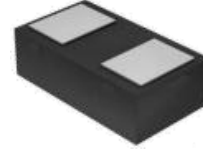


## 1. Features

- Capacitance: 3.5pF(typ.)
- Reverse Working Voltage: 5V
- IEC 61000-4-2 (ESD Air):  $\pm 25\text{KV}$   
IEC 61000-4-2 (ESD Contact):  $\pm 20\text{KV}$   
IEC 61000-4-5 (Lightning 8/20 $\mu\text{s}$ ): 2.5A

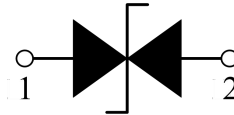
## 2. Pin Description



## 3. Applications

- Cellular phones
- Portable devices
- Digital cameras
- Power supplies

## 4. Schematic Diagram



## 5. Order Information

Type	Package	Size (mm)	Delivery Form	Delivery Quantity
SCS312S35	DFN1006	1.00x0.60x0.37	7" T&R	10,000

## 6. Limiting Values( $T_A = 25\text{ }^\circ\text{C}$ , unless otherwise specified)

Symbol	Parameter	Conditions	Min	Max	Unit
$V_{\text{ESD}}$	Electrostatic Discharge Voltage	IEC 61000-4-2; Contact Discharge	-	$\pm 20$	kV
		IEC 61000-4-2; Air Discharge	-	$\pm 25$	kV
$P_{\text{PP}}$	Peak Pulse Power	$t_P = 8/20\text{ }\mu\text{s}$	-	40	W
$I_{\text{PPM}}$	Rated Peak Pulse Current	$t_P = 8/20\text{ }\mu\text{s}$	-	4.5	A
$T_A$	Ambient Temperature Range	-	-55	150	$^\circ\text{C}$
$T_{\text{stg}}$	Storage Temperature Range	-	-55	150	$^\circ\text{C}$

## 7. Electrical Characteristics( $T_A = 25\text{ }^\circ\text{C}$ , unless otherwise specified)

Symbol	Parameter	Conditions	Min	Typ.	Max	Unit
$V_{\text{RWM}}$	Reverse Working Voltage	$T_A = 25\text{ }^\circ\text{C}$	-	-	5.0	V
$V_{\text{BR}}$	Breakdown Voltage	$I_R = 1\text{ mA}$ ; $T_A = 25\text{ }^\circ\text{C}$	5.6	-	9.0	V
$I_R$	Reverse Leakage Current	$V_{\text{RWM}} = 5\text{ V}$ ; $T_A = 25\text{ }^\circ\text{C}$	-	-	100	nA
$V_C$	Clamping Voltage	$I_{\text{PP}} = 1\text{ A}$ , $t_P = 8/20\text{ }\mu\text{s}$	-	-	13	V
		$I_{\text{PP}} = 2.5\text{ A}$ , $t_P = 8/20\text{ }\mu\text{s}$	-	-	16	V
$C_J$	Junction Capacitance	$V_R = 0\text{ V}$ , $f = 1\text{ MHz}$	-	3.5	4.0	pF

## 8. Typical Characteristics

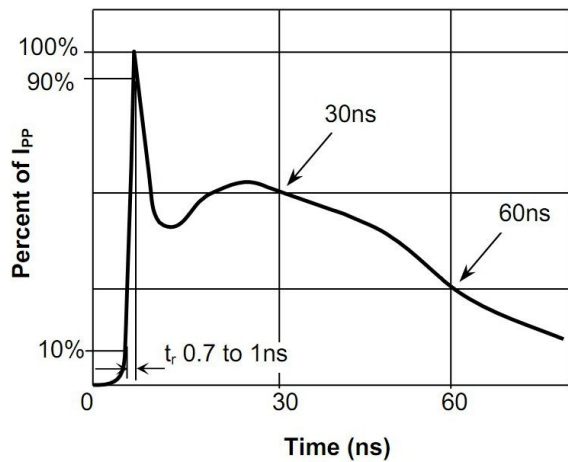


Fig.1 Pulse Waveform-ESD (IEC61000-4-2)

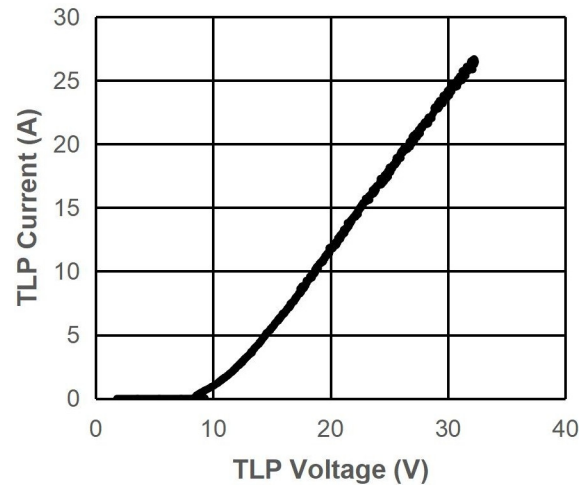


Fig.2 Transmission Line Pulse (TLP)

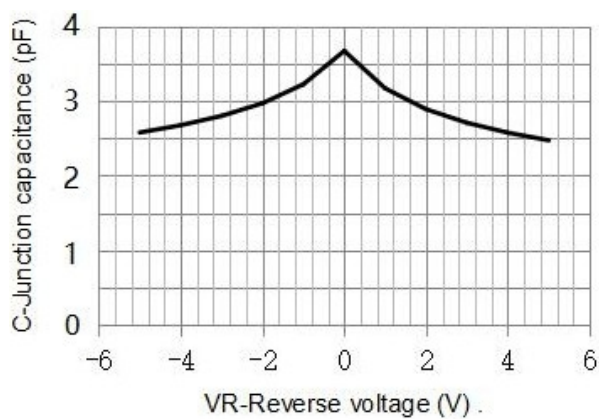


Fig.3 Capacitance vs. Reverse Voltage

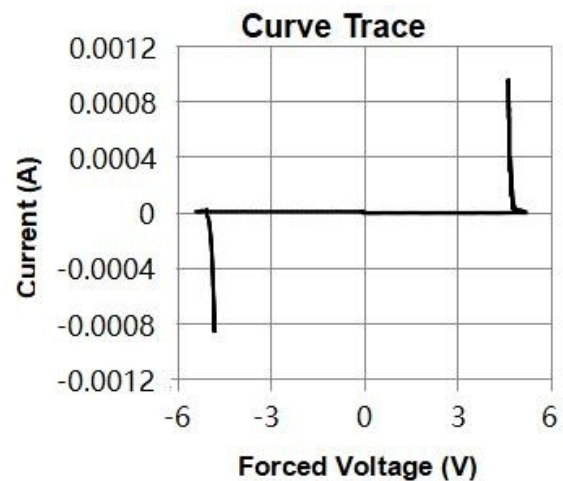
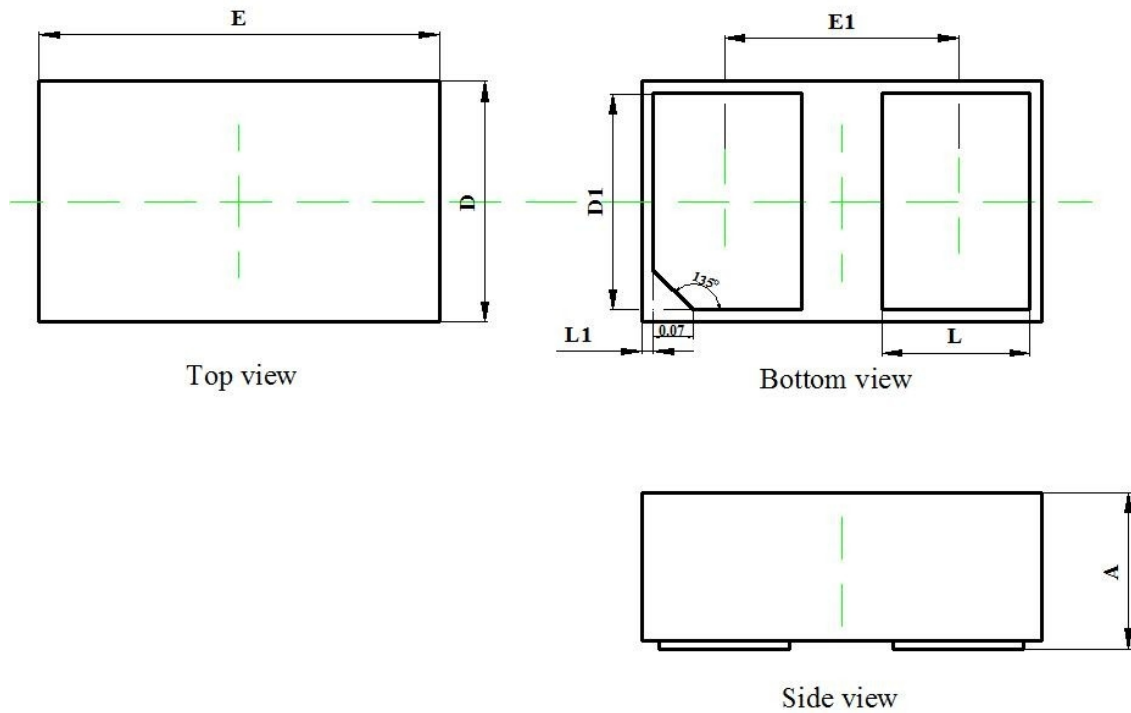


Fig.4 IV Curve (Forward Voltage)

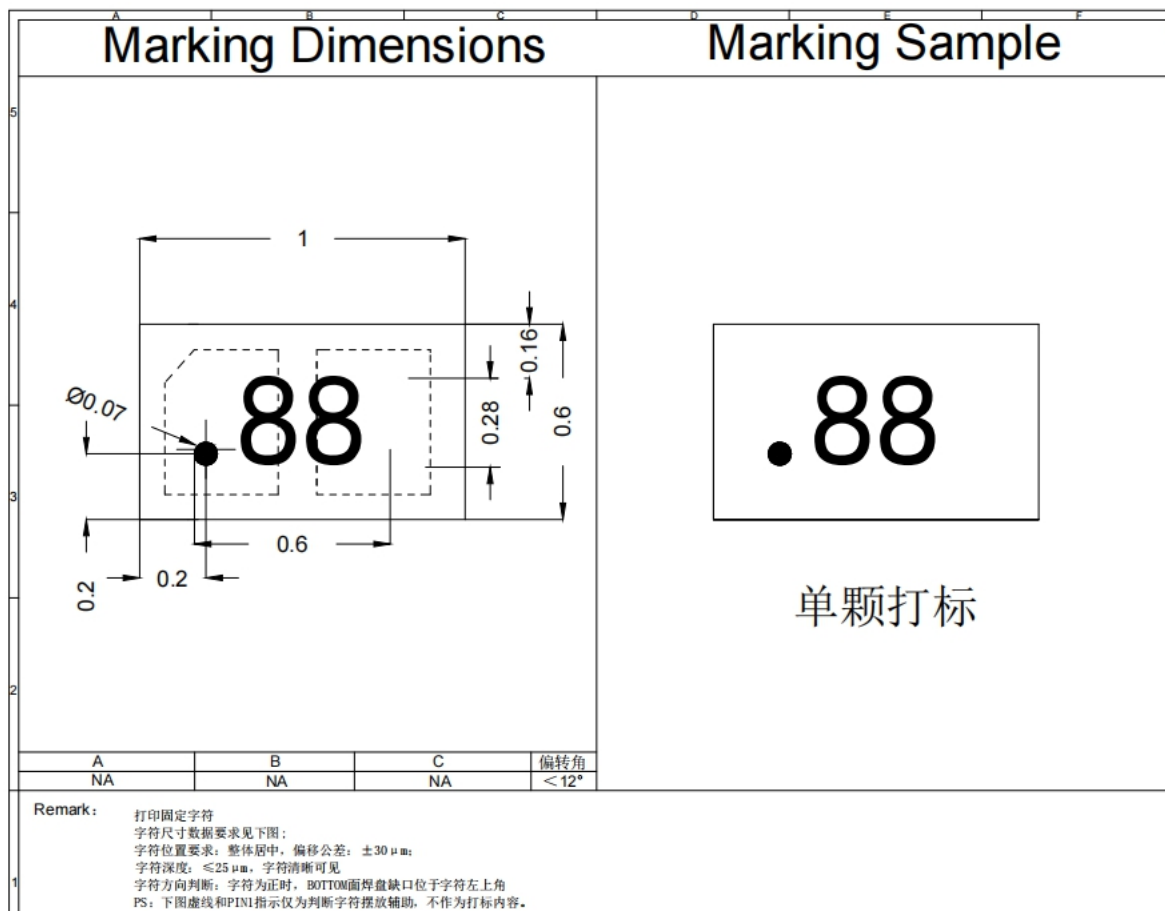
## 9. Package Outline Dimensions

**DFN1006 Package Outline**

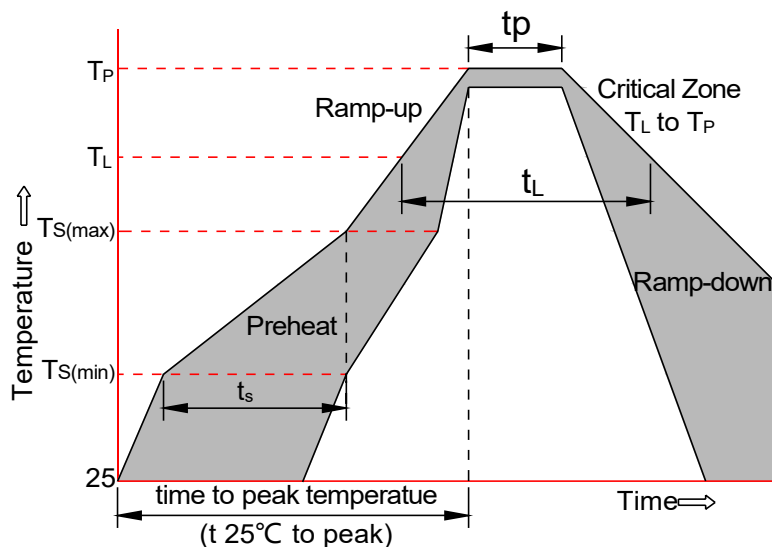


Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min	Max	Min	Max
<b>A</b>	0.350	0.450	0.014	0.018
<b>D</b>	0.550	0.650	0.022	0.026
<b>E</b>	0.950	1.050	0.037	0.041
<b>D1</b>	0.420	0.520	0.017	0.020
<b>E1</b>	0.550	0.650	0.022	0.026
<b>L</b>	0.270	0.370	0.011	0.015
<b>L1</b>	0.000	0.100	0.000	0.004

## 10. Marking Dimensions



## 11. Soldering Parameters



Reflow Condition		Pb-Free Assembly
Pre-heat	-Temperature Min (T <sub>s(min)</sub> )	+150°C
	-Temperature Max(T <sub>s(max)</sub> )	+200°C
	-Time (Min to Max) (t <sub>s</sub> )	60-180 secs.
Average ramp up rate (Liquid us Temp (T <sub>L</sub> ) to peak)		3°C/sec. Max
T <sub>s(max)</sub> to T <sub>L</sub> - Ramp-up Rate		3°C/sec. Max
Reflow	-Temperature(T <sub>L</sub> )(Liquid us)	+217°C
	-Temperature(t <sub>L</sub> )	60-150 secs.
Peak Temp (T <sub>p</sub> )		+260(+0/-5)°C
Time within 5°C of actual Peak Temp (t <sub>p</sub> )		30 secs. Max
Ramp-down Rate		6°C/sec. Max
xTime 25°C to Peak Temp (T <sub>P</sub> )		8 min. Max
Do not exceed		+260°C