



SE05S3ADKH

ESD PROTECTION DIODE

FEATURES

- IEC61000-4-2 (ESD) $\pm 15\text{kV}$ (air), $\pm 8\text{kV}$ (contact)
- Working Voltage 5V
- Suffix " H " indicated Halogen-free part, ex.SE05S3ADKH

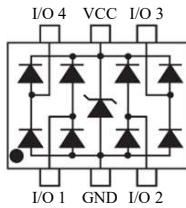
APPLICATIONS

- Digital Visual Interface (DVI)
- Monitors and flat panel displays
- HDMI, USB 2.0, MDDI, SATA ports
- Set Top Box

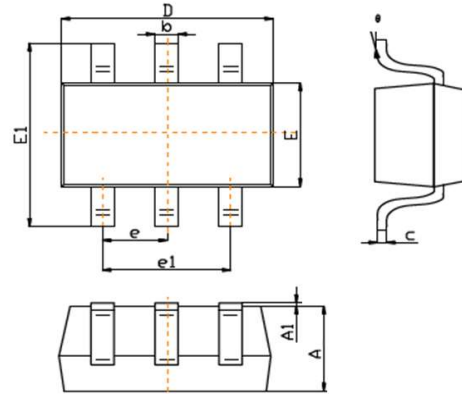
MECHANICAL DATA

Case : SOT-23-6

PIN CONFIGURATION



OUTLINE DRAWING AND DIMENSION



Dimensions	Unit (mm)		Unit (inch)	
	MIN.	MAX.	MIN.	MAX.
A	1.00	1.20	0.039	0.047
A1	0.00	0.10	0.000	0.004
b	0.30	0.50	0.012	0.020
c	0.08	0.20	0.003	0.008
D	2.70	3.10	0.106	0.122
E	1.30	1.70	0.051	0.067
E1	2.60	3.00	0.102	0.118
e	0.95 (BSC.)		0.037 (BSC.)	
e1	1.70	2.10	0.067	0.083
θ	0	8°	0	8°

Maximum Ratings (Rating at 25°C ambient temperature unless otherwise specified)

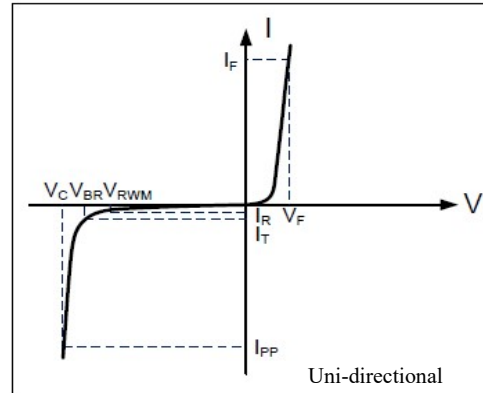
Parameter	Symbol	Value	Units
Peak Pulse Power ($t_p=8/20\mu\text{s}$ waveform)	P_{PK}	150	W
Peak Pulse Current ($t_p=8/20\mu\text{s}$ waveform)	I_{PP}	6	A
ESD per IEC 61000-4-2 (Air)	V_{ESD}	± 15	kV
ESD per IEC 61000-4-2 (Contact)		± 8	
Operating Temperature Range	T_J	-40 to +125	°C
Storage Temperature Range	T_{STG}	-55 to +150	°C



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Symbol	Parameter
V_{RWM}	Working Peak Reverse Voltage
I_R	Maximum Reverse Leakage Current @ V_{RWM}
V_{BR}	Breakdown Voltage @ I_T
I_T	Test Current for Reverse Breakdown
V_C	Clamping Voltage @ I_{pp}
I_{pp}	Maximum Reverse Peak Pulse Current
C_j	Junction Capacitance
I_F	Forward Current
V_F	Forward Voltage @ I_F



Electrical Characteristics ($T_{amb}=25^{\circ}C$ Unless Otherwise Specified)

Parameter	Conditions	Symbol	Min.	Typ.	Max.	Units
Reverse Working Voltage	VCC to GND	V_{RWM}	-	-	5.0	V
Reverse Breakdown Voltage	$I_T=1mA$, VCC to GND	V_{BR}	6.0	-	-	V
Reverse Leakage Current	$V_{RWM}=5V$, VCC to GND	I_R	-	-	3.0	μA
Clamping Voltage	$I_{pp}=1A$, $t_p=8/20\mu s$, Any pin to GND	V_C	-	-	15	V
	$I_{pp}=6A$, $t_p=8/20\mu s$, Any pin to GND				25	
Junction Capacitance	$V_R=0V$, $f=1MHz$, Any I/O pin to GND	C_j	-	-	3.0	pF
	$V_R=0V$, $f=1MHz$, Any I/O pin to pin				1.5	



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RATINGS AND CHARACTERISTIC CURVES

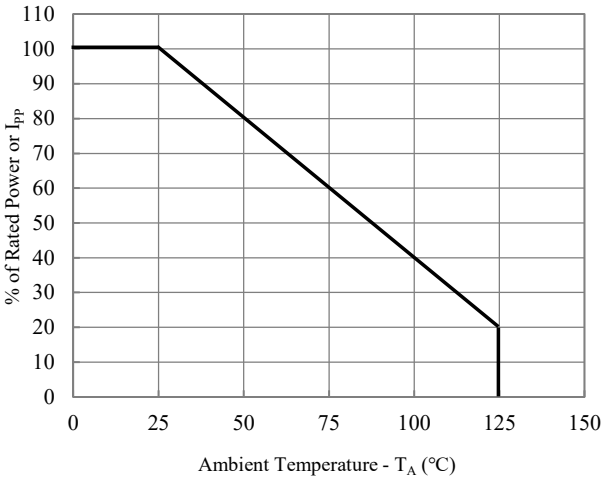


Fig.1-Power Derating Curve

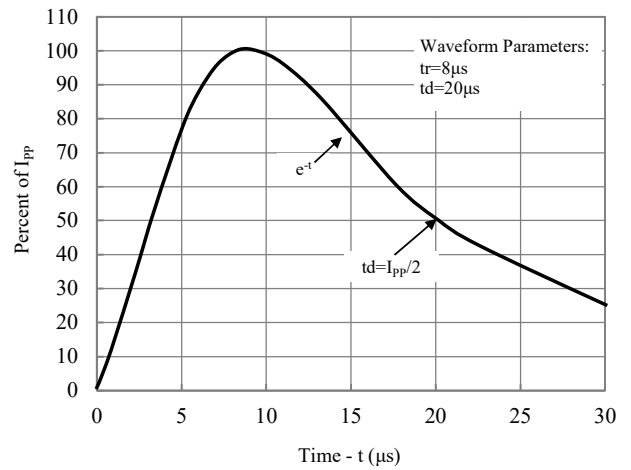


Fig.2-Pulse Waveform

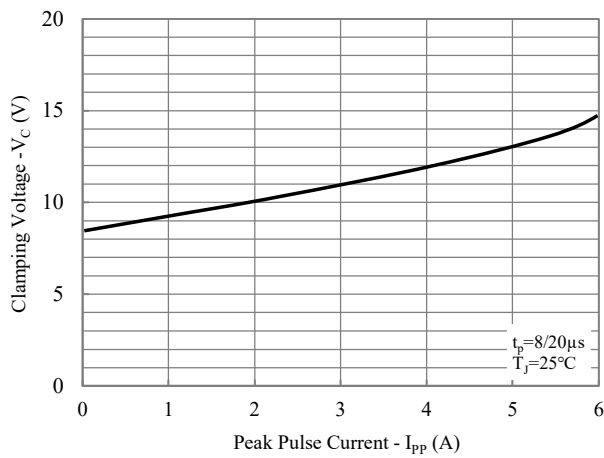


Fig.3-Clamping Voltage vs. Peak Pulse Current

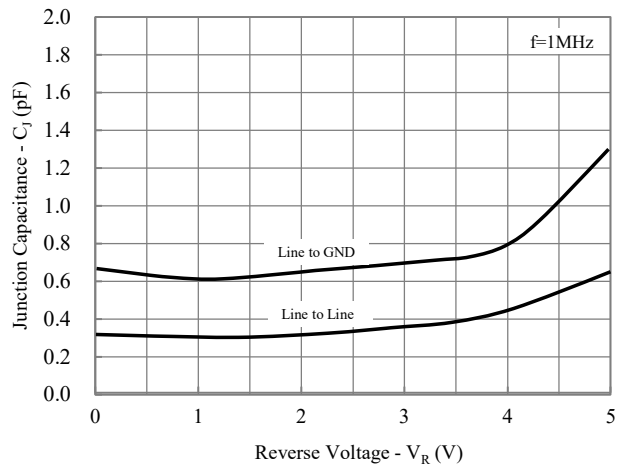


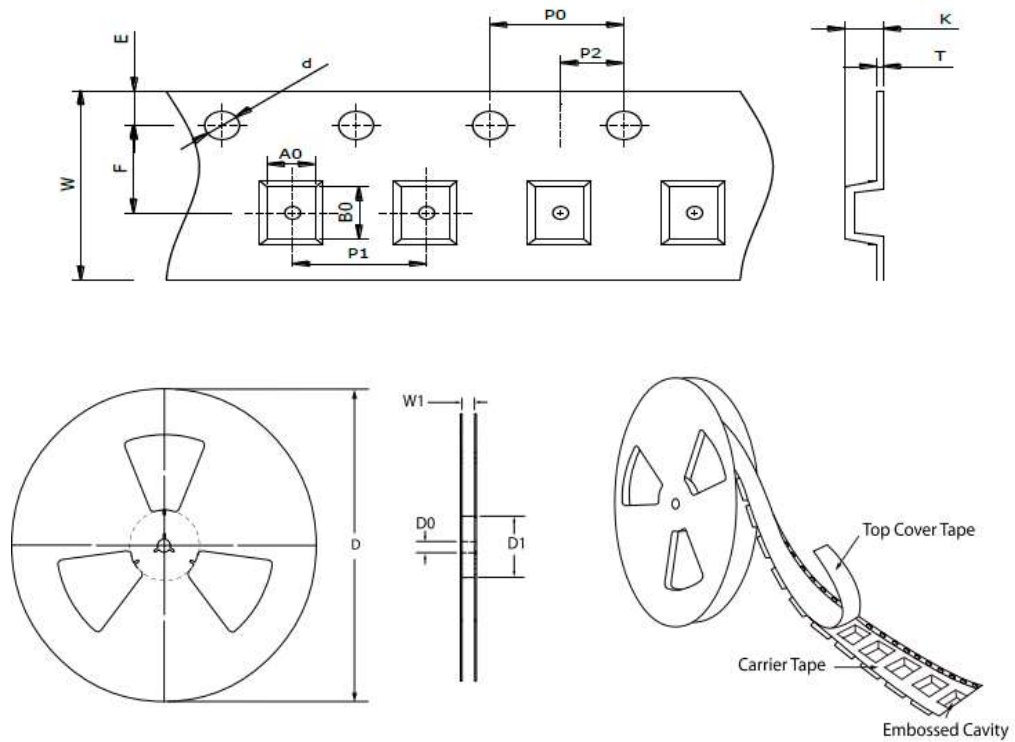
Fig.4-Junction Capacitance vs. Reverse Voltage



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TAPE & REEL SPECIFICATION



Item	Symbol	SOT-23-6
Carrier width	A ₀	3.10 ± 0.10
Carrier length	B ₀	3.20 ± 0.10
Carrier depth	K	1.10 ± 0.10
Sprocket hole	d	1.50 ± 0.10
Reel outside diameter	D	178.00 ± 2.00
Feed hole width	D ₀	13.00 ± 0.20
Reel inner diameter	D ₁	MIN. 54.00
Sprocke hole position	E	1.75 ± 0.10
Punch hole position	F	3.50 ± 0.10
Sprocke hole pitch	P ₀	4.00 ± 0.10
Punch hole pitch	P ₁	4.00 ± 0.10
Embossment center	P ₂	2.00 ± 0.10
Overall tape thickness	T	0.20 ± 0.05
Tape width	W	8.00 ± 0.20
Reel width	W1	MAX. 13.50

ORDER INFORMATION

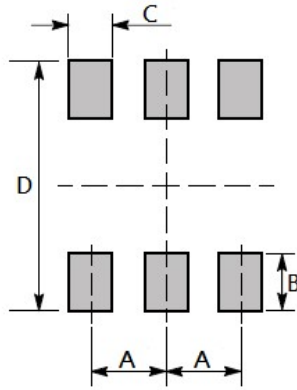
Package	Marking Code	Reel Size	Quantity
SOT-23-6	F54	7"	3,000



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SUGGESTED SOLDER PAD LAYOUT



Unit : mm

PACKAGE	A	B	C	D
SOT-23-6	0.95	1.00	0.70	3.40