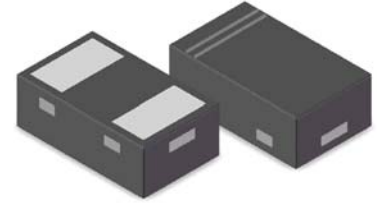
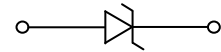


**Features**

- 30Watts peak pulse power ( $t_p=8/20\mu S$ )
- Unidirectional configuration
- 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 $\mu S$ )



Package: SOD-882



Schematic Diagram

**Applications**

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

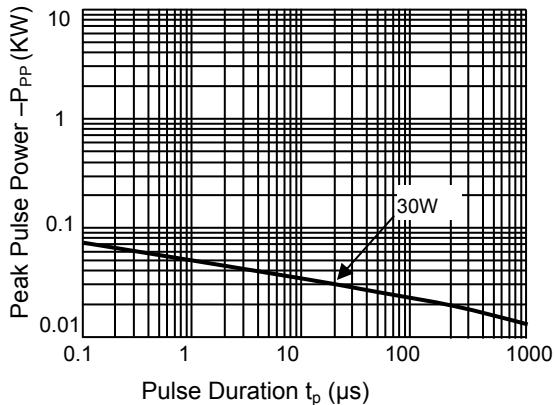
**Absolute Maximum Ratings** ( $T_A=25^\circ C$  unless otherwise specified)

Parameter	Symbol	Value	Unit
Peak Pulse Power ( $T_P=8/20\mu S$ )	$P_{PP}$	30	W
ESD Contact/air Discharge (IEC-61000-4-2)	$V_{ESD}$	10/18	kV
Peak Pulse Current ( $t_P = 8/20\mu S$ )	$I_{PP}$	3	A
Junction Temperature	$T_J$	-55 to +125	$^\circ C$
Storage Temperature	$T_{STG}$	-55 to +150	$^\circ C$
Maximum Lead Solder Temperature(10 second duration)	$T_L$	260	$^\circ C$

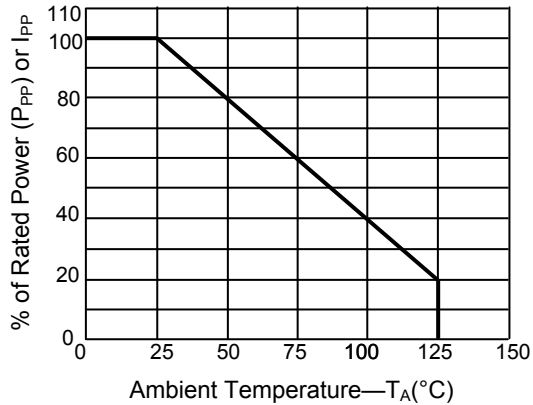
**Electrical Characteristics** ( $T_A=25^\circ C$  unless otherwise specified)

Parameter	Symbol	Conditions	Min	Typ	Max	Unit
Reverse Stand-off Voltage	$V_{RWM}$	-	-	-	5.0	V
Reverse Breakdown Voltage	$V_{BR}$	$I_T=1mA$	6.0	-	10.5	V
Reverse Leakage Current	$I_R$	$V_R=5.0V$	-	<1	100	nA
Clamping Voltage (IEC 61000-4-5)	$V_C$	$I_{PP}=3A$	-	10	-	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

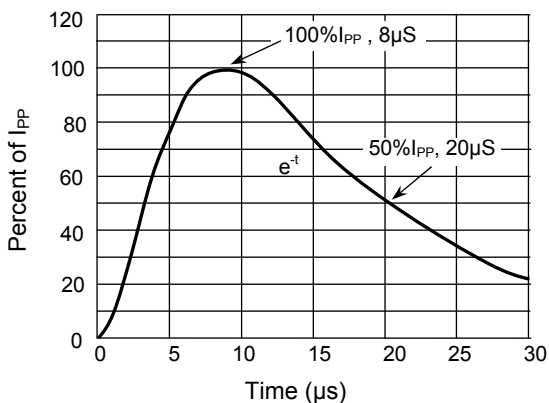
**Typical Characteristic Curve**



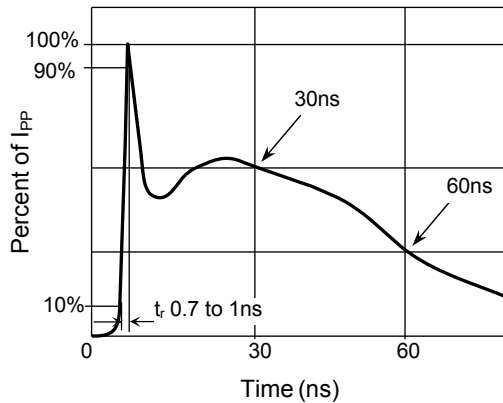
**Figure 1. Peak Pulse Power Rating Curve**



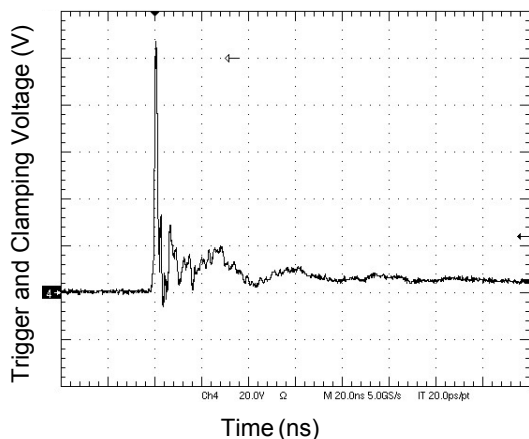
**Figure 2. Pulse Derating Curve**



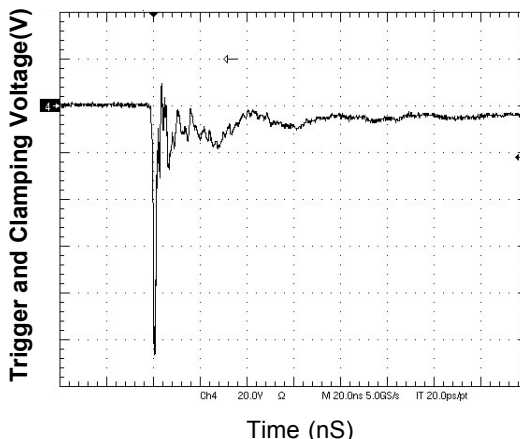
**Figure 3. Pulse Waveform- 8/20 μs**



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

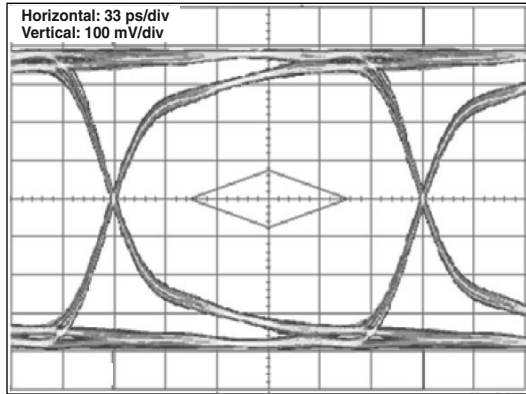


**Figure 5. IEC61000-4-2 +8kV Contact Discharge**

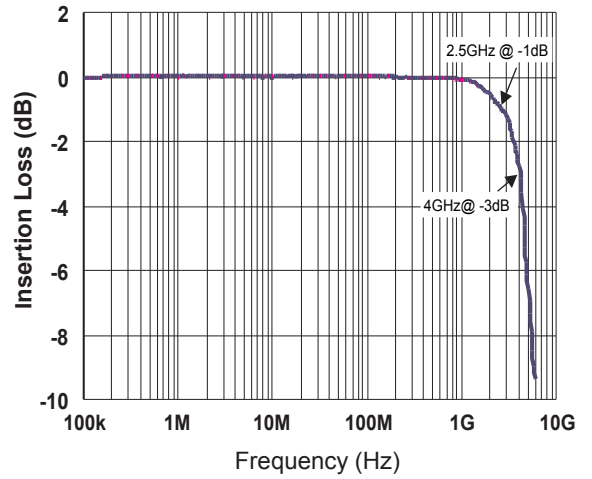


**Figure 6. IEC61000-4-2 -8kV Contact Discharge**

**Typical Characteristic Curves**



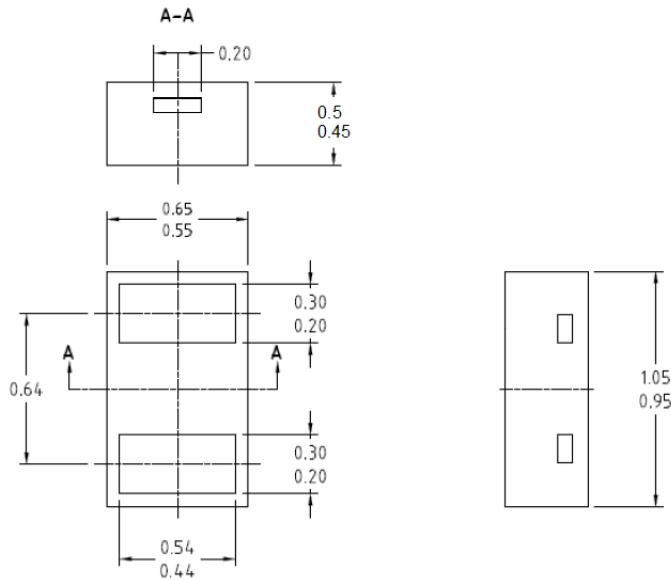
**Figure 7. Eye Diagram - USB3.0 Mask at 5.0Gbps per Channel (with GSESUC5VD882-2U)**



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

**Package Outline Dimensions**

**SOD-882**



**Order Information**

Device	Package	Marking	Carrier	Quantity	HSF Status
GSEWT5U003	SOD-882	U5	Tape & Reel	10,000pcs / Reel	RoHS compliant