



SE05S1AME

ESD PROTECTION ARRAY

FEATURES

- IEC61000-4-2 (ESD) $\pm 15\text{kV}$ (air), $\pm 8\text{kV}$ (contact)
- IEC61000-4-4 (EFT) 40A (5/50ns)
- Low capacitance
- Low leakage current
- Working Voltage 5V
- Suffix " H " indicated Halogen-free part, ex.SE05S1AMEH

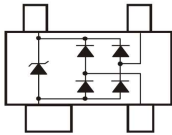
APPLICATIONS

- xDSL
- USB 1.1/2.0/OTG
- IEEE 1394 Firewire Ports
- Projection TV Monitors and Flat Panel Displays
- Set Top Box
- Projection TV

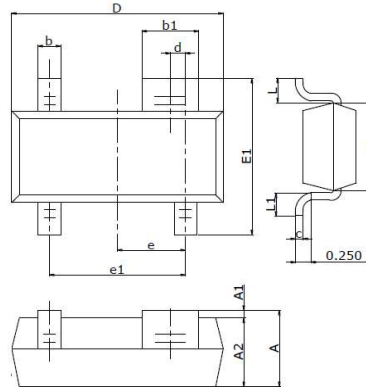
MECHANICAL DATA

Case : SOT-143

PIN CONFIGURATION



OUTLINE DRAWING AND DIMENSION



Dimensions	Unit (mm)		Unit (inch)	
	MIN.	MAX.	MIN.	MAX.
A	0.90	1.15	0.035	0.045
A1	0.00	0.10	0.000	0.004
A2	0.90	1.05	0.035	0.041
b	0.30	0.50	0.012	0.020
b1	0.75	0.90	0.030	0.035
c	0.08	0.15	0.003	0.006
D	2.80	3.00	0.110	0.118
d	0.20 TYP.		0.008 TYP.	
E	1.20	1.40	0.047	0.055
E1	2.25	2.55	0.089	0.100
e	0.95 TYP.		0.037 TYP.	
e1	1.80	2.00	0.071	0.079
L	0.55 REF.		0.022 REF	
L1	0.30	0.50	0.012	0.020

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

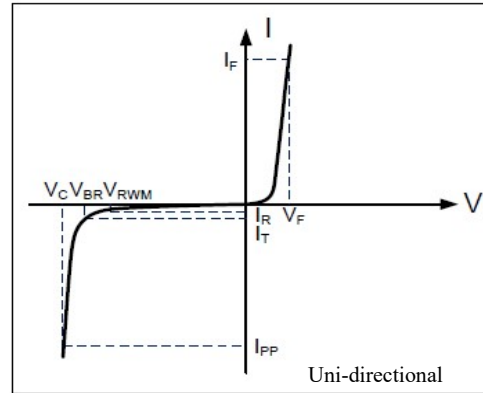
Parameter	Symbol	Value	Units
Peak Pulse Power (tp = 8/20 μ s)	P _{PP}	150	W
Peak Pulse Current(tp=8/20 μ s waveform)	I _{PP}	5	A
ESD per IEC 61000-4-2 (Air)	V _{ESD}	15	kV
ESD per IEC 61000-4-2 (Contact)		8	
Operating Temperature Range	T _J	-55 to +125	°C
Storage Temperature Range	T _{STG}	-55 to +150	°C



SE05S1AME

ESD PROTECTION ARRAY

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)

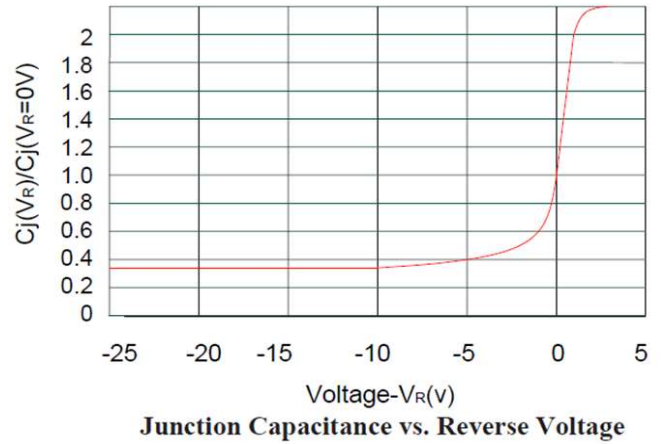
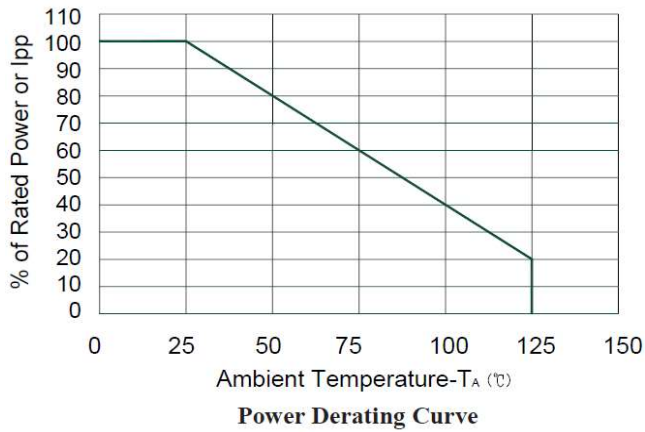
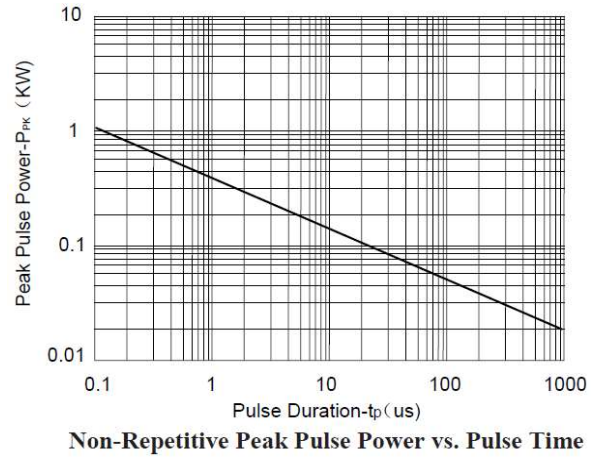
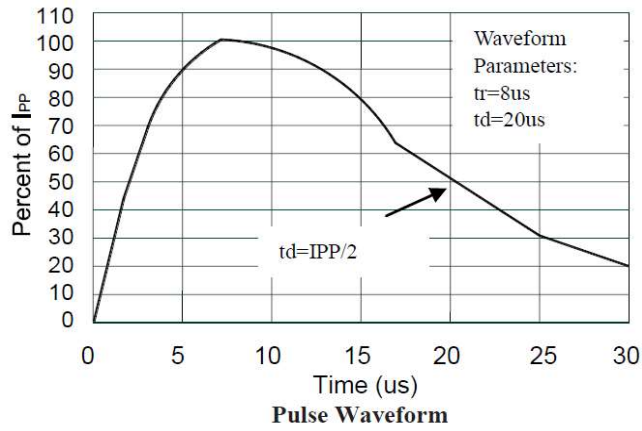
Parameter	Conditions	Symbol	Min.	Typ.	Max.	Units
Reverse Working Voltage	Any I/O to Ground	V_{RWM}	-	-	5.0	V
Reverse Breakdown Voltage	$I_T = 1mA$, Any I/O to Ground	V_{BR}	6.0	-	-	V
Reverse Leakage Current	$V_{RWM} = 5V$, Any I/O to Ground	I_R	-	-	1.0	μA
Diode Forward Voltage	$I_F = 15mA$	I_F	-	0.85	1.20	V
Clamping Voltage	$I_{pp} = 1A$, $t_p = 8/20\mu s$, Any I/O pin to Ground	V_C	-	-	15.5	V
	$I_{pp} = 5A$, $t_p = 8/20\mu s$, Any I/O pin to Ground		-	-	30.0	
Junction Capacitance	$V_R = 0V$, $f = 1MHz$, between I/O pins	C_j	-	0.45	0.60	pF
	$V_R = 0V$, $f = 1MHz$, Any I/O pin to Ground		-	0.9	1.2	



SE05S1AME

ESD PROTECTION ARRAY

RATINGS AND CHARACTERISTIC CURVES

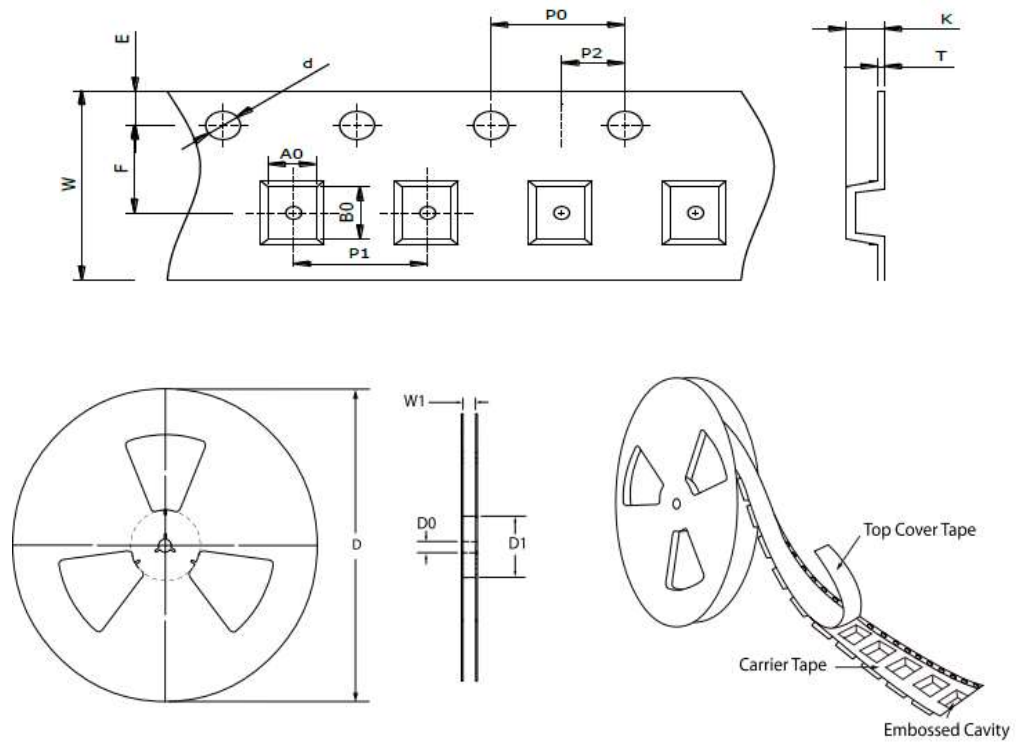




SE05S1AME

ESD PROTECTION ARRAY

TAPE & REEL SPECIFICATION



Item	Symbol	SOT-143
Carrier width	A ₀	2.60 ± 0.10
Carrier length	B ₀	3.05 ± 0.10
Carrier depth	K	1.00 ± 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
Sprocket hole position	E	1.75 ± 0.10
Punch hole position	F	3.50 ± 0.10
Sprocket 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	Reel Size	Quantity
SOT-143	7"	3,000



SE05S1AME

ESD PROTECTION ARRAY

SUGGESTED SOLDER PAD LAYOUT

Unit:mm

