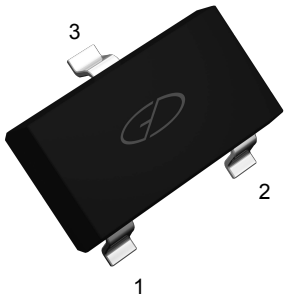
GOOD-ARK SEMICONDUCTOR

GSES17VT23-3B
ESD Protection Diode

Features

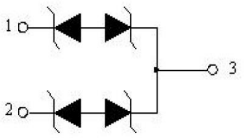
- 400 watts peak pulse power (tp = 8/20μs)
- Protects two -7V to 12V lines
- Low capacitance
- Low clamping voltage
- Solid-state silicon avalanche technology



Package: SOT-23

Applications

- Protection of RS-485 transceivers with extended common-mode range
- Security sytems
- Automatic teller machines
- HFC systems
- Networking



Schematic Diagram

Absolute Maximum Ratings (T_A=25°C unless otherwise specified)

Parameter	Symbol	Value	Units
Peak Pulse Power	P_{PP}(1)	400	W
Peak Pulse Current	I_{PP}(1)	12	A
Lead Solder Temperature – Maximum (10 Second Duration)	T_L	260	°C
Junction Temperature	T_J	-55 to 125	
Storage Temperature	T_{STG}	-55 to 150	

Note：1 Non-repetitive current pulse 8/20 μ s exponential decay waveform according to IEC61000-4-5.

Electrical Characteristics (T_A=25°C unless otherwise specified)

Parameter	Symbol	Test Condition	Pins 1 to 3 and 2 to 3 (12V TVS)			Pins 3 to 1 and 3 to 2(7V TVS)			Unit
			Min	Typ.	Max	Min	Typ.	Max	
Reverse Standoff Voltage	V_{RWM}	Pin 3 to 1 or Pin 2 to 1	-	-	12	-	-	7	V
Breakdown Voltage	V_{BR}	I_T=1mA	13.3	-	-	7.5	-	-	V
Reverse Leakage Current	I_R	V_R= V_{RWM}	-	-	1	-	-	1	μA
Clamping Voltage	V_C	I_{PP}=5A，t_p= 8/20μs	-	-	20	-	-	10	V
		I_{PP}=12A，t_p= 8/20μs	-	-	26	-	-		
Junction Capacitance	C_J	V_R=0V,f=1MHz	-		75	-	-	75	pF
		V_R=0V,f=1MHz	-	45		-	45		

Typical Characteristic Curves

Figure 1 Non-Repetitive Peak Pulse Power vs. Pulse Time

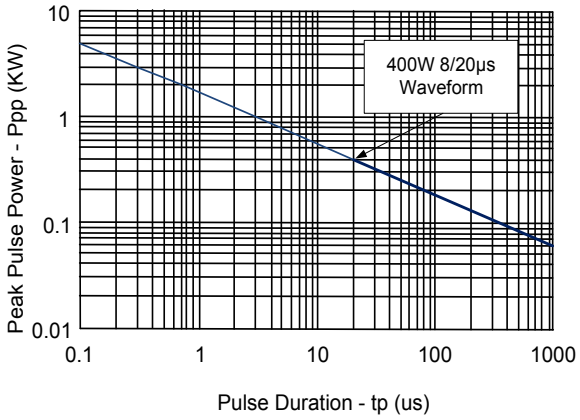


Figure 2 Power Derating curve

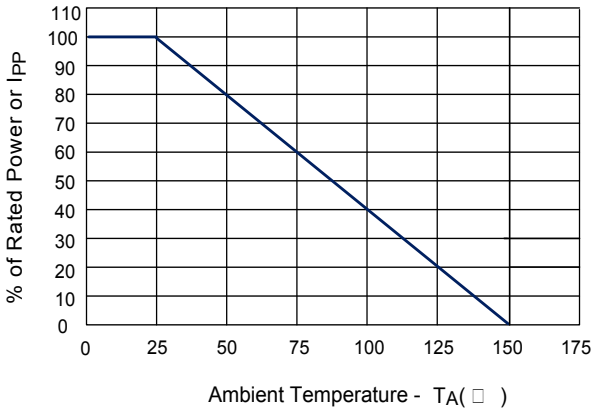


Figure 3 Pulse Waveform

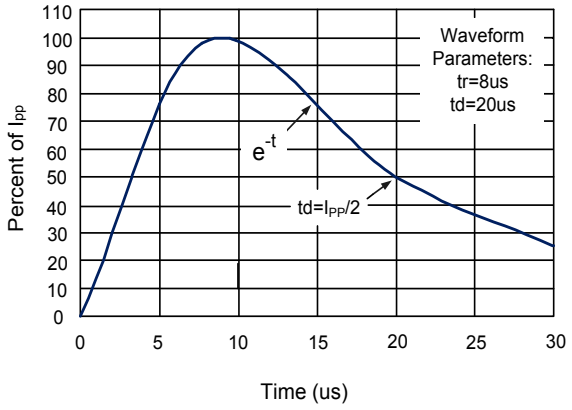


Figure 4 Clamping Voltage vs. Peak Pulse Current

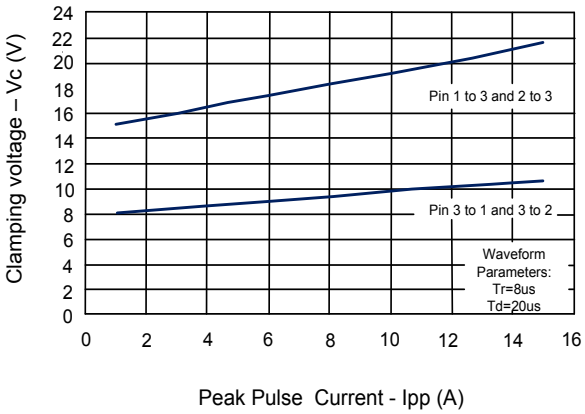
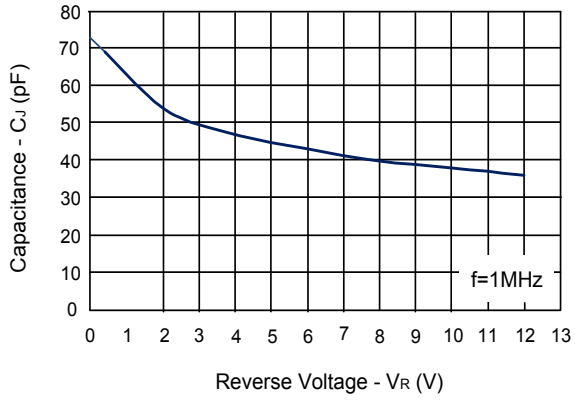
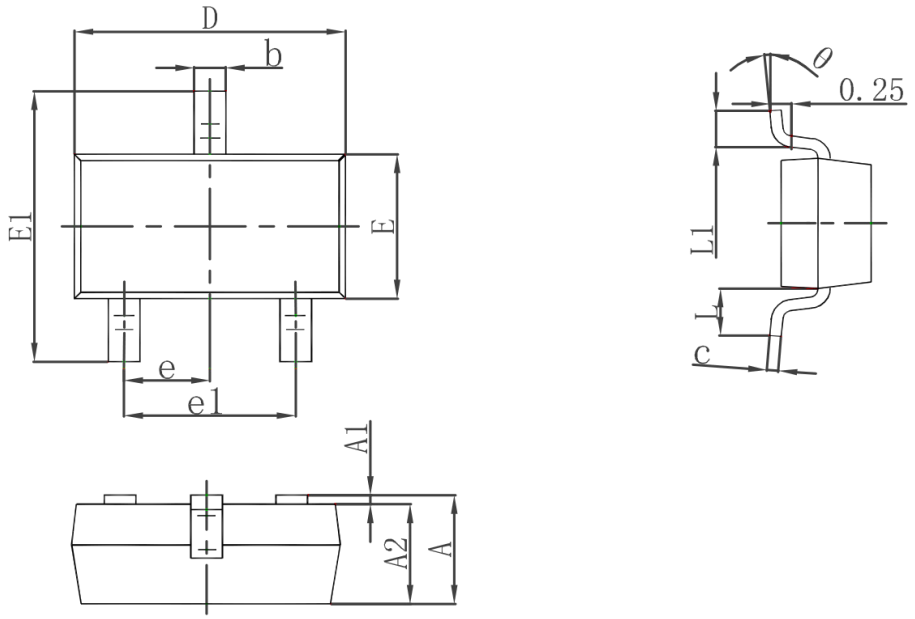


Figure 5 Capacitance vs. Reverse Voltage



Package Information



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min	Max	Min	Max
A	0.900	1.150	0.035	0.045
A1	0.000	0.100	0.000	0.004
A2	0.900	1.050	0.035	0.041
b	0.300	0.500	0.012	0.020
c	0.080	0.150	0.003	0.006
D	2.800	3.000	0.110	0.118
E	1.200	1.400	0.047	0.055
E1	2.250	2.550	0.089	0.100
e	0.950 TYP		0.037 TYP	
e1	1.800	2.000	0.071	0.079
L	0.550 REF		0.022 REF	
L1	0.300	0.500	0.012	0.020
θ	0°	8°	0°	6°