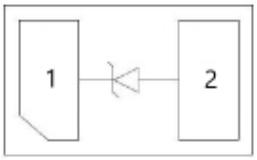
SSCE5V061N1

1-Line Uni-directional TVS Diode

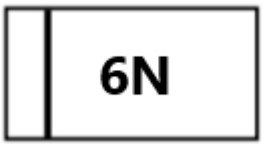
Description

The SSCE5V061N1 is an uni-directional TVS diode, utilizing leading monolithic silicon technology to provide fast response time and low ESD clamping voltage, making this device an ideal solution for protecting voltage sensitive data and power line. The SSCE5V061N1 complies with the IEC 61000-4-2 (ESD) with ±30kV air and ±30kV contact discharge. It is assembled into a small lead-free DFN1006-2 (1.0×0.6×0.5mm) package. The small size and high ESD surge protection make AU0531P1 an ideal choice to protect cell phone, digital cameras, audio players and many other portable applications.

PIN configuration



Top view



Marking

Feature

- Ultra small package: 1.0x0.6x0.5mm
- Protects one date or power line
- Working voltage: 5V
- Low clamping voltage
- 2-pin leadless package
- Complies with following standards:
  - IEC 61000-4-2 (ESD) immunity test
    Air discharge: ±30kV
    Contact discharge: ±30kV
  - IEC61000-4-5 (Lightning) 16A (8/20us)
- RoHS Compliant

Applications

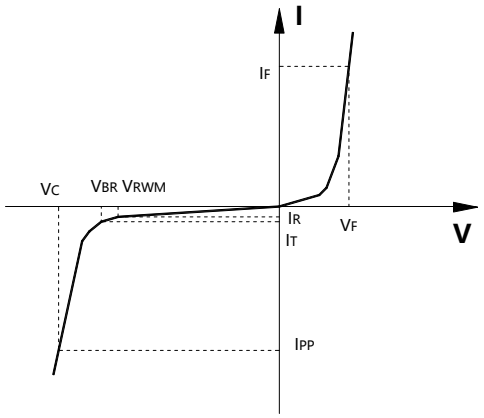
- Cellular Handsets and Accessories
- Personal Digital Assistants
- Notebooks and Handhelds
- Portable Instrumentation
- Digital Cameras
- Peripherals
- Audio Players
- Keypads, Side Keys, LCD Displays

Mechanical data

- Package: DFN1006-2 (1.0×0.6×0.5mm)
- Lead Finish: NiPdAu
- Case Material: “Green” Molding Compound.
- UL Flammability Classification Rating 94V-0
- Moisture Sensitivity: Level 3 per J-STD-020
- Terminal Connections: See Diagram Below
- Marking Information: See Below

Electronic Parameter

Symbol	Parameter
V_{RWM}	Peak Reverse Working Voltage
I_R	Reverse Leakage Current @ V_{RWM}
V_{BR}	Breakdown Voltage @ I_T
I_T	Test Current
I_{PP}	Maximum Reverse Peak Pulse Current
V_C	Clamping Voltage @ I_{PP}
P_{PP}	Peak Pulse Power
C	Junction Capacitance



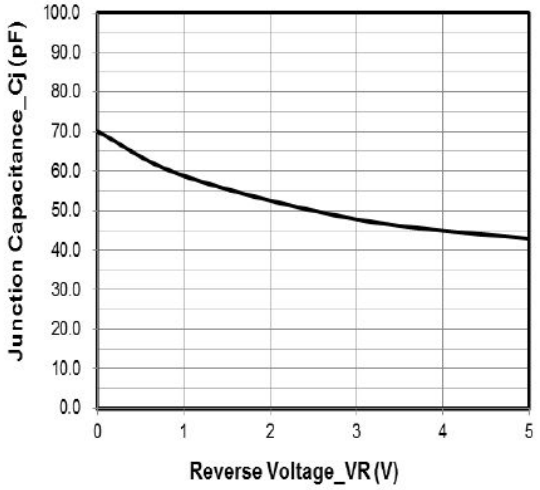
Absolute maximum rating @TA=25℃

Symbol	Parameter	Value	Units
P_{PP}	Peak Pulse Power（8/20μS）	200	W
I_{PP}	Peak Pulse Current（8/20μS）	16	A
V_{ESD}	ESD per IEC 61000−4−2 (Air) ESD per IEC 61000−4−2 (Contact)	±30 ±30	KV
T_{STG}	Storage Temperature	-55/+150	℃
T_J	Operating Temperature	-55/+125	℃

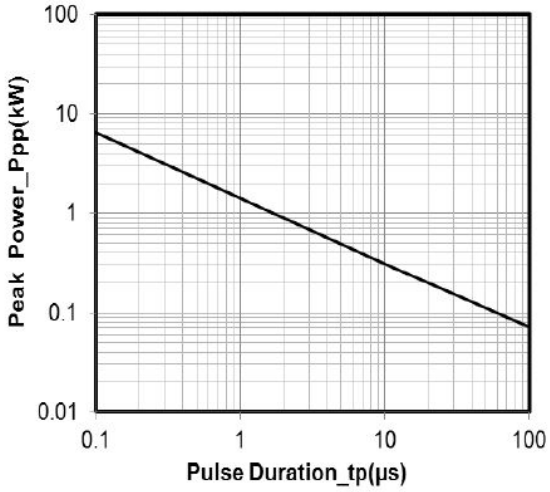
Electrical Characteristics @TA=25℃

Parameter	Symbol	Conditions	Min.	Typ.	Max.	Units
Peak Reverse Working Voltage	V_{RWM}				5	V
Breakdown Voltage	V_{BR}	It = 1mA	6			V
Reverse Leakage Current	I_R	VRWM =5V,			0.2	μA
Forward Voltage	V_F	I_F=10mA		1.0		V
Clamping Voltage	V_C	IPP = 1A, tP = 8/20μs		8		V
Clamping Voltage	V_C	IPP=16A, tP = 8/20μs		12	14	V
Junction Capacitance	C_J	VR=0V, f = 1MHz		100		pF

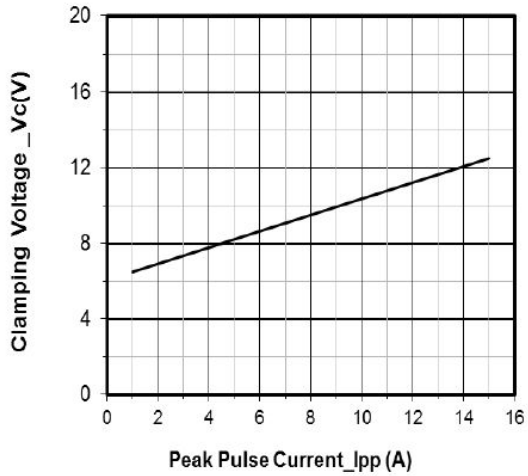
- **Typical Performance Characteristics**



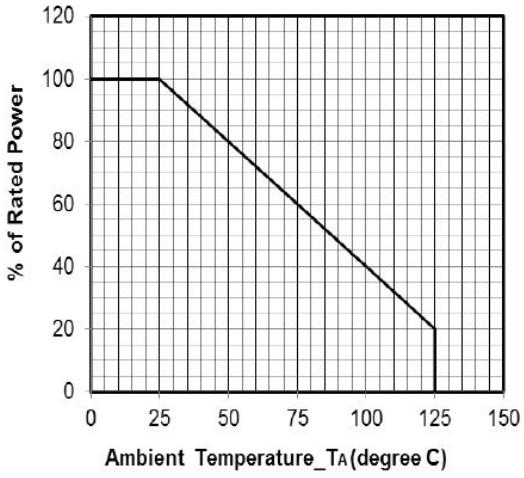
Junction Capacitance vs. Reverse Voltage



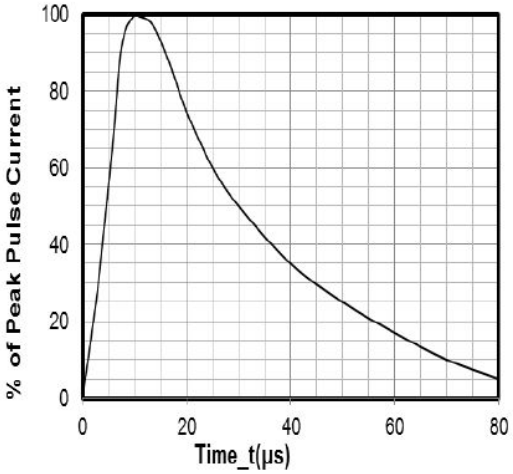
Peak Pulse Power vs. Pulse Time



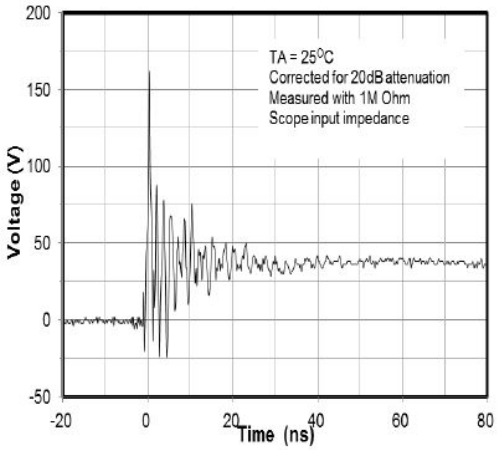
Clamping Voltage vs. Peak Pulse Current



Power Derating Curve



8 X 20μs Pulse Waveform



ESD Clamping Voltage

8 kV Contact per IEC61000-4-2

- **Package Information**

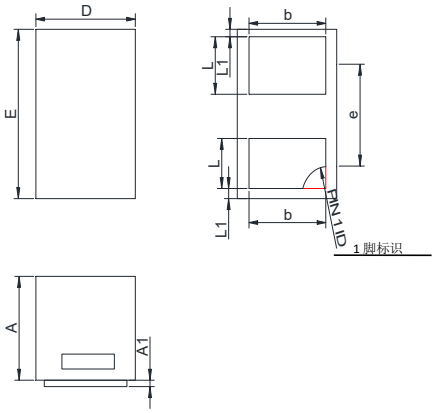
Ordering Information

Device	Package	Qty per Reel	Reel Size
SSCE5V061N1	DFN1006-2L	10000	7 Inch

Mechanical Data

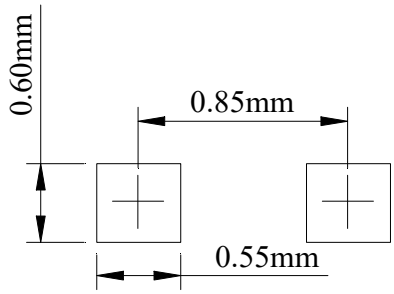
Case:DFN1006-2L

Case Material: Molded Plastic. UL Flammability



DIM	Millimeters	
	Min	Max
A	0.45	0.55
A1	0.00	0.05
D	0.55	0.65
E	0.95	1.05
b	0.45	0.55
e	0.65TYP	
L	0.20	0.30
L1	0.05REF	

Recommended Pad outline



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