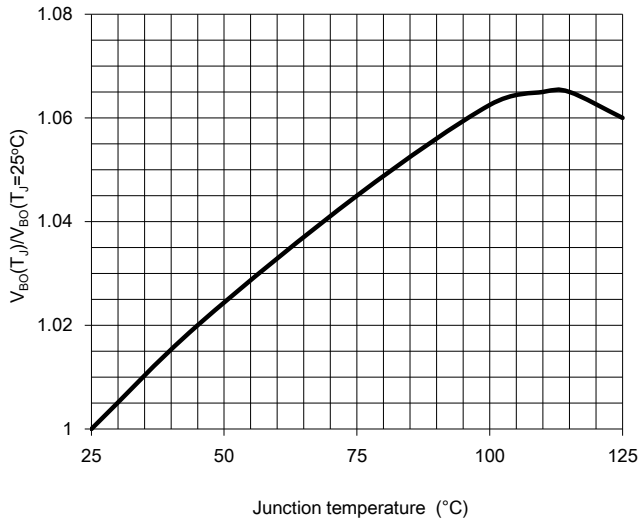


Fig. 2 Power derating curve

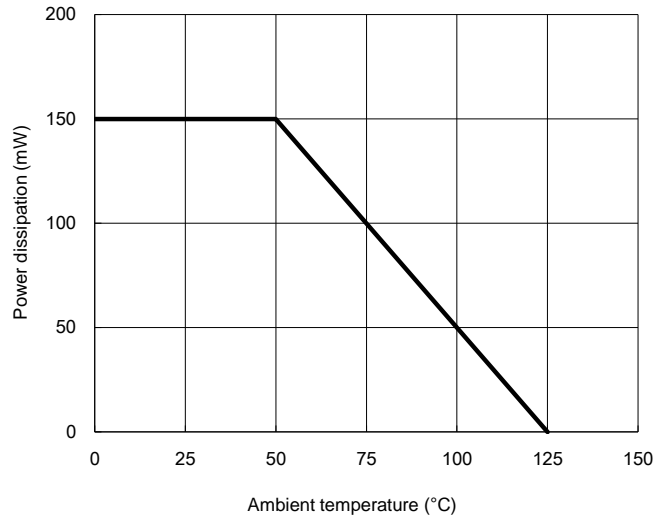
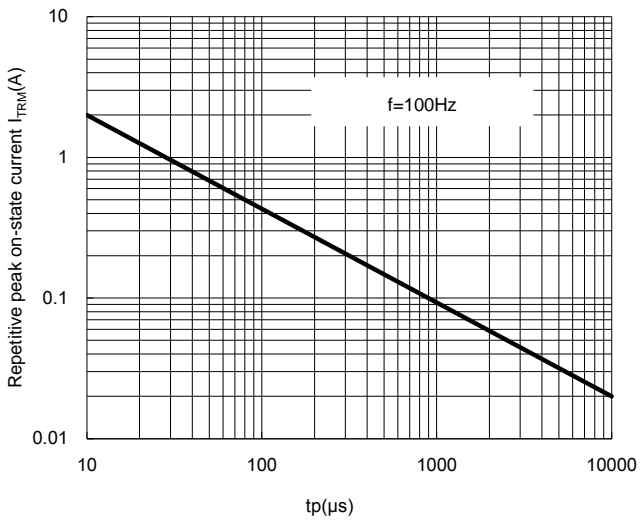


Fig. 3 Peak pulse current vs. pulse duration



Small Signal Product

ORDERING INFORMATION				
PART NO.	PACKING CODE	PACKING CODE SUFFIX	PACKAGE	PACKING
SODDBxx (Note 1, 2)	RH	G	SOD-123	3K / 7" Reel

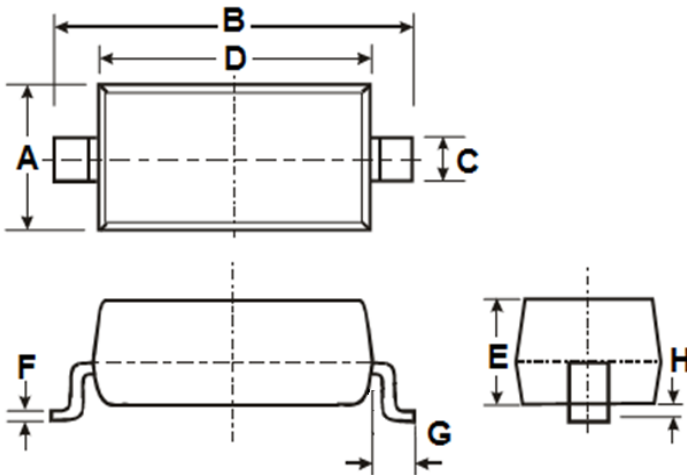
Note 1: "x" is Device Code from "3" - "3T".

Note 2: Whole series with green compound

EXAMPLE				
EXAMPLE P/N	PART NO.	PACKING CODE	PACKING CODE SUFFIX	DESCRIPTION
SODDB3 RHG	SODDB3	RH	G	Green compound

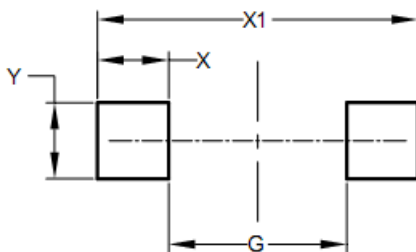
PACKAGE OUTLINE DIMENSIONS

SOD-123



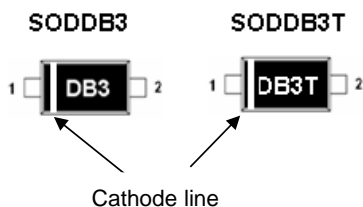
DIM.	Unit (mm)		Unit (inch)	
	Min	Max	Min	Max
A	1.40	1.80	0.055	0.071
B	3.55	3.85	0.140	0.152
C	0.45	0.70	0.018	0.028
D	2.55	2.85	0.100	0.112
E	0.95	1.35	0.037	0.053
F	0.05	0.15	0.002	0.006
G	0.50 REF		0.02 REF	
H	-	0.10	-	0.004

SUGGEST PAD LAYOUT



DIM.	Unit (mm)		Unit (inch)	
	Min	Min	Min	Min
G	2.25		0.089	
X	0.90		0.035	
X1	4.05		0.159	
Y	0.95		0.037	

MARKING



Note: Apply positive voltage in cathode line and apply negative in another electrode, it will show better I/V curve. It help user differentiate the direction of purpose.

Notice

Specifications of the products displayed herein are subject to change without notice. TSC or anyone on its behalf, assumes no responsibility or liability for any errors or inaccuracies.

Information contained herein is intended to provide a product description only. No license, express or implied, to any intellectual property rights is granted by this document. Except as provided in TSC's terms and conditions of sale for such products, TSC assumes no liability whatsoever, and disclaims any express or implied warranty, relating to sale and/or use of TSC products including liability or warranties relating to fitness for a particular purpose, merchantability, or infringement of any patent, copyright, or other intellectual property right.

The products shown herein are not designed for use in medical, life-saving, or life-sustaining applications. Customers using or selling these products for use in such applications do so at their own risk and agree to fully indemnify TSC for any damages resulting from such improper use or sale.