

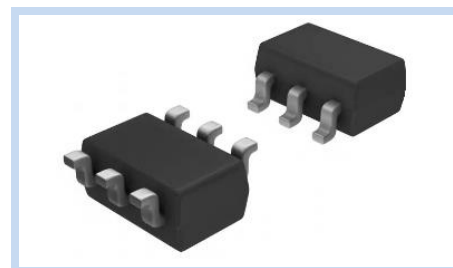
ESD Suppressor AEC-Q101 5V 4-Unidirectional SOT-23-6

ME54U9V8S236A

MERITEK

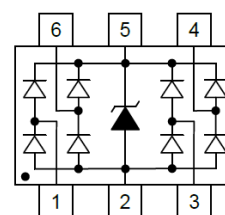
FEATURE

- IEC 61000-4-2 ESD: $\pm 25\text{KV}$ (Air) $\pm 20\text{KV}$ (Contact)
- ESD Protection for four Unidirectional Channels
- Low Leakage Current and Clamping Voltage
- Array of Surge Rated, Low Capacitance Diodes
- Solid-State Silicon-Avalanche Technology
- AEC-Q101 Qualified



APPLICATION

- USB Power and Data Line Protection
- LAN/WAN Device
- Video Line Protection
- Microcontroller Input Protection
- Handheld Electronics



MAXIMUM RATINGS AND CHARACTERISTICS

Parameter	Symbol	Value	Unit
ESD Voltage (Contact discharge)	V_{ESD}	± 20	KV
ESD Voltage (Air discharge)		± 25	
Peak Pulse Current ($t_p=8/20\mu s$)	I_{PP}	5	A
Operating & Storage Temperature Range	T_J, T_{STG}	-55~+150	$^{\circ}\text{C}$

ELECTRICAL CHARACTERISTICS

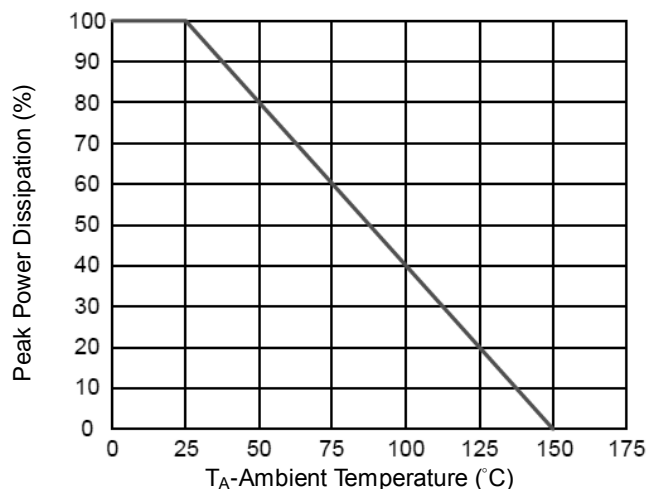
Parameter	Condition	Symbol	Min.	Typ.	Max.	Unit
Reverse Stand-Off Voltage	--	V_{RWM}	--	--	5	V
Reverse Breakdown Voltage	$I_{BR}=1\text{mA}$	V_{BR}	6	--	--	V
Reverse Leakage Current	$V_R=5\text{V}$, Each I/O pin	I_R	--	--	1	μA
Clamping Voltage	$I_{PP}=1\text{A}$, $t_p=8/20\mu s$, Line to Ground	V_C	--	--	9.8	V
	$I_{PP}=5\text{A}$, $t_p=8/20\mu s$, Line to Ground		--	--	16	
Off State Junction Capacitance	$V_{dc}=0$, $f=1\text{MHz}$, Between I/O pins and GND	C_J	--	0.8	--	pF

Notes:

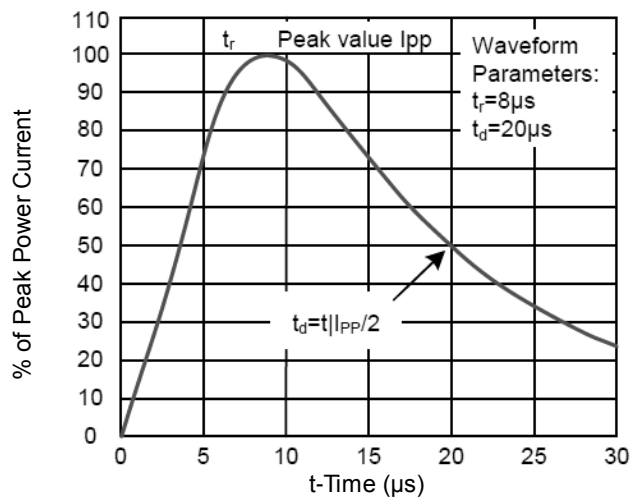
1. $T_J=25^{\circ}\text{C}$ unless otherwise specified

CHARACTERISTIC CURVES

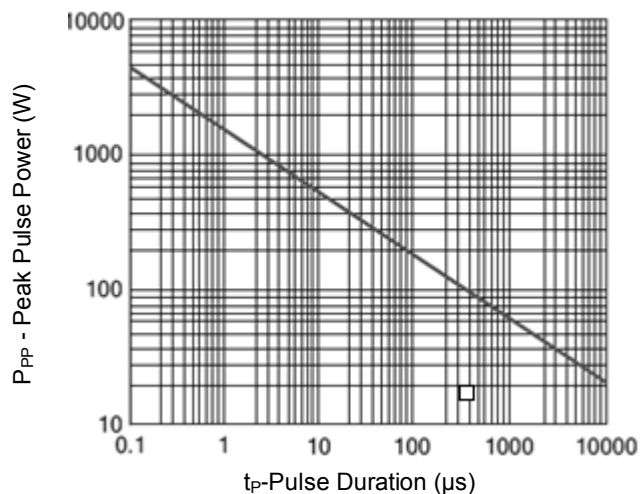
Power Derating Curve



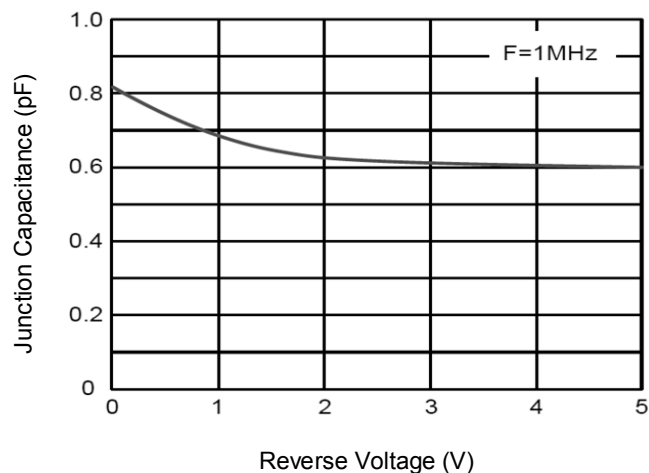
Pulse Waveforms



Non-Repetitive Peak Pulse vs. Pulse Time



Capacitance vs. Reverse Voltage



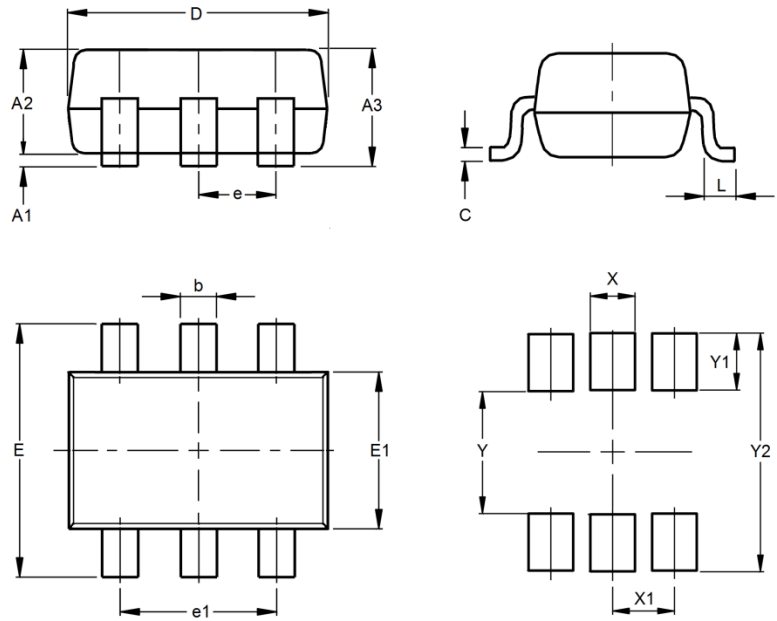
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DIMENSIONS AND RECOMMENDED LAND PATTERN

Item	Min (mm)	Max (mm)
A1	0.15	0.15
A2	0.90	1.30
A3	1.45	1.45
b	0.30	0.50
C	0.08	0.22
D	2.80	3.00
e	0.93	0.97
e1	1.90	1.90
E	2.60	3.00
E1	1.50	1.70
L	0.30	0.60
Y	1.60	1.60
Y1	0.79	0.79
Y2	3.10	3.10
X	0.55	0.55
X1	0.94	0.94



*Specifications subject to change without notice.