

GSE050LU5J6F

ESD Protection Diodes

Product Description

90W Peak Pulse Power (8/20 μ s).
5V Working Voltage.

Features

- Normal Capacitance 15pF (Typ.)
- Unidirectional Protection
- IEC61000-4-2 (ESD) ± 15 kV (Air), ± 8 kV (Contact)
- IEC61000-4-4 (EFT) 40A (5/50ns)
- IEC61000-4-5 (Lightning) 7.5A (8/20 μ s)

Mechanical Data

- SOT-563 Package
- RoHS Compliant and Halogen Free

Package and Pin Assignment

SOT-563	Equivalent Circuit
	

Ordering and Marking Information

Ordering Information			
Part Number	Package	Marking Code	Quantity/Reel
GSE050LU5J6F	SOT-563	E5C	3000 PCS
<div><div><div>- Product Code: GSE</div><div>- Type2 Code: U for Unidirectional 5 for Five Channels</div></div><div><div>- Voltage Code: 050 is 5V of V_{RWM} Voltage.</div><div>- Package Code: J6 for SOT-563 Package</div></div><div><div>- Type1 Code: L for Type of Rating.</div><div>- Green Level: F for RoHS Compliant and Halogen Free</div></div></div>			

GSE050LU5J6F

Marking Information

E5C

- Product Code:
E5C

Absolute Maximum Ratings (T_A=25°C Unless otherwise noted)

Symbol	Parameter	Value	Unit
P _{PP}	Peak Pulse Power (tp=8/20μs Waveform)	90	W
I _{PP}	Peak Pulse Current (tp=8/20μs Waveform)	7.5	A
V _{ESD}	Maximum Air Discharge Voltage per IEC61000-4-2	±15	KV
	Maximum Contact Discharge Voltage per IEC61000-4-2	±8	KV
T _{OP}	Operating Junction Temperature Range	-55 to +125	°C
T _{STG}	Storage Temperature Range	-55 to +150	°C

NOTE:

Maximum ratings are those values beyond which device damage can occur. Maximum ratings applied to the device are individual stress limit values (not normal operating conditions) and are not valid simultaneously. If these limits are exceeded, device functional operation is not implied, damage may occur and reliability may be affected.

Electrical Characteristics (T_A=25°C Unless otherwise noted)

Symbol	Parameter	Conditions	Min	Typ	Max	Unit
V _{RWM}	Reverse Stand-Off Voltage				5.0	V
V _{BR}	Reverse Breakdown Voltage	I _T = 1mA	6.0			V
I _R	Reverse Leakage Current	V _{RWM} = 5V			0.5	uA
V _C	Clamping Voltage	I _{PP} = 7.5A, tp=8/20us		12		V
V _C	Clamping Voltage (ESD)	V _{ESD} = +8kV		20		V
V _T	Trigger Voltage (ESD)	V _{ESD} = +8kV		100		V
C _J	Junction Capacitance	V _R =0V, f=1MHz		15		pF

Typical Characteristics (T_A=25°C Unless otherwise noted)

Fig.1 Peak Pulse Power Rating Curve

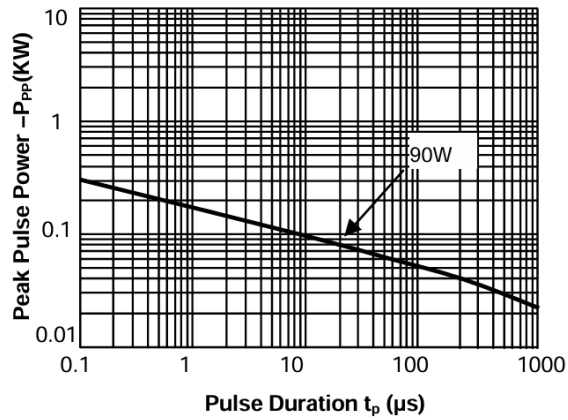


Fig.2 Pulse Derating Curve

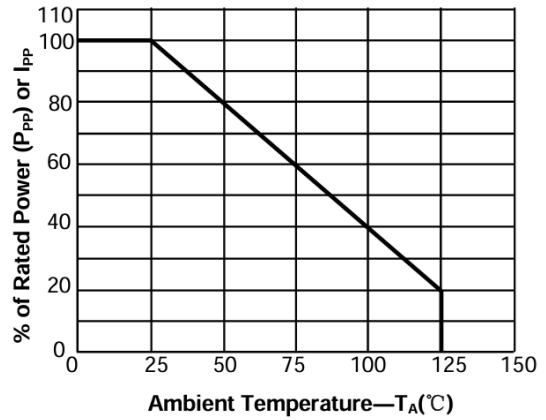


Fig.3 Pulse Waveform-8/20μs

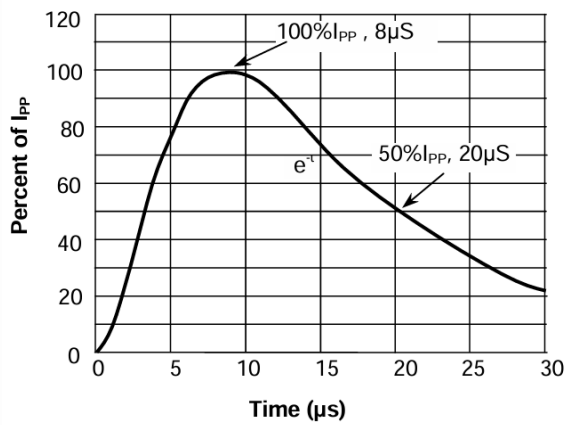
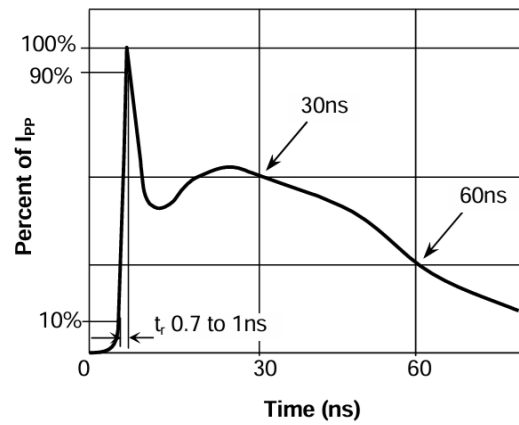
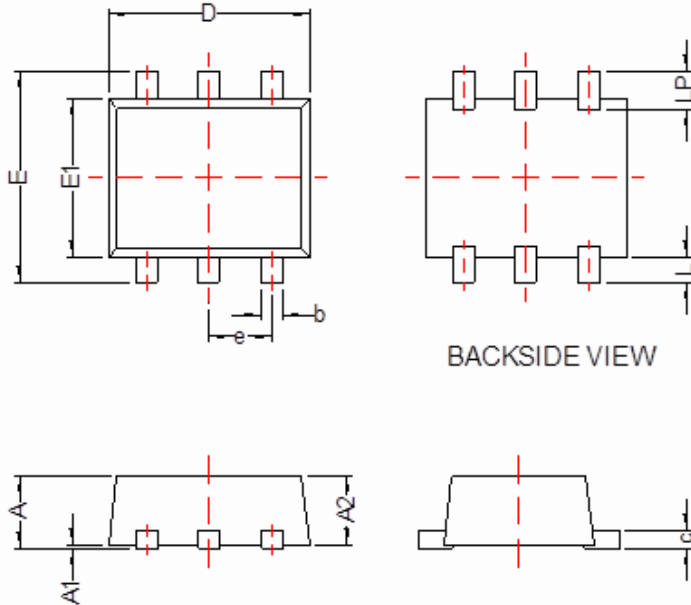


Fig.4 Pulse Waveform-ESD(IEC61000-4-2)

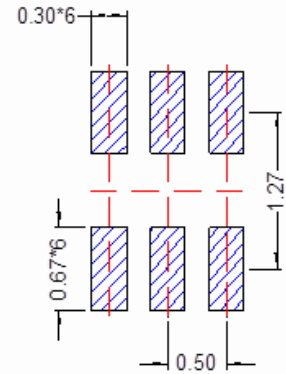


SOT-563

Package Dimension



Recommended Land Pattern



Dimensions

SYMBOL	Millimeters		Inches	
	MIN	MAX	MIN	MAX
A	0.45	0.65	0.018	0.026
A1	0.00	0.10	0.000	0.004
A2	0.45	0.60	0.018	0.024
b	0.15	0.30	0.006	0.012
c	0.07	0.20	0.003	0.008
D	1.50	1.70	0.059	0.067
E	1.50	1.70	0.059	0.067
E1	1.10	1.30	0.043	0.051
e	0.50 BSC		0.020 BSC	
L	0.10	0.30	0.004	0.012
LP	0.16	0.4	0.006	0.016





NOTE:



Dimensions are exclusive of Burrs, Mold Flash and Tie Bar extrusions.

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