

承 認 書

SPECIFICATION FOR APPROVAL

CUSTOMER'S APPROVAL CHOP 客 戶 確 認 蓋 章
條件附確認: Approval's condition: _____
確認日期 Approved date: _____

確認這制品, 請簽回一套給我司并蓋上貴司的正式印章
KINDLY RETURN A SET WITH YOUR COMPANY'S OFFICIAL
STAMP ON APPROVAL OF THIS ITEM

客 戶 名 稱 :
CUSTOMER'S NAME : _____

客 戶 機 型 :
CUSTOMER'S MODEL NO. : _____

客 戶 型 號 :
CUSTOMER'S PART NO. : _____

類 別 :
DESCRIPTION : Programmable Over Voltage protector

晶 訊 編 號 :
SEMITELE'S MODEL NO. : SVG120DN

版 本 :
VERSION : B

日 期 :
DATE : 2016/4/12

- 承認書附件:
Attachments:
- 制品規格書
Product specification
 - 樣品/Sample Qty.:
 - 測試參數
Test data

Prepared By	Checked By	Approved By
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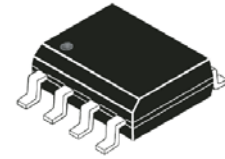
变更记录 Revision Record

版本 Version	变更日期 Revision date	变更项目/Revision for items	变更原因/Reason For Revision
A	2013/10/15	New product release	
B	2013/11/20	Performance improve	Adjust the parameter

晶訊編號： SEMTEL'S MODEL NO. :	SVG120DN	客戶機型： CUSTOMER'S MODEL NO.:	
版本/VERSION :	B	客戶型號 :	
日期/DATE :	2016/4/12		

Description

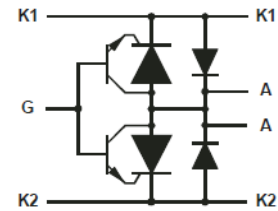
This device is especially designed to protect Subscriber Line Interface Circuit (SLIC) against transient overvoltage. Positive overloads are clipped with 2 diodes. Negative surges are suppressed by 2 Thyristors, their breakdown voltage being referenced to VBAT through the gate. This component presents a very low gate triggering current and minimizes overvoltage stress on the SLIC.



SOP-8

Feature

- Dual programmable transient suppressor
- Wide battery voltage supports
- Low gate triggering current
- High holding current
- ESD Immunity(HBM): JESD22 Class 3B, $\geq 8\text{KV}$
- MSL: Level 1 - unlimited



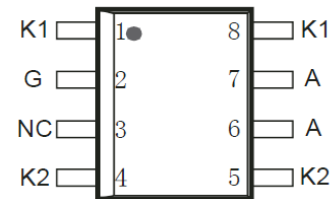
Schematic Diagram

Application

- Switch Line Card
- Access Network Line Card
- PBX
- VoIP

Pin Configuration

Pin #	Pin Name	Description
1, 4, 5, 8	K1, K2	Connect to subscriber lines (Tip/Ring)
2	G	Connect to battery (Reference Voltage)
6, 7	A	Connect ground
3	NC	Not connected

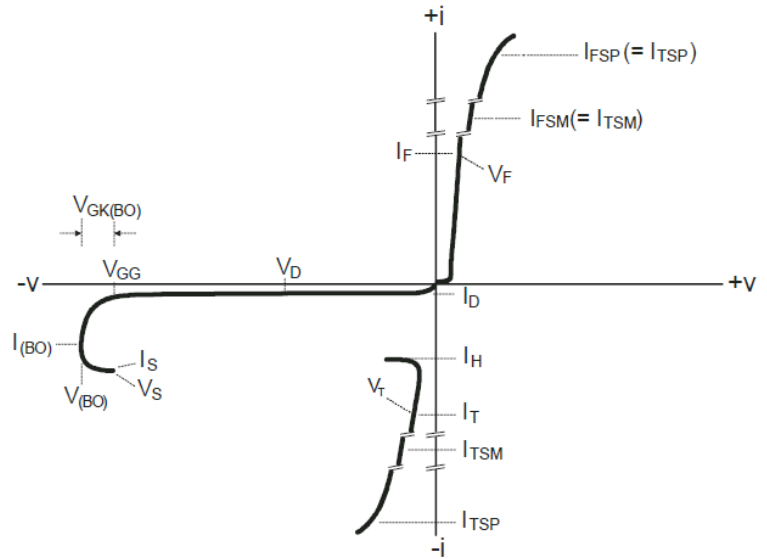


Absolute Maximum Ratings

Parameter	Symbol	Value	Unit
Non-repetitive peak on-state pulse current	I_{pp}	30	A
10/1000 μs		40	
5/310 μs		120	
Non repetitive surge peak on-state current (sinusoidal) 60Hz	I_{TSM}	6.5	A
0.5s		4.5	
1s		2.4	
5s		1.3	
30s		0.72	
900s			
Maximum voltage LINE/GROUND	V_{DRM}	-120	V
Maximum voltage GATE/LINE	V_{GKRM}	-120	V
Operating free-air temperature range	T_A	-40-85	$^{\circ}\text{C}$
Storage temperature range	T_{STG}	-40-150	$^{\circ}\text{C}$
Junction temperature	T_J	-40-150	$^{\circ}\text{C}$
Maximum lead temperature for soldering during 10s	T_L	260	$^{\circ}\text{C}$
Junction to free air thermal resistance	$R_{\theta JA}$	120	$^{\circ}\text{C}/\text{W}$

Electrical Characteristics (T_A = 25°C)

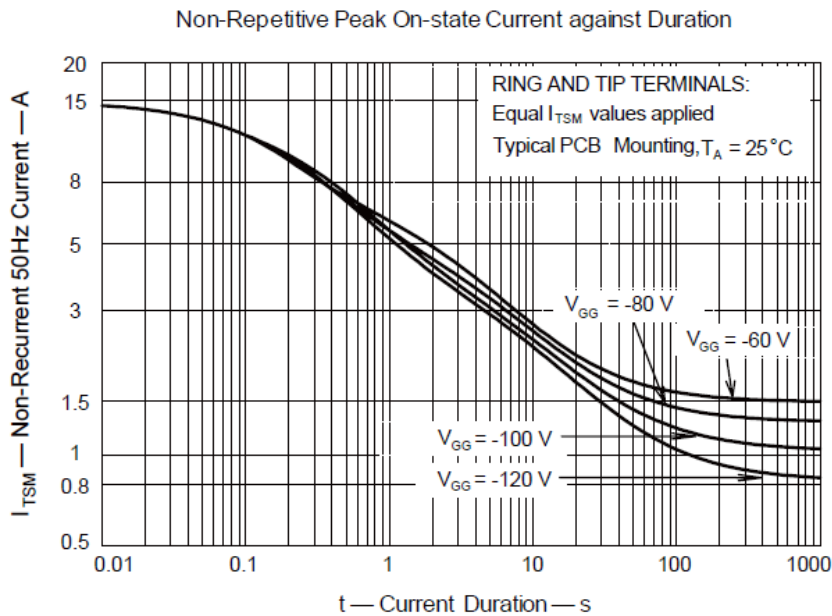
Parameter	Symbol
Off-state current	I _D
Holding current	I _H
Breakover voltage	V _(BO)
Forward voltage	V _F
Peak forward recovery voltage	V _{FRM}
Gate-cathode impulse breakover voltage	V _{GK(BD)}
Gate reverse current	I _{GKS}
Gate trigger current	I _{GT}
Gate-cathode trigger voltage	V _{GT}
Cathode-anode off-state capacitance	C _{KA}



Parameters Related to the Diode (T_A = 25°C)

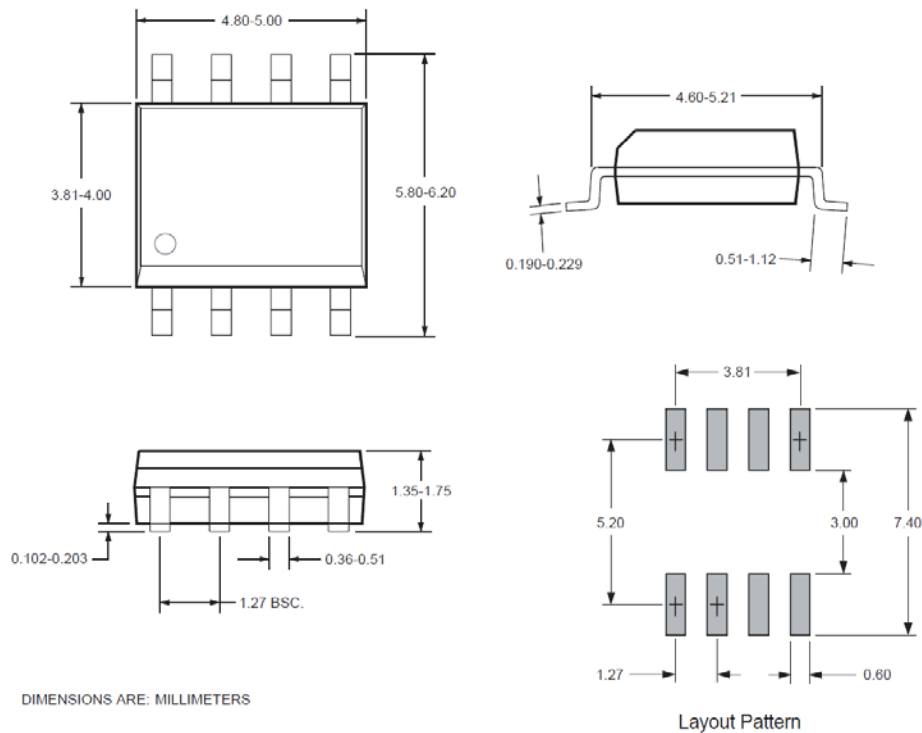
Symbol	Test Conditions	Min.	Typ.	Max.	Unit
V _F forward voltage	I _F =5A, t _w =200μs			3	V
V _{FRM} peak forward recovery voltage	2/10μs, I _F =100A, R _s =50Ω, di/dt=80A/μs			10	V

Parameters Related to the Thyristor (T_A = 25°C)



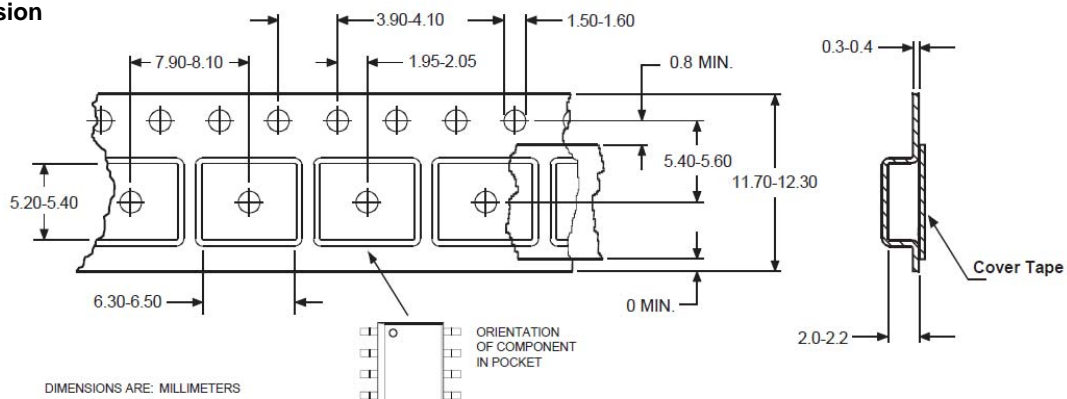
Symbol	Test Conditions	Min.	Typ.	Max.	Unit
I_D off-state current	$V_D=-170V, V_{GK}=0 \quad T_J=25^\circ C$			-5	μA
	$V_D=-170V, V_{GK}=0 \quad T_J=85^\circ C$			-50	μA
V_{BO} breakover voltage	$2/10\mu s, I_{TM}=100A, R_s=50\Omega, di/dt=-80A/\mu s, V_{GG}=-48V$			-60	V
I_H holding current	$I_T=-1A, di/dt=1A/ms, V_{GG}=-100V$	-150			mA
I_{GAS} gate reverse current	$V_{GG}=V_{GK}=-167V, V_{KA}=0 \quad T_J=25^\circ C$			-5	μA
	$V_{GG}=V_{GK}=-167V, V_{KA}=0 \quad T_J=85^\circ C$			-50	μA
I_{GT} gate trigger current	$I_T=3A, tp(g)\geq 20\mu s, V_{GG}=-100V$			5	mA
V_{GT} gate trigger voltage	$I_T=3A, tp(g)\geq 20\mu s, V_{GG}=-100V$			2.5	V
C_{AK} anode-cathode offstate capacitance	$f=1MHz, V_d=1V, I_G=0 \quad V_D=-3V$			110	pF
	$f=1MHz, V_d=1V, I_G=0 \quad V_D=-48V$			55	pF

Product Dimension

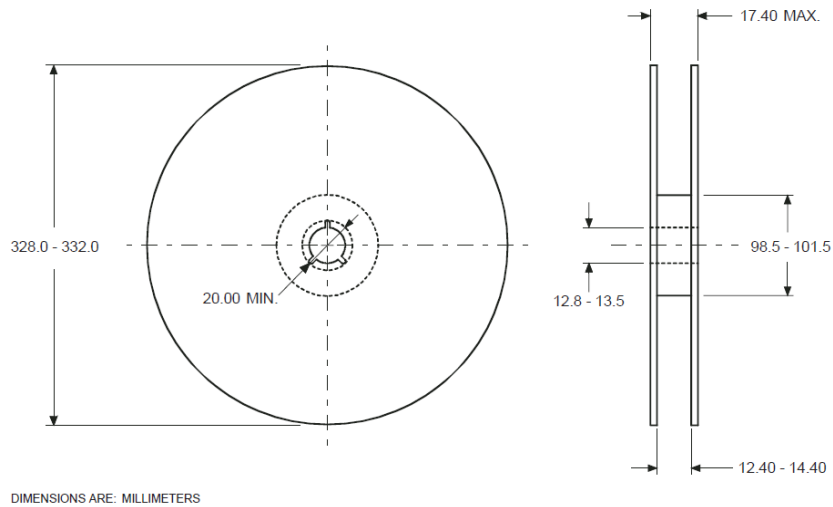


Package Information

Tape Dimension

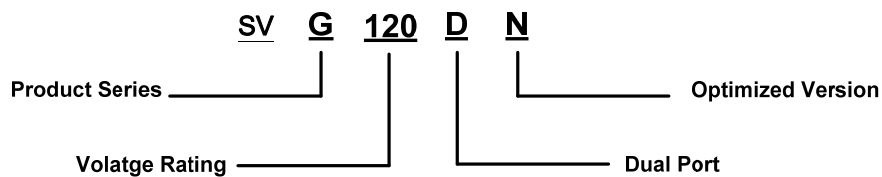


Reel Dimension



Marking and Order Information

Part Number System



Order Information

Device	Package	Net Weight	Carrier	Quantity	HSF Status
SVG120DN	SOP-8	0.0080g	Tape & Reel	2,500pcs/reel	RoHS compliant

Marking



YYWW = Date Code

Specifications are subject to change without notice.

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