

High Capacitance ESD Protection Diode

1 Features

- IEC 61000-4-2 Level 4 ESD Protection
 - ± 30 -kV Contact Discharge
 - ± 30 -kV Air Gap Discharge
- Peak Reverse Working Voltage: 6.5V (Maximum)
- IO Capacitance:
 - 275pF (Typical)
- DC Breakdown Voltage: 7.0V (Minimum)
- Low Leakage Current: 1 μ A (Maximum)
- Industrial Temperature Range: -55°C to $+125^{\circ}\text{C}$
- Package DFN1006-2L

2 Applications

- End Equipment
 - Smart Wearable
 - TV and Monitors
 - Cellular handsets and accessories
 - Portable electronics
 - Communication systems
 - Computers and peripherals

3 Description

The SLEN26H5CU is a uni-directional TVS diode, utilizing leading monolithic silicon technology to provide fast response time and ultralow ESD clamping voltage, making this device an ideal solution for protecting voltage sensitive data and power line. The

SLEN26H5CU complies with the IEC 61000-4-2 (ESD) with ± 30 kV air and ± 30 kV contact discharge. It is assembled into an ultra-small 1.0x0.6x0.5mm DFN lead-free package. The small size and high ESD surge protection make SLEN26H5CU an ideal choice to protect cell phone, digital cameras, audio players and many other portable applications.

4 Pin Configuration and Bottom View



DFN1006-2L

5 Device Information

PART NUMBER	PACKAGE	BODY SIZE (NOM)
SLEN26H5CU	DFN1006-2L	1.00 mm x 0.60mm

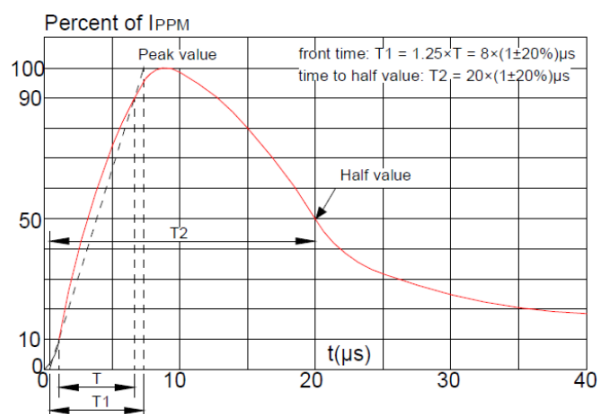
6 Absolute maximum Ratings @25°C

RATING	SYMBOL	VALUE	UNITS
Peak Pulse Power ($t_p=8/20\mu\text{s}$)	P_{PP}	480	W
Peak Pulse Current ($t_p=8/20\mu\text{s}$)	I_{PP}	40	A
Operating Temperature	T_J	-55 to 125	$^{\circ}\text{C}$
Storage Temperature	T_{STG}	-55 to 150	$^{\circ}\text{C}$
ESD Protection-Contact Discharge	V_{ESD}	± 30	kV
ESD Protection-Air Discharge	V_{ESD}	± 30	kV

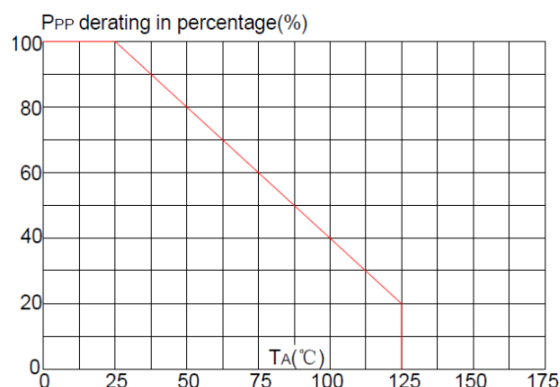
7 Electrical characteristics (@25°C unless otherwise specified)

PARAMETER	SYMBOL	CONDITIONS	MIN.	TYP.	MAX.	UNITS
Peak Reverse Working Voltage	V_{RWM}				6.5	V
Breakdown Voltage	V_{BR}	$I_t = 1\text{mA}$	7.0	7.2		V
Reverse Leakage Current	I_R	$V_{RWM} = 6.5\text{V}$ $T=25^\circ\text{C}$			1	μA
Clamping Voltage	V_C	$I_{PP} = 1\text{A}$ $t_P = 8/20\mu\text{s}$		7	8	V
Clamping Voltage	V_C	$I_{PP} = 30\text{A}$ $t_P = 8/20\mu\text{s}$		10	11	V
Clamping Voltage	V_C	$I_{PP} = 40\text{A}$ $t_P = 8/20\mu\text{s}$		11	12	V
Junction Capacitance	C_j	$V_R=0\text{V}$ $f = 1\text{MHz}$		275	300	pF

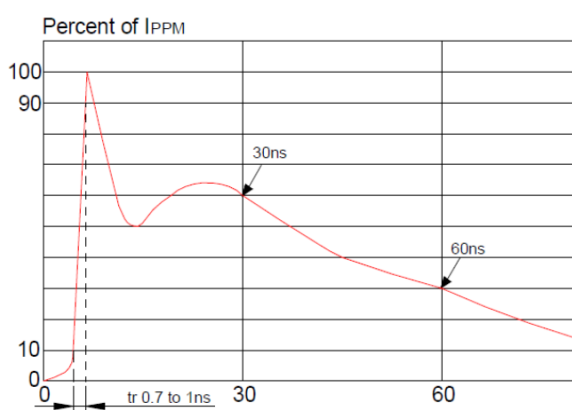
8 Typical Characteristics



Pulse Waveform (8/20us)

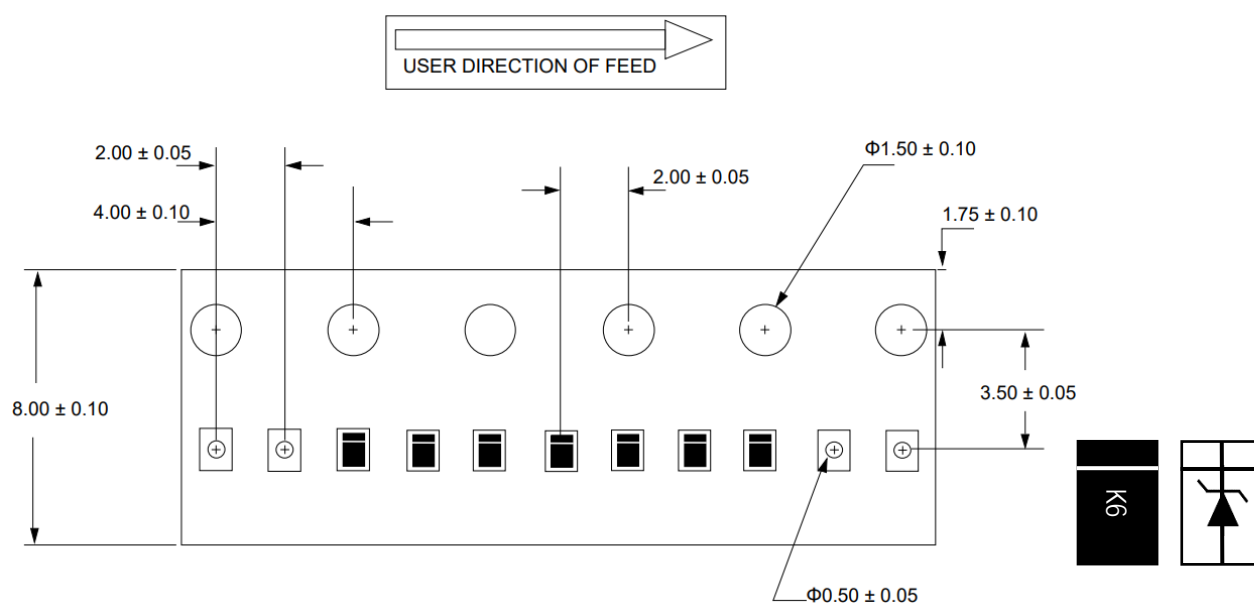


Pulse Derating Curve



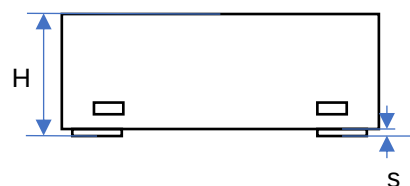
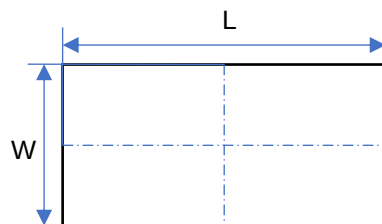
ESD Clamping(8kV Contact Discharge)

9 Load with information

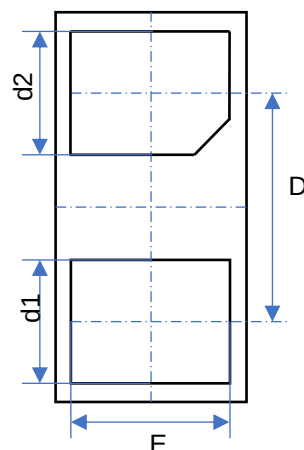


10 Product dimension

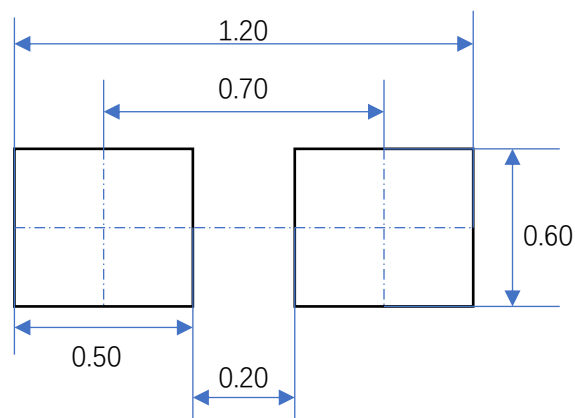
DFN1006-2L



DIM	UNITS (mm)		
	MIN.	TYP.	MAX.
L	0.95	1.00	1.08
W	0.55	0.60	0.68
H	0.39	0.44	0.50
s	0.00	0.02	0.05
D	0.60	0.65	0.70
E	0.40	0.50	0.60
d1	0.20	0.25	0.30
d2	0.20	0.25	0.30



11 PCB Layout Footprints



12 Ordering Information

Part Number	Packaging	Reel Size
SLEN26H5CU	10000/Tape & Reel	7 inch