

## 1. Features

- Ultra-Low capacitance:0.8pF(typ.)
- Reverse stand-off voltage:5V
- IEC 61000-4-2 (ESD Air):  $\pm 15\text{kV}$   
IEC 61000-4-2 (ESD Contact):  $\pm 8\text{kV}$   
IEC61000-4-4 (5/50ns): 40A  
IEC61000-4-5 (8/20 $\mu\text{s}$ ): 5A

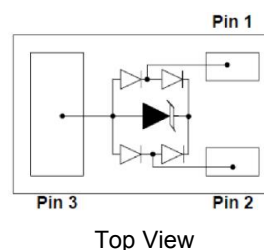
## 2. Pin Description



## 3. Applications

- USB 2.0
- HDMI 1.3/1.4
- Unified Display Interface (UDI)
- Digital Visual Interface (DVI)
- High speed serial interfaces

## 4. Schematic Diagram



## 5. Order Information

Type	Package	Size (mm)	Delivery Form	Delivery Quantity
SCS322U08	DFN1006-3L	1.00x0.60x0.45	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	-	$\pm 8$	kV
		IEC 61000-4-2; Air Discharge	-	$\pm 15$	kV
$I_{\text{PPM}}$	Rated Peak Pulse Current	$t_P = 8/20\text{ }\mu\text{s}$	-	5	A
$T_A$	Ambient Temperature Range	-	-55	125	$^{\circ}\text{C}$
$T_{\text{stg}}$	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	$I_R = 1\text{ mA}$ ; $T_A = 25\text{ }^{\circ}\text{C}$	6.0	-	-	V
$I_R$	Reverse Leakage Current	$V_{\text{RWM}} = 5\text{ V}$ ; $T_A = 25\text{ }^{\circ}\text{C}$	-	-	1.0	$\mu\text{A}$
$V_C$	Clamping Voltage	$I_{\text{PP}} = 5\text{ A}$ , $t_P = 8/20\mu\text{s}$	-	8.5	12	V
$C_J$	Junction Capacitance	$V_R = 0\text{ V}$ , $f = 1\text{ MHz}$ , I/O to I/O	-	-	0.4	pF
		$V_R = 0\text{ V}$ , $f = 1\text{ MHz}$ , I/O to GND	-	-	0.8	pF

## 8. Typical Characteristics

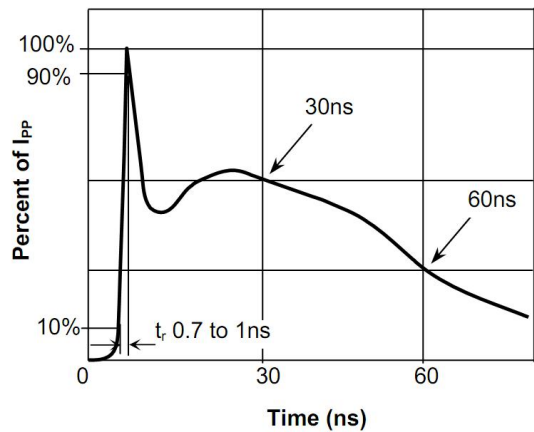


Fig.1 Pulse Waveform-ESD(IEC61000-4-2)

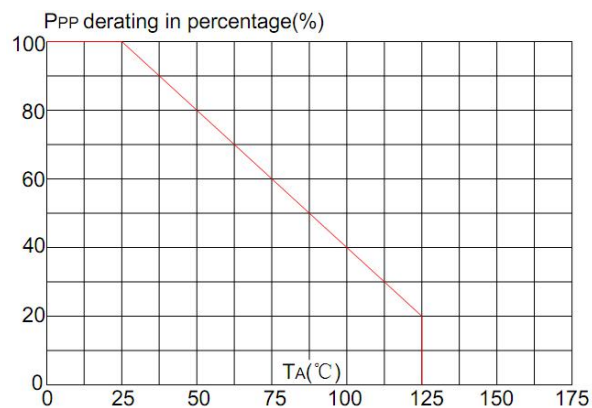


Fig.2 Pulse Derating Curve

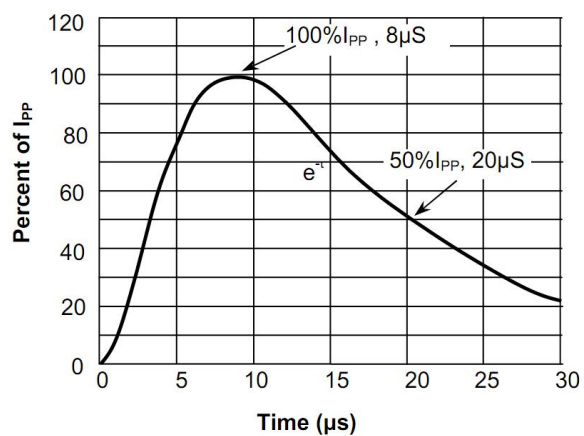
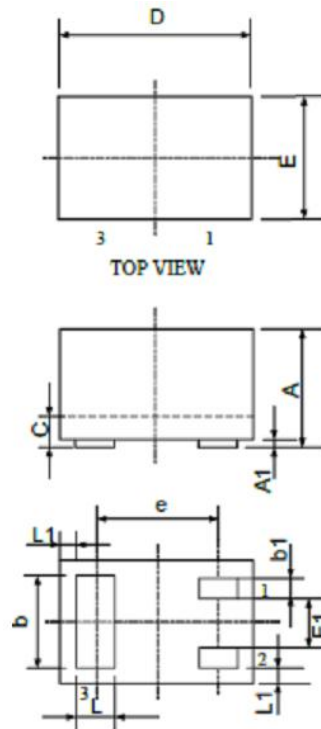


Fig.3 Pulse Waveform-8/20μs

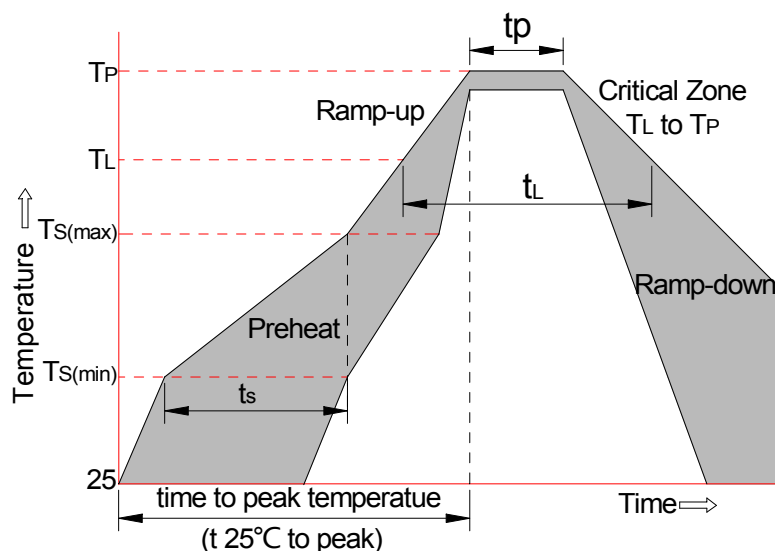
## 9. Package Dimension

### DFN1006-3L Package Outline



Symbol	Dimensions in millimeters		
	Min	Nom	Max
<b>A</b>	0.41	0.45	0.50
<b>A1</b>	-	0.02	0.05
<b>b</b>	0.45	0.50	0.55
<b>b1</b>	0.10	0.15	0.20
<b>C</b>	0.12	0.15	0.18
<b>D</b>	0.95	1.00	1.05
<b>e</b>	0.65BSC		
<b>E</b>	0.55	0.60	0.65
<b>E1</b>	0.15	0.20	0.25
<b>L</b>	0.20	0.25	0.30
<b>L1</b>	0.05 REF		

## 10. Soldering Parameters



Reflow Condition		Pb-Free Assembly
Pre-heat	-Temperature Min ( $T_{s(min)}$ )	+150°C
	-Temperature Max( $T_{s(max)}$ )	+200°C
	-Time (Min to Max) ( $t_s$ )	60-180 secs.
Average ramp up rate (Liquid us Temp ( $T_L$ ) to peak)		3°C/sec. Max
$T_{s(max)}$ to $T_L$ - Ramp-up Rate		3°C/sec. Max
Reflow	-Temperature( $T_L$ )(Liquid us)	+217°C
	-Temperature( $t_L$ )	60-150 secs.
Peak Temp ( $T_p$ )		+260(+0/-5)°C
Time within 5°C of actual Peak Temp ( $t_p$ )		30 secs. Max
Ramp-down Rate		6°C/sec. Max
xTime 25°C to Peak Temp ( $T_P$ )		8 min. Max
Do not exceed		+260°C