

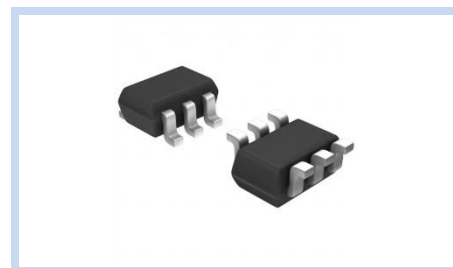
# ESD Suppressor AEC-Q101 5.5V 4-Unidirectional SOT-363

ME5V54U10S363A

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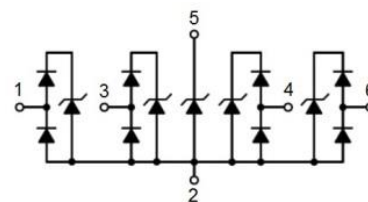
## FEATURE

- IEC 61000-4-2 ESD:  $\pm 20\text{KV}$  (Air)  $\pm 15\text{KV}$  (Contact)
- IEC 61000-4-4 EFT: 40A (5/50ns)
- IEC 61000-4-5 Lightning: 4A (8/20 $\mu\text{s}$ )
- ESD Protection for four Unidirectional Channels
- Low Clamping Voltage
- AEC-Q101 Qualified



## APPLICATION

- USB 2.0 Data Line Protection
- Video Graphics Cards
- Digital Video Interface (DVI)
- 10/100/1000 Ethernet
- Control Signal Line Protection



## MAXIMUM RATINGS AND CHARACTERISTICS

Parameter	Symbol	Value	Unit
ESD Voltage (Contact discharge)	$V_{ESD}$	$\pm 15$	KV
ESD Voltage (Air discharge)		$\pm 20$	
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	--	$V_{RWM}$	--	--	5.5	V
Reverse Breakdown Voltage	$V_{BR}=1\text{mA}$ , Any pins to GND	$V_{BR}$	6	6.9	--	V
Reverse Leakage Current	$V_R=5\text{V}$	$I_R$	--	--	1	$\mu\text{A}$
Dynamic Resistance	$T_p=100\text{ns}$	$R_{DYN}$	--	0.94	--	$\Omega$
Clamping Voltage	$I_{PP}=1\text{A}$ , $t_p=8/20\mu\text{s}$ , Any I/O pins to GND	$V_C$	--	--	10	V
	$I_{PP}=4\text{A}$ , $t_p=8/20\mu\text{s}$ , Any I/O pin to GND		--	--	15	
Clamping Voltage TLP	$I_{PP}=8\text{A}$ , $t_p=100\text{ns}$ , Any I/O pin to GND	$V_C$	--	16	--	V
	$I_{PP}=16\text{A}$ , $t_p=100\text{ns}$ , Any I/O pin to GND		--	23.5	--	
Off State Junction Capacitance	$V_{dc}=0$ , Bias, $f=1\text{MHz}$ , Between any I/O pins to GND	$C_J$	--	--	0.6	pF
	$V_{dc}=0$ , Bias, $f=1\text{MHz}$ , Between any I/O pins		--	--	0.3	

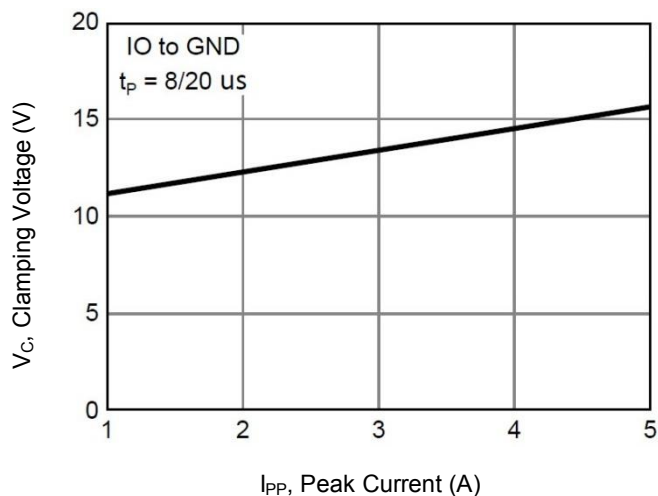
Note:

1. Testing using Transmission Line Pulse (TLP) conditions:  $Z_0=50\Omega$ ,  $t_p=100\text{ns}$

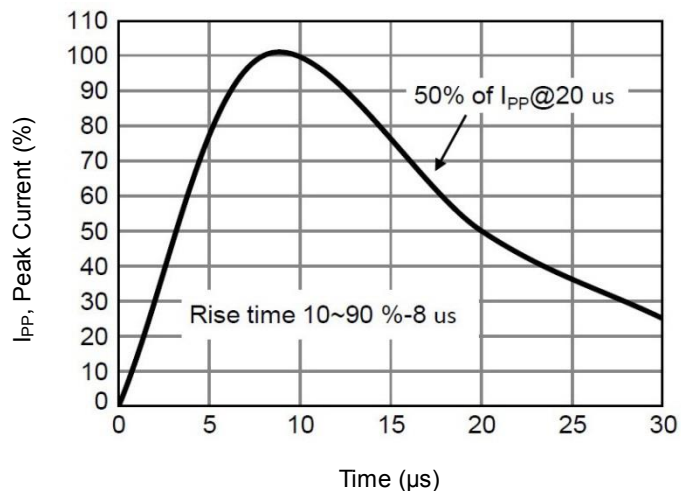
2.  $T_A=25^{\circ}\text{C}$  unless otherwise specified

## CHARACTERISTIC CURVES

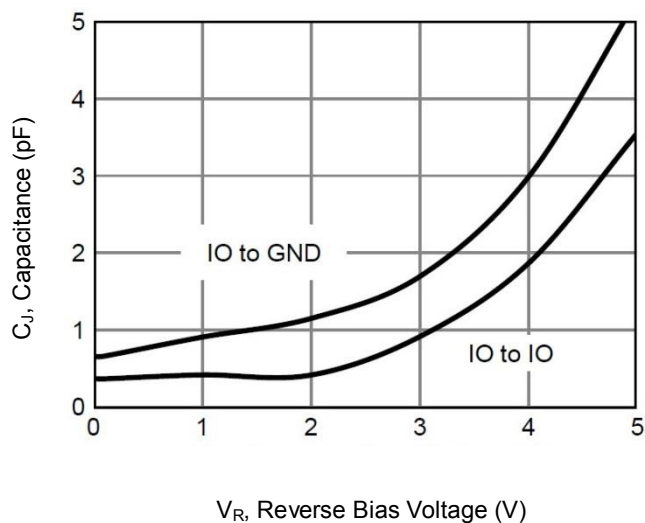
Typical Peak Clamping Voltage



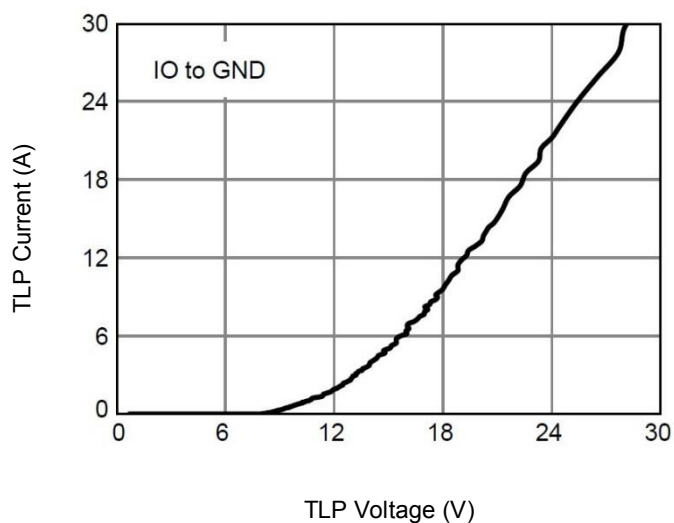
Pulse Waveform



Typical Junction Capacitance



Transmission Line Pulsing



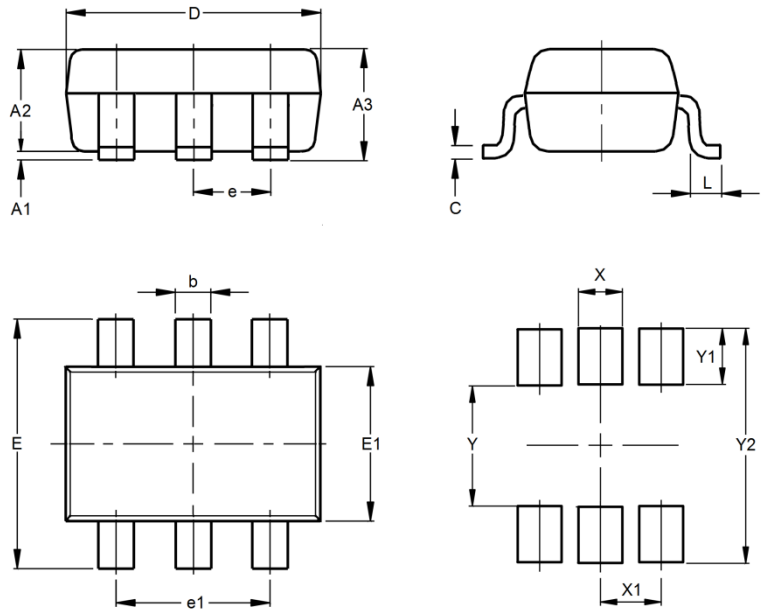
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## DIMENSIONS AND RECOMMENDED LAND PATTERN

Item	Min (mm)	Max (mm)
A1	0.00	0.10
A2	0.80	1.00
A3	0.00	1.10
b	0.15	0.30
C	0.08	0.25
D	1.90	2.20
e	0.55	0.75
e1	1.20	1.40
E	2.00	2.20
E1	1.15	1.35
L	0.15	0.45
Y	1.25	1.25
Y1	0.60	0.60
Y2	2.30	2.30
X	0.42	0.42
X1	0.65	0.65



\*Specifications subject to change without notice.