上海晟芯微电子有限公司

Shanghai Senchip Microelectronics Co.,Ltd

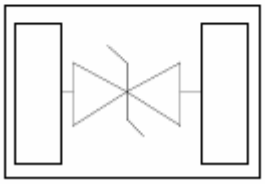
Transient Voltage Suppressor

SCLAMP0521P

Features

- Peak Power Dissipation – 20W(8×20us Waveform)
- Stand-off Voltage:5.0V
- Low capacitance(＜0.5pF)for high-speed interfaces
- No insertion loss to 2.0GHz
- Replacement for MLV(0402)
- Protects I/O Port
- Low Clamping Voltage
- Low Capacitance
- Meets MSL 1 Requirements
- ROHS compliant

DFN1006



IEC COMPATIBILITY (EN61000-4)

- IEC 61000-4-2 (ESD) ±15kV (air), ±8kV (contact)
- IEC 61000-4-4 (EFT) 40A (5/50ns)

Main applications

- High Speed Line:USB1.0/2.0,VGA,DVI,SDI
- Serial and Parallel Ports
- Notebooks,Desktops,Servers
- Projection TV
- Cellular handsets and accessories
- Portable instrumentation
- Peripherals

Maximum rating(Tamb=25℃ Unless Otherwise Specified)

Parameter	Symbol	Value	Unit
Peak Pulse Power (tp=8/20μs waveform)	P_{PPP}	20	Watts
ESD Rating per IEC61000-4-2: Contact Air		8 15	KV
Lead Soldering Temperature	T_L	260 (10 sec.)	℃
Operating Temperature Range	T_J	-55 ~ 150	℃
Storage Temperature Range	T_{STG}	-55 ~ 150	℃
Lead Solder Temperature – Maximum (10 Second Duration)	T_L	260	℃

Maximum ratings are those values beyond which device damage can occur. Maximum ratings applied to the device are individual stress limit
values (not normal operating conditions) and are not valid simultaneously. If these limits are exceeded, device functional operation is not
implied,damage may occur and reliability may be affected.
**Other voltages may be available upon request.*
1. Nonrepetitive current pulse, per Figure 1.

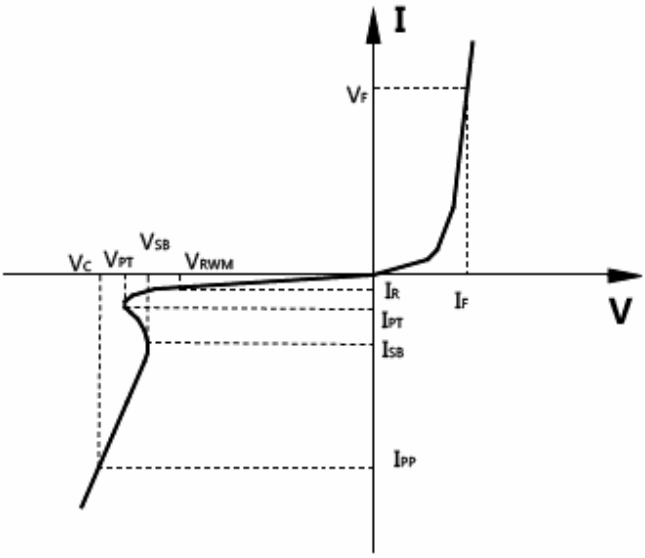
Electrical characteristics(Tamb=25℃ Unless Otherwise Specified)

Device	V_{RWM}	I_R @ V_{RWM}	V_{PT} @ 1 mA (Volts)		V_C @ 1 A	Capacitance @ V_R = 0 V, 1 MHz (pF)	
	(V)	(uA)	Min	Max	(V)	Typ	Max
SCLAMP0521P	5.0	1	6.0	10	15.0	0.3	0.5

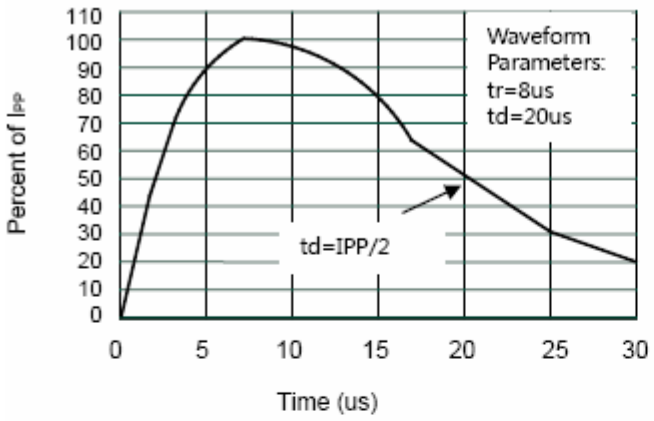
Junction capacitance is measured in VR=0V,F=1MHz

Electrical Parameters (T=25℃)

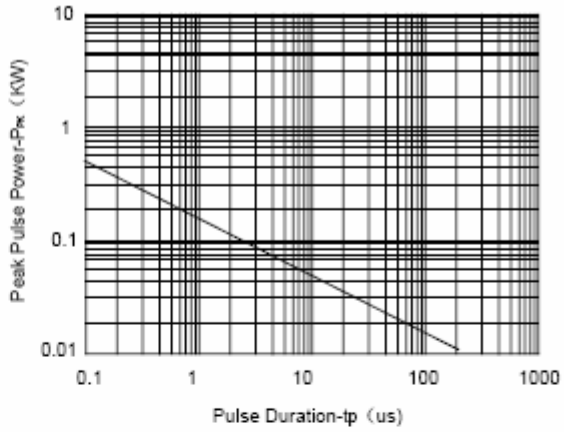
Symbol	Parameter
V_{RWM}	Working Peak Reverse Voltage
V_{PT}	Punch-Through Voltage@ I_{PT}
V_{SB}	Snap-Back Voltage@ I_{SB}
V_C	Clamping Voltage @ I_{PP}
I_T	Test Current
I_{RM}	Leakage current at V_{RWM}
I_{PP}	Peak pulse current
C_O	Off-state Capacitance
C_J	Junction Capacitance



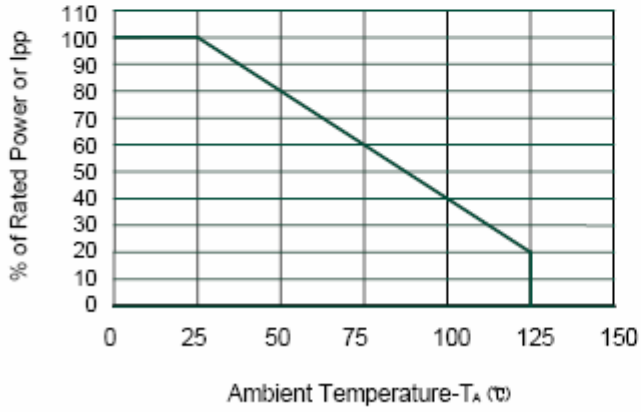
Typical Characteristics



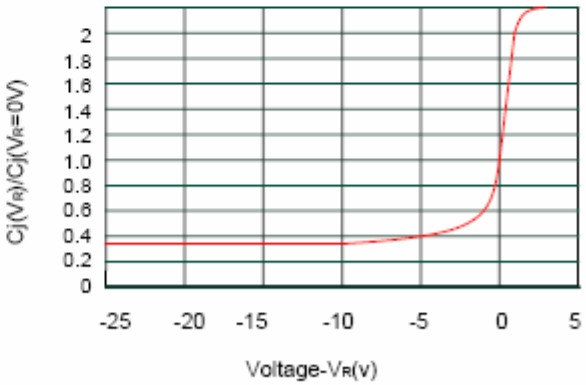
Pulse Waveform



Non-Repetitive Peak Pulse Power vs. Pulse Time

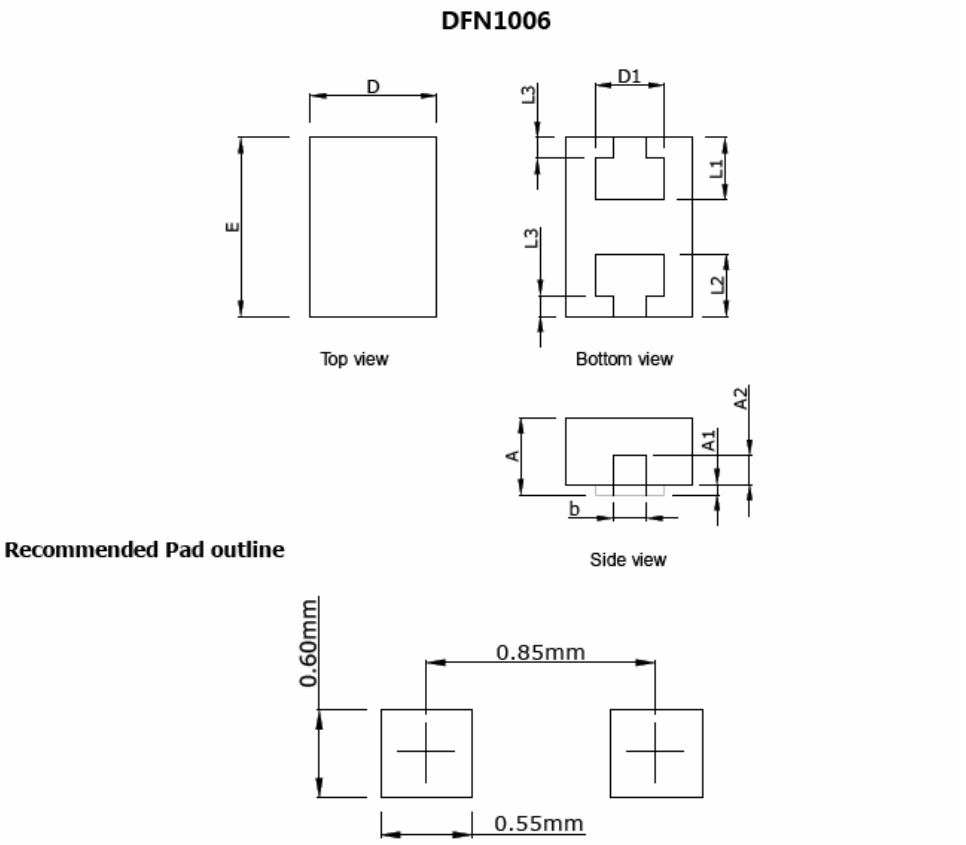


Power Derating Curve



Junction Capacitance vs. Reverse Voltage

Outline Drawing – DFN1006



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min	Max	Min	Max
A	0.40	0.50	0.016	0.020
A1		0.05		0.002
A3	0.15REF		0.006REF	
D	0.55	0.65	0.022	0.026
E	0.95	1.05	0.037	0.041
D1	0.25	0.35	0.010	0.014
b	0.15	0.25	0.006	0.001
L1	0.25	0.45	0.010	0.018
L2	0.23	0.43	0.009	0.017
L3	0.10REF		0.004REF	

Ordering Information

Device	Qty per Reel	Reel Size
SCLAMP0521P	5000	7 Inch