Small Signal Product

400mW Trigger Diode (DIAC)

FEATURES

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

SOD-123

Pb-Free

RoHS COMPLIANT

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

APPLICATION

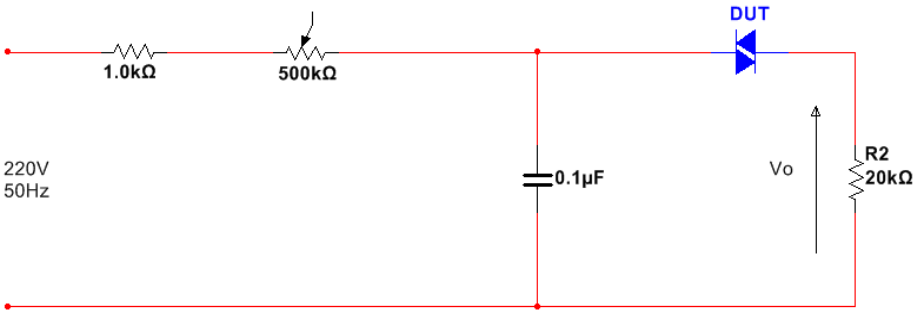
- These diacs are intended for use in thyrisitors phase control, circuits for lamp dimming, universal motor speed control, and heat control

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS (T_A=25℃ 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	SODDB3	V_{BO}	28	32	36	C=22nF	V
	SODDB3T		30	32	34		
Breakdown Voltage Symmetry	SODDB3	$[\|+V_{BO1}\|-\|-V_{BO2}\|]$			±3	C=22nF	V
	SODDB3T				±2		
Dynamic Breakdown Voltage	SODDB3	$\|\triangle V\pm\|$	5			$\triangle I$=[I_{BO} to I_F=10mA]	V
	SODDB3T		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	SODDB3	I_{BO}			100	C=22nF	μA
	SODDB3T		-		15		

Note: Test circuit for output voltage



Version: C1601

RATINGS AND CHARACTERISTICS CURVES

(T_A=25°C unless otherwise noted)

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

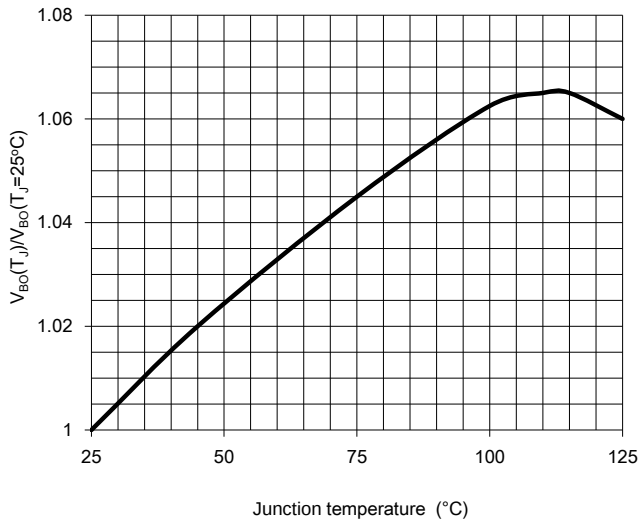


Fig. 2 Power derating curve

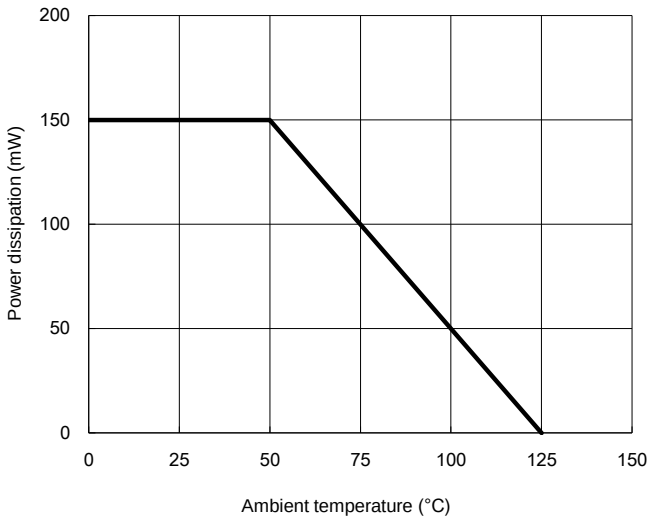
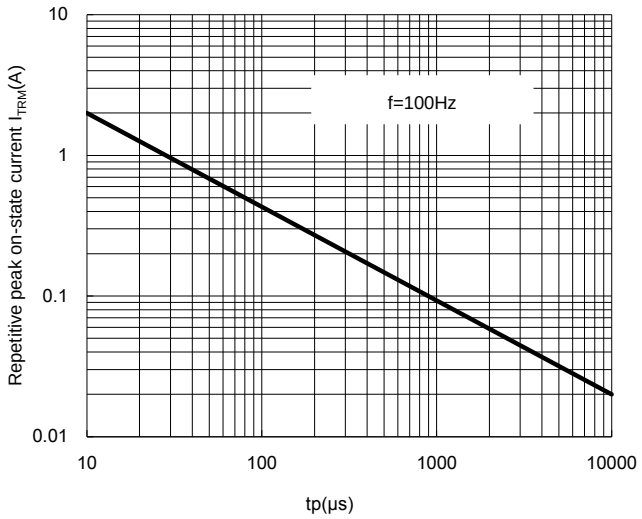


Fig. 3 Peak pulse current vs. pulse duration



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

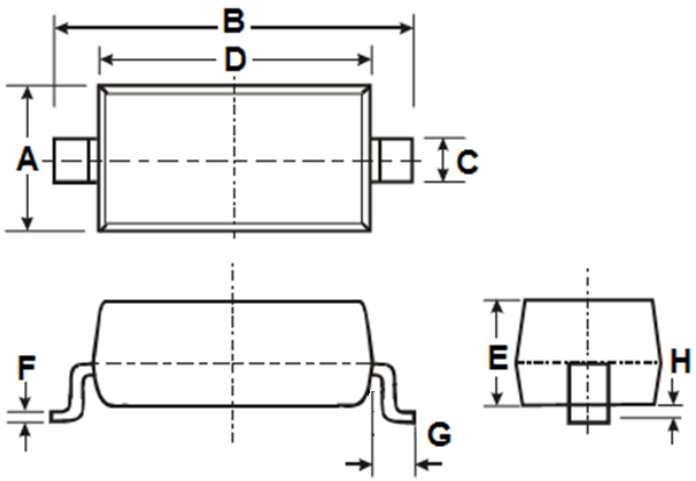
Note 1: "x" is Device Code from "3" - "3T".

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

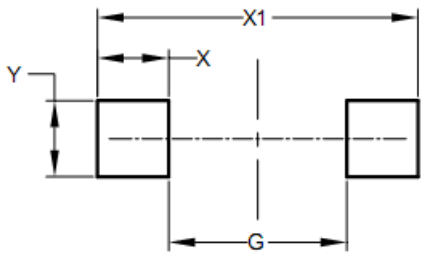
PACKAGE OUTLINE DIMENSIONS

SOD-123



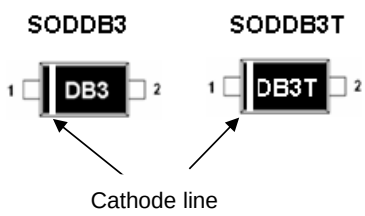
DIM.	Unit (mm)		Unit (inch)	
	Min	Max	Min	Max
A	1.40	1.80	0.055	0.071
B	3.55	3.85	0.140	0.152
C	0.45	0.70	0.018	0.028
D	2.55	2.85	0.100	0.112
E	0.95	1.35	0.037	0.053
F	0.05	0.15	0.002	0.006
G	0.50 REF		0.02 REF	
H	-	0.10	-	0.004

SUGGEST PAD LAYOUT



DIM.	Unit (mm)	Unit (inch)
	Min	Min
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.

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