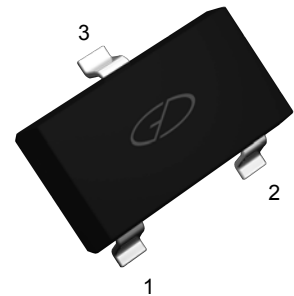


GSEC24U120 ESD Protection Diode

Features

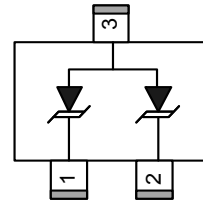
- 264W peak pulse power ($t_p=8/20\mu S$)
- Protects one bidirectional or two unidirectional lines
- Fast response time, typically < 1 nS
- Excellent clamping voltage
- Low leakage current
- IEC 61000-4-2 $\pm 30kV$ (Air) ESD protection
- IEC 61000-4-2 $\pm 30kV$ (Contact) ESD protection
- IEC 61000-4-4 40A (5/50nS) EFT protection
- IEC 61000-4-5 6A (8/20uS) surge protection
- RoHS compliant



Package: SOT-23

Applications

- Cellular handsets and accessories
- Portable electronics
- Control & Monitoring systems
- Servers, notebooks
- Set-top box
- Communication systems



Schematic Diagram

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}	264	W
Peak Pulse Current ($t_p=8/20\mu S$)	I_{PP}	6	A
ESD per IEC 61000-4-2 (Air)	V_{ESD}	30	kV
ESD per IEC 61000-4-2 (Contact)		30	
Lead Soldering Temperature	T_L	260 (10 seconds)	$^\circ C$
Junction Temperature	T_J	-55 to +125	$^\circ C$
Storage Temperature	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}	-	-	-	24	V
Reverse Breakdown Voltage	V_{BR}	$I_T=1mA$	26.7	-	-	V
Reverse Leakage Current	I_R	$V_R=24V$	-	0.1	0.5	μA
Clamping Voltage	V_C	$I_{PP}=6A, T_p=8/20\mu S$	-	-	44	V
Junction Capacitance	C_J	(pin1 to pin2) $V_R=0V, f=1MHz$	-	12	15	pF

Typical Characteristic Curves

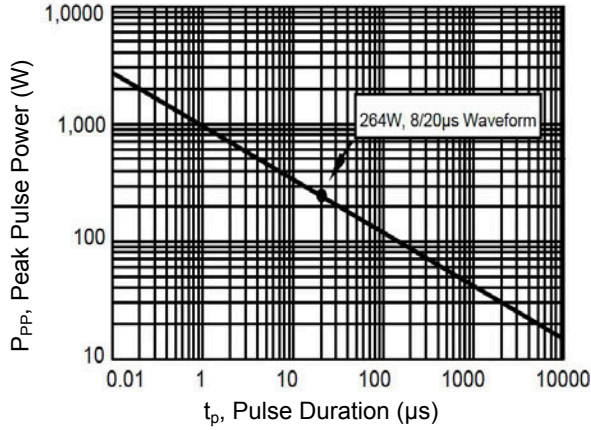


Figure 1. Peak Pulse Power vs. Pulse Time

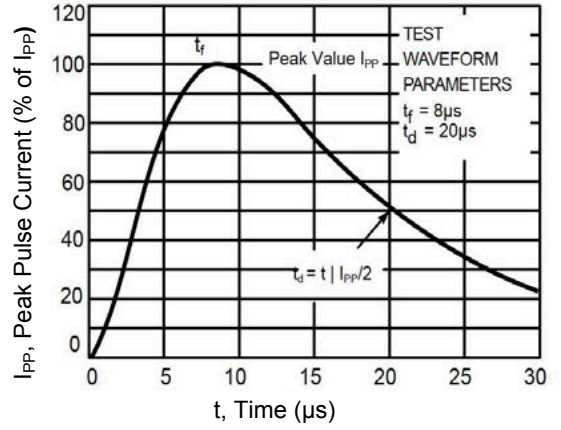


Figure 2. Pulse Waveform - 8/20 μs

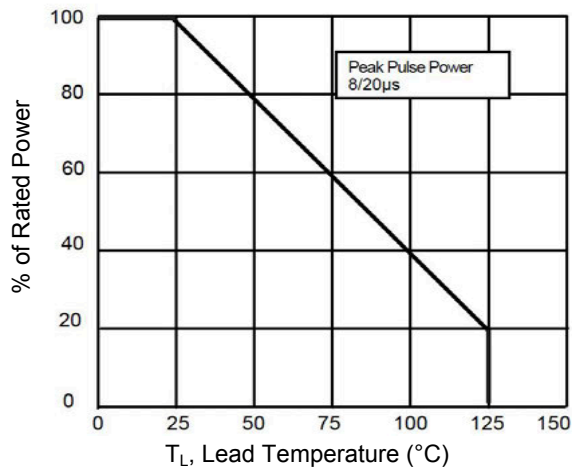


Figure 3. Power Derating Curve

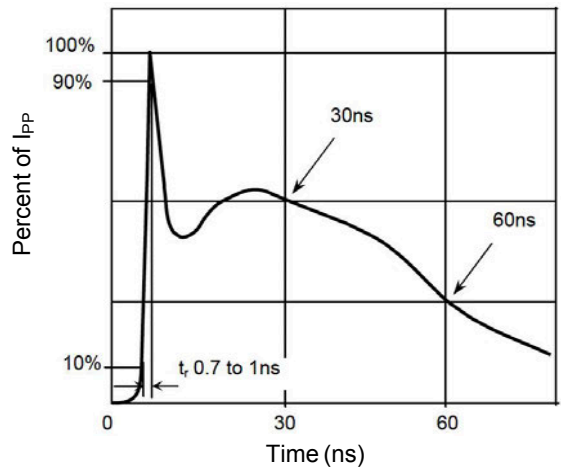
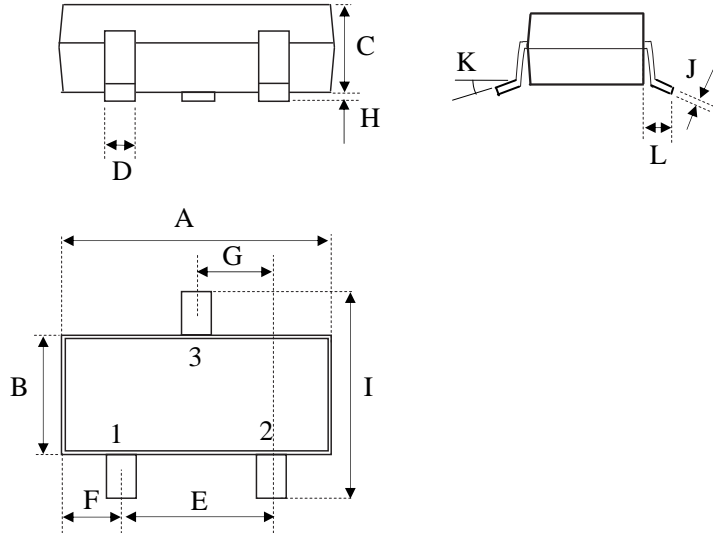


Figure 4. Pulse Waveform - ESD (IEC61000-4-2)

Package Outline Dimensions (SOT-23)



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min	Max	Min	Max
A	2.800	3.040	0.110	0.120
B	1.200	1.400	0.047	0.055
C	0.890	1.110	0.035	0.044
D	0.370	0.500	0.015	0.020
E	1.780	2.040	0.070	0.080
F	0.450	0.600	0.018	0.024
G	0.890	1.020	0.035	0.040
H	0.013	0.100	0.001	0.004
I	2.100	2.500	0.083	0.098
J	0.085	0.177	0.003	0.007
K	0°	10°	0°	10°
L	0.450	0.600	0.018	0.024

Order Information

Device	Package	Marking	Carrier	Quantity	HSF Status
GSEC24U120	SOT-23	CM2	Tape & Reel	3,000pcs	RoHS compliant