NLightning Technology

NLC_SMA Series

SURFACE MOUNT THYRISTOR

Surge Compliance

- 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)

Package

DO-214AC

Application

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

Pin Configuration

Features

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

Mechanical Characteristics

- DO-214AC Package (SMA)
- Weight 65 Milligram (Approximate)
- Flammability Rating UL94V-0
- Lead Free Plating
- Reel Size 13″
- 5,000 PCS Per Reel

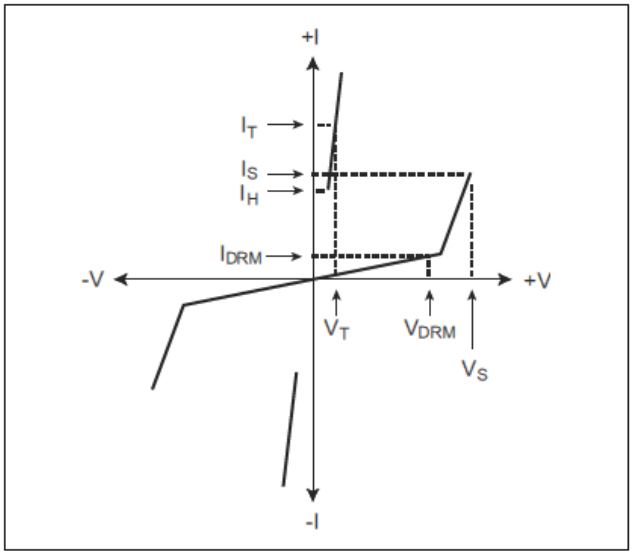
DEVICE CHARACTORISTICS

Maximum Rating			
Parameter	**Symbol**	**Value**	**Units**
Surge Current—60Hz	I_{TSM}	20	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

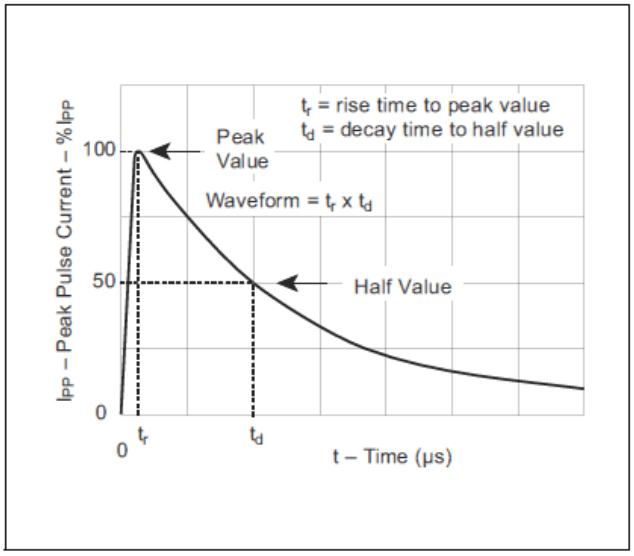
Electrical Characteristics (@25 °C)								
Part Number	**V_{DRM} (Volt)**	**V_S (Volt)**	**I_S (mA)**	**I_{DRM} (uA)**	**I_H (mA)**	**I_T (A)**	**V_T (V)**	**C_O (pF)**
NLC3100SMA	275	350	800	5	50	2.2	4	35
NLC3500SMA	320	400	800	5	50	2.2	4	35

Surge Rating @ 25℃							
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**	**I_{TSM} 60 Hz Amps**	**di/dt Amps/μs**
SMA	250	250	150	80	70	20	500

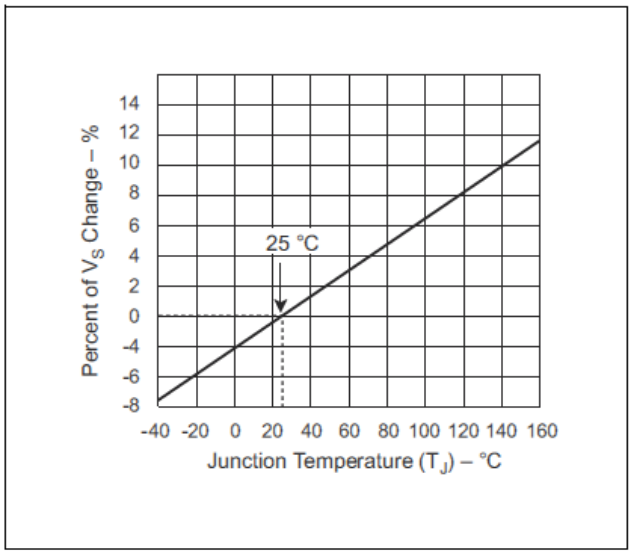
RATING CURVES



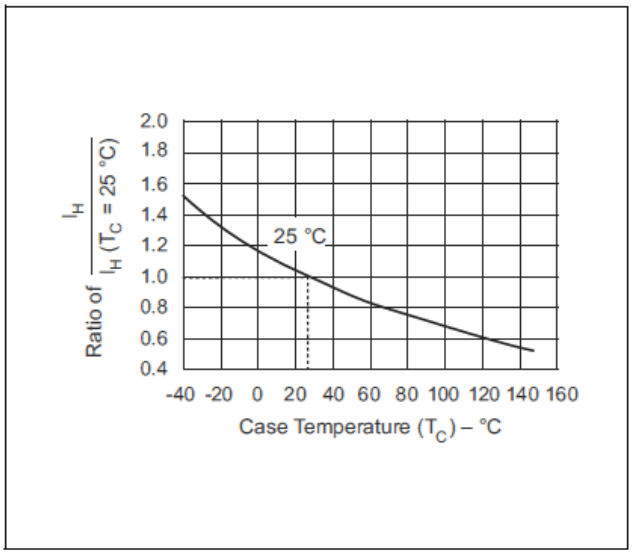
V-I Characteristics



t_r x t_d Pulse Wave-form



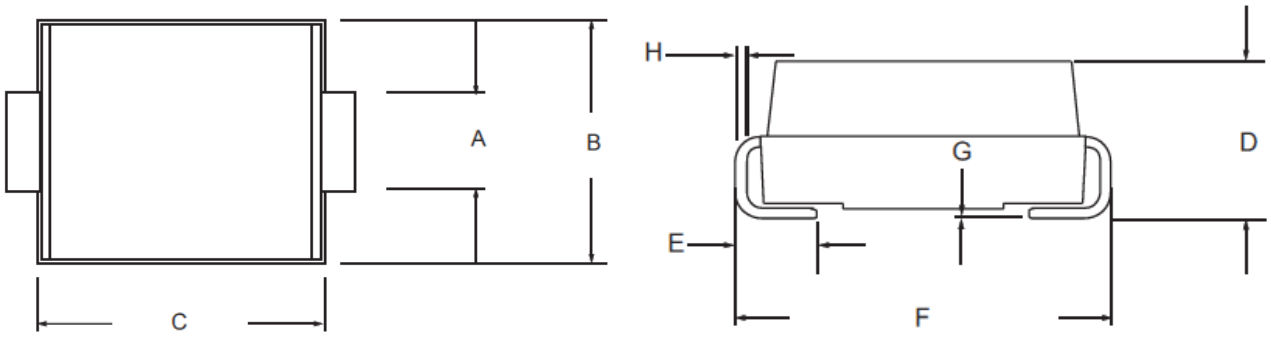
Normalized V_S Change versus Junction Temperature



Normalized DC Holding Current versus Case Temperature

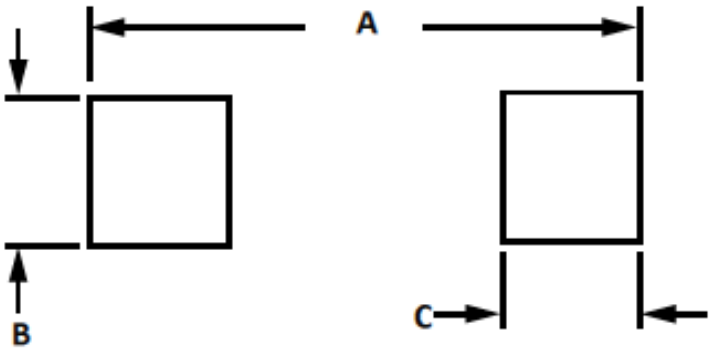
DIMENSIONS

Outline Dimension				
Symbol	Millimeters		Inches	
	Min	Max	Min	Max
A	1.25	1.65	0.049	0.065
B	2.54	2.79	0.100	0.110
C	3.99	4.55	0.157	0.177
D	1.98	2.29	0.078	0.090
E	0.78	1.52	0.030	0.060
F	4.93	5.28	0.194	0.208
G	0.05	0.30	0.0019	0.0118
H	0.15	0.31	0.006	0.012



LAYOUT PAD

Layout PAD Dimension				
Symbol	Millimeters		Inches	
	Min	Max	Min	Max
A	6.50	-	0.256	-
B	1.80	-	0.070	-
C	2.10	-	0.082	-



Revision History	Modification Description
Rev.1.0	Initial Release
Rev.1.01	Edit Document Layout
Rev.1.02	Reduce Series Models
Rev.1.03	Redefine Upper/Lower Limit of Dimension G