
SURFACE MOUNT THYRISTOR

Compliance Standard

- ◆ IEC 61000-4-5 (Surge) 250A (8/20us)
- ◆ GR1089 (Surge) 100A (10/360us)
- ◆ ITU-T K.21 (Surge) 100A (5/310us)
- ◆ TIA-968-A (Surge) 80A (10/560us)

Applications

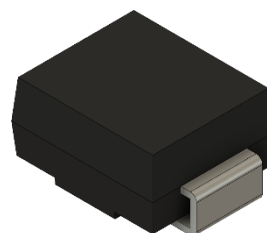
- ◆ T1/E1
- ◆ SLIC Line Interface
- ◆ ADSL/ISDN Line Interface
- ◆ Ethernet

Features

- ◆ Bi-directional Configuration
- ◆ Quick Response
- ◆ High Surge Capability
- ◆ Low Leakage Current

Mechanical Characteristics

- ◆ SMB Package
- ◆ Weight 98 Milligram (Approximate)
- ◆ Flammability Rating UL94V-0
- ◆ Lead Free Plating
- ◆ Reel Size 13"
- ◆ 3,000 PCS Per Reel

Package**SMB****Device Symbol**

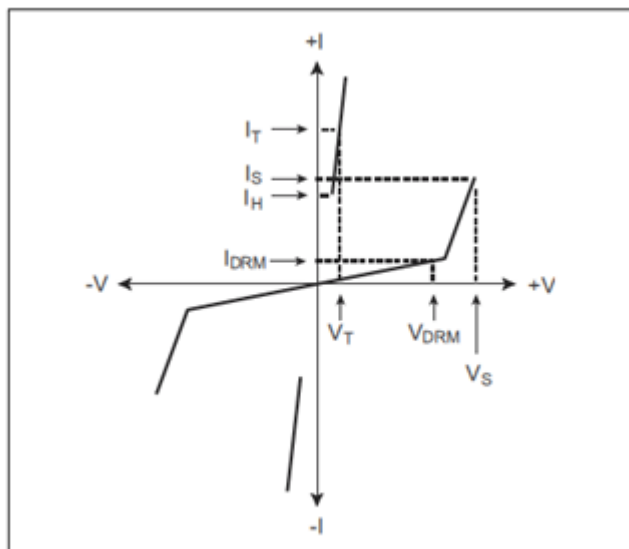
DEVICE CHARACTERISTICS

<i>Maximum Rating</i>			
Parameter	Symbol	Value	Unit
Surge Current—60Hz	I _{TSM}	25	A
Lead Soldering Temperature	T _L	260 (10s)	°C
Operating Temperature Range	T _J	-40~150	°C
Storage Temperature Range	T _{STG}	-55~150	°C

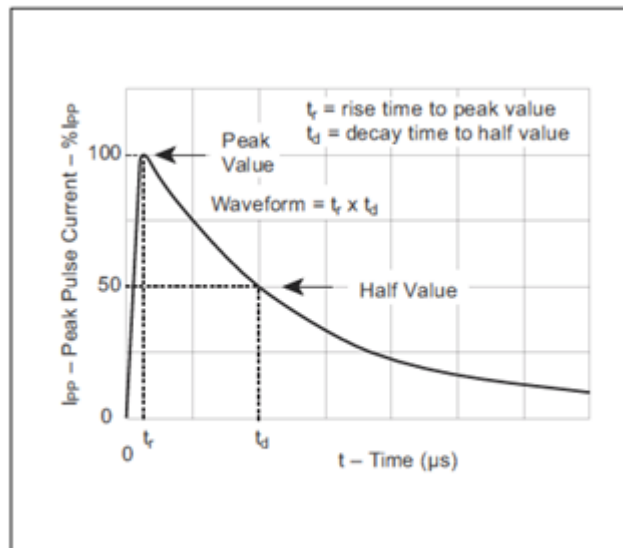
<i>Electrical Characteristics (@25 °C)</i>								
Part Number	V _{DRM} (Volt)	V _S (Volt)	I _S (mA)	I _{DRM} (uA)	I _H (mA)	I _T (A)	V _T (V)	C _o (pF)
NLC3100SB	275	350	800	5	150	2.2	4	45

<i>Surge Rating @ 25 °C</i>						
Series	I _{PP} 2x10 μs Amps	I _{PP} 8x20 μs Amps	I _{PP} 10x160 μs Amps	I _{PP} 10x560 μs Amps	I _{PP} 10x1000 μs Amps	di/dt Amps/μs
SB	250	250	150	80	75	500

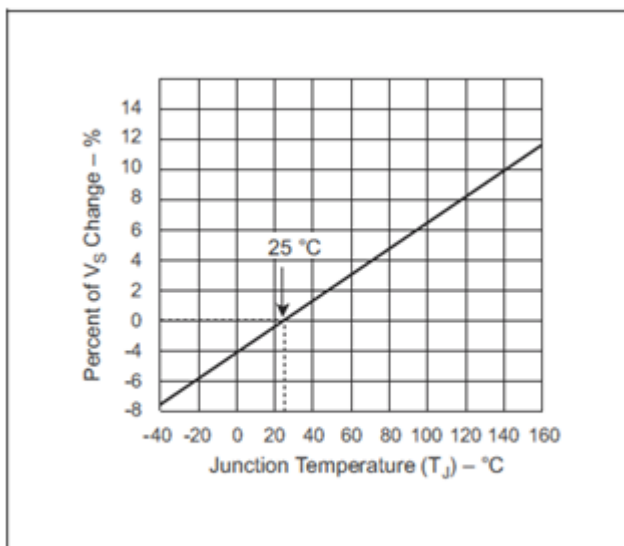
RATING CURVES



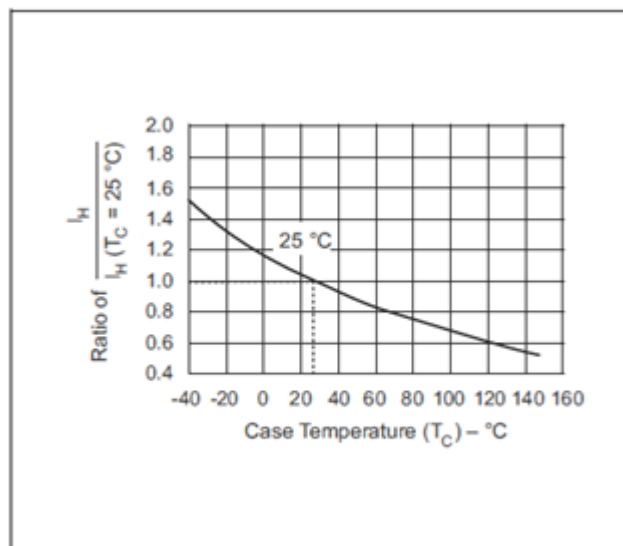
V-I Characteristics



$t_r \times t_d$ Pulse Wave-form



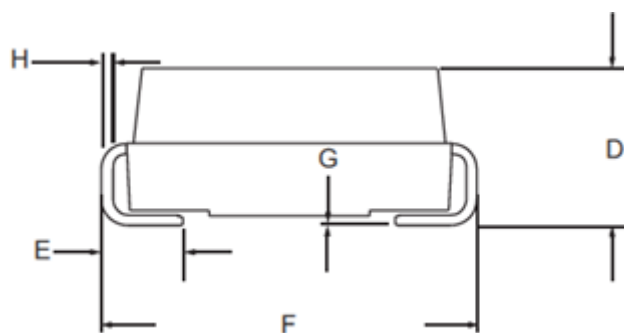
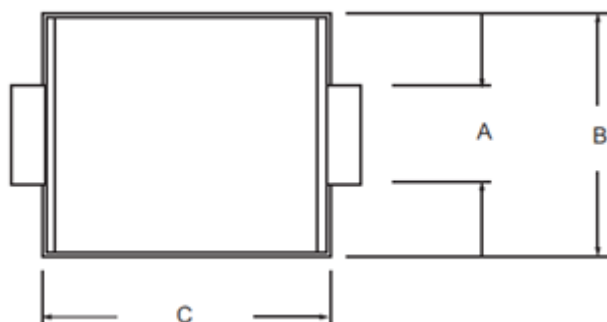
Normalized V_S Change versus Junction Temperature



Normalized DC Holding Current versus Case Temperature

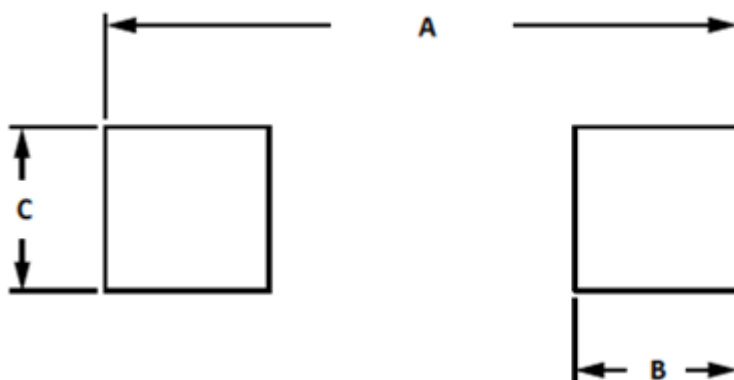
DEVICE OUTLINE

Outline Dimension				
Symbol	Millimeters		Inches	
	Min	Max	Min	Max
A	1.96	2.21	0.077	0.087
B	3.30	3.94	0.130	0.155
C	4.06	4.57	0.160	0.180
D	1.95	2.50	0.079	0.098
E	0.76	1.52	0.030	0.060
F	5.21	5.59	0.205	0.220
G	0.20TYP		0.008TYP	
H	0.15	0.31	0.006	0.012



LAYOUT PAD DIMENSION

<i>Layout PAD Dimension</i>				
Symbol	Millimeters		Inches	
	Min	Max	Min	Max
A	6.00	6.40	0.236	0.252
B	1.80	2.00	0.070	0.079
C	2.20	2.40	0.087	0.094



<i>Revision History</i>	<i>Description</i>
v2.0	Re-organize datasheet layout