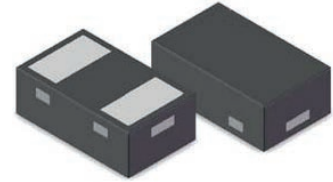
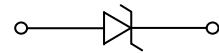


## Features

- 30 Watts peak pulse power ( $T_p=8/20\mu s$ )
- SOD-882 package
- Unidirectional configurations
- R2R + Zener technology
- Low clamping voltage
- Low leakage current
- Ultra low capacitance ( $C_J=0.3pF$  typ.)
- Protection one data/power line to:
  - IEC 61000-4-2  $\pm 10kV$  contact  $\pm 18kV$  air
  - IEC 61000-4-4 (EFT) 40A (5/50ns)
  - IEC 61000-4-5 (Lightning) 3A (8/20 $\mu s$ )
- RoHS compliant



SOD-882



Schematic Diagram

## Applications

- USB3.0, Firewire, DVI, HDMI, S-ATA
- Thunderbolt, Display Port
- Mobile HDMI Link, MDDI, MIPI, SWP / NFC

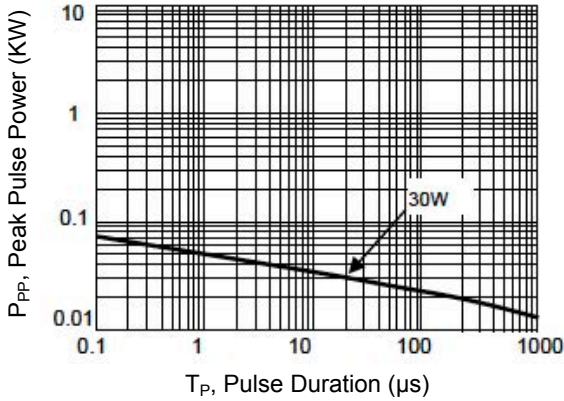
## Absolute Maximum Ratings ( $T_A=25^\circ C$ , unless otherwise specified)

Parameter	Symbol	Value	Unit
Peak Pulse Power (8/20 $\mu s$ )	$P_{PP}$	30	W
Peak Pulse Current (8/20 $\mu s$ )	$I_{PP}$	3	A
ESD Contact/Air discharge (IEC-61000-4-2)	$V_{ESD}$	10/18	kV
Maximum Lead Solder Temperature	$T_L$	260 (10 Seconds)	$^\circ C$
Operating Temperature Range	$T_J$	-55 to +125	$^\circ C$
Storage Temperature Range	$T_{stg}$	-55 to +150	$^\circ C$

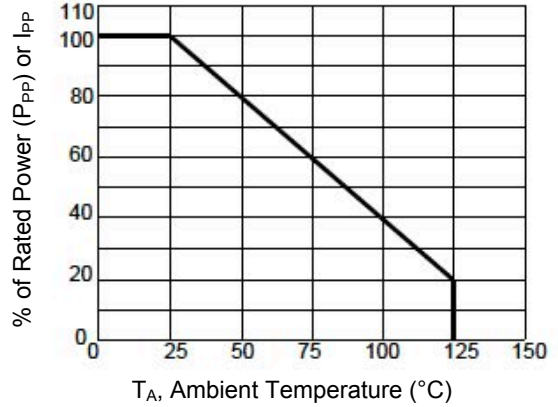
## Electrical Characteristics ( $T_A=25^\circ C$ unless otherwise specified)

Parameter	Symbol	Conditions	Min.	Typ.	Max.	Unit
Reverse Stand-Off Voltage	$V_{RWM}$	-	-	-	3.3	V
Reverse Breakdown Voltage	$V_{BR}$	$I_T=1mA$	4.5	6.5	-	V
Reverse Leakage Current	$I_R$	$V_R=3.3V$	-	<1	100	nA
Clamping Voltage (IEC 61000-4-5)	$V_C$	$I_{PP}=3A$	-	10	-	V
Trigger Voltage (IEC 61000-4-2)	$V_T$	$V_{ESD}=8kV$	-	135	-	V
Clamping Voltage (IEC 61000-4-2)	$V_C$	$V_{ESD}=8kV$	-	15	-	V
Junction Capacitance	$C_J$	$V_R=0V, f=1MHz$	-	0.3	-	pF

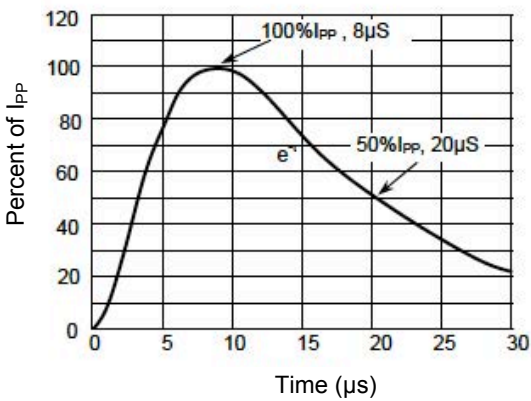
**Typical Characteristic Curves**



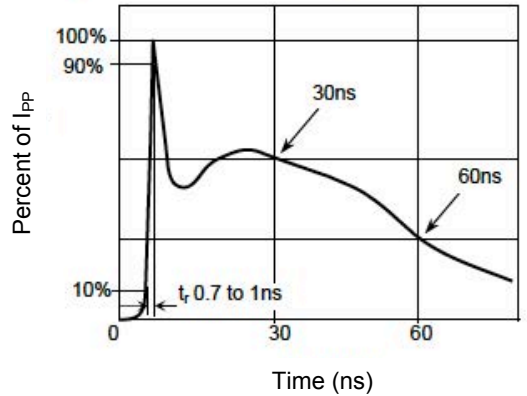
**Figure 1. Peak Pulse Power Rating Curve**



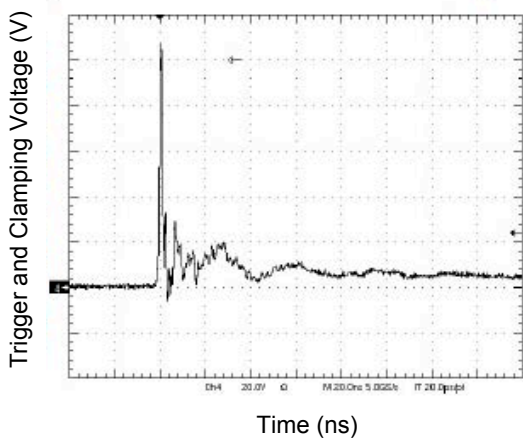
**Figure 2. Pulse Derating Curve**



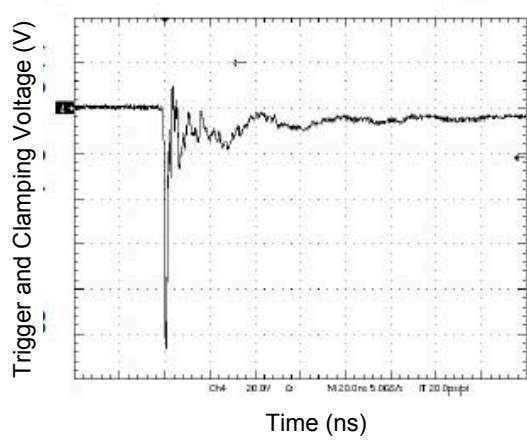
**Figure 3. Pulse Waveform-8/20µs**



**Figure 4. Pulse Waveform-ESD (IEC61000-4-2)**

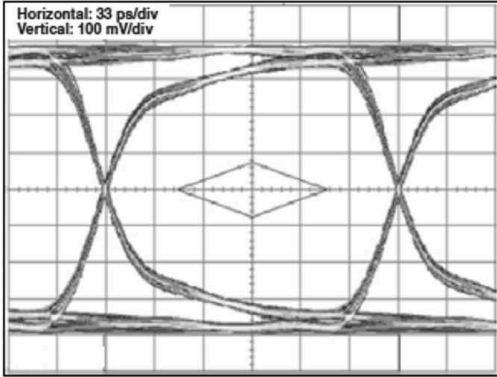


**Figure 5. IEC61000-4-2 +8kV Contact Discharge**

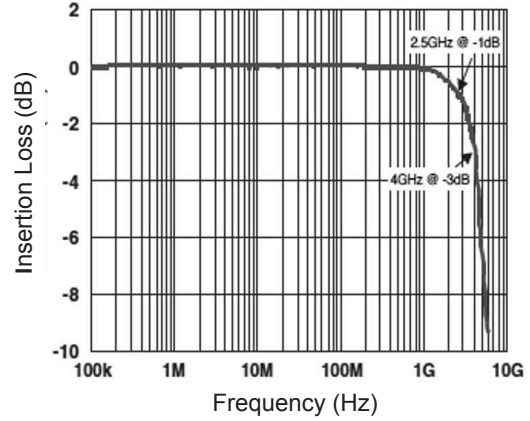


**Figure 6. IEC61000-4-2 -8kV Contact Discharge**

**Typical Characteristic Curves**

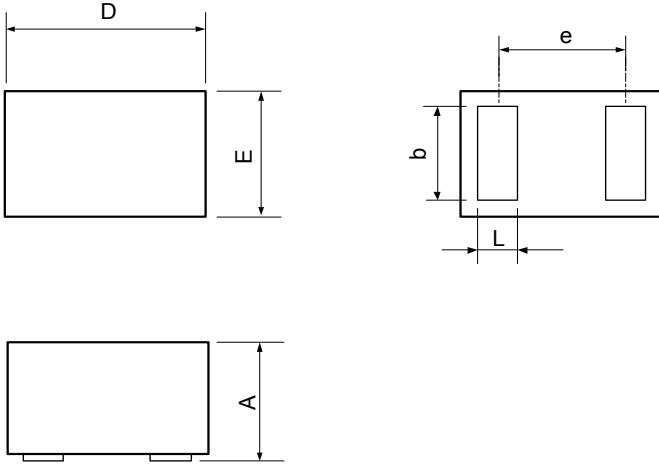


**Figure 7. Eye Diagram - USB3.0 mask at 5.0Gbps per channel (with GSEWT3U003C)**



**Figure 8. Insertion Loss S21 - I/O to GND**

**Package Outline Dimensions (SOD-882)**



Symbol	Dimensions in Millimeters		Dimensions in Inches	
	Min	Max	Min	Max
D	0.950	1.050	0.037	0.041
E	0.550	0.650	0.022	0.026
A	0.450	0.550	0.018	0.022
b	0.450	0.550	0.018	0.022
L	0.200	0.300	0.008	0.012
e	0.650 BSC		0.026 BSC	

**Order Information**

Device	Package	Marking	Carrier	Quantity
GSEWT3U003C	SOD-882	U5	Tape & Reel	10,000pcs / Reel