

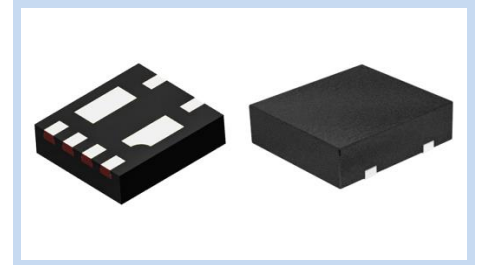
ESD Suppressor 5V 3-Unidirectional DFN2018

ME53U9V8D2018

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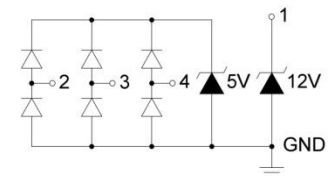
FEATURE

- IEC 61000-4-2 ESD: $\pm 15\text{KV}$ (Air) $\pm 8\text{KV}$ (Contact)
- ESD Protection for three Unidirectional Channels
- Low Leakage Current
- Low Clamping Voltage
- Solid-State Silicon-Avalanche Technology



APPLICATION

- Power Port Protection
- I²C Bus Protection
- Computer Interfaces Protection
- Microprocessors Protection
- Peripherals



MAXIMUM RATINGS AND CHARACTERISTICS

Parameter	Symbol	Value	Unit
ESD Voltage (Contact discharge)	V_{ESD}	± 8	KV
ESD Voltage (Air discharge)		± 15	
Peak Pulse Current (tp=8/20 μ s)	I_{PP}	50	A
Operating Temperature Range	T_J	-55~+85	$^{\circ}\text{C}$
Storage Temperature Range	T_{STG}	-55~+150	$^{\circ}\text{C}$

ELECTRICAL CHARACTERISTICS

Parameter	Condition	Symbol	Min.	Typ.	Max.	Unit
Reverse Stand-Off Voltage	Pin 1 to GND	V_{RWM}	--	--	12	V
	Pin 2/3/4 to GND		--	--	5	
Reverse Breakdown Voltage	$I_{BR}=1\text{mA}$, Pin 1 to GND	V_{BR}	13.5	--	--	V
	$I_{BR}=1\text{mA}$, Pin 2/3/4 to GND		6	--	--	
Reverse Leakage Current	$V_R=12\text{V}$, Pin 1 to GND	I_R	--	--	1	μA
	$V_R=5\text{V}$, Pin 2/3/4 to GND		--	--	1	
Clamping Voltage	$I_{PP}=50\text{A}$, tp=8/20 μ s, Pin 1 to GND	V_C	--	--	40	V
	$I_{PP}=1\text{A}$, tp=8/20 μ s, Pin 2/3/4 to GND		--	--	9.8	
	$I_{PP}=3\text{A}$, tp=8/20 μ s, Pin 2/3/4 to GND		--	--	40	

Notes:

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

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ELECTRICAL CHARACTERISTICS

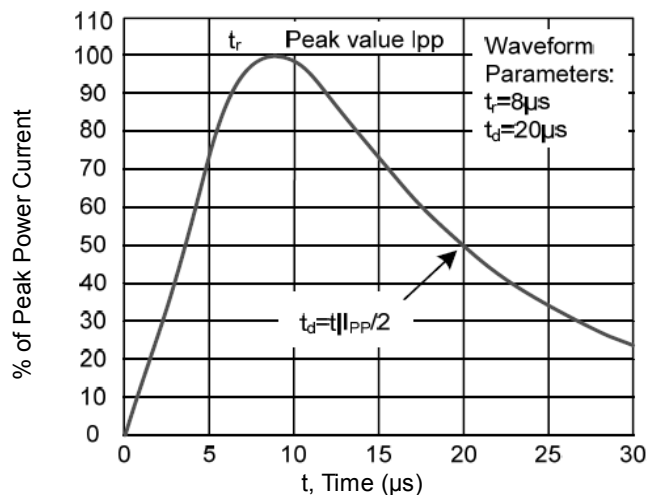
Parameter	Condition	Symbol	Min.	Typ.	Max.	Unit
Off State Junction Capacitance	Vdc=0, f=1MHz Pin 1 to GND	C _J	--	--	350	pF
	Vdc=0, f=1MHz Pin 2/3/4 to GND		--	--	1	

Notes:

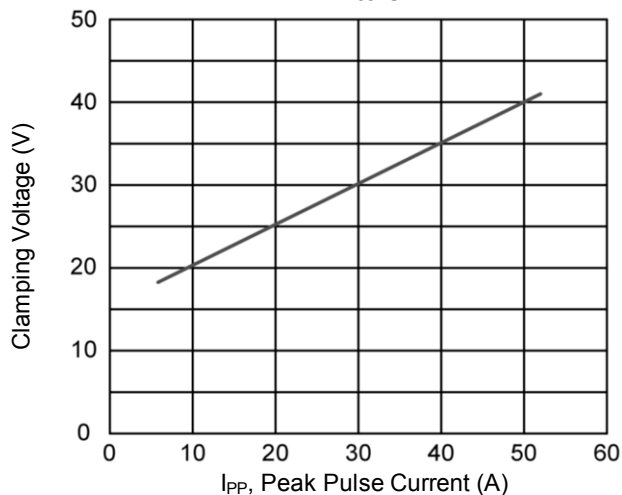
2. T_J=25°C unless otherwise specified

CHARACTERISTIC CURVES

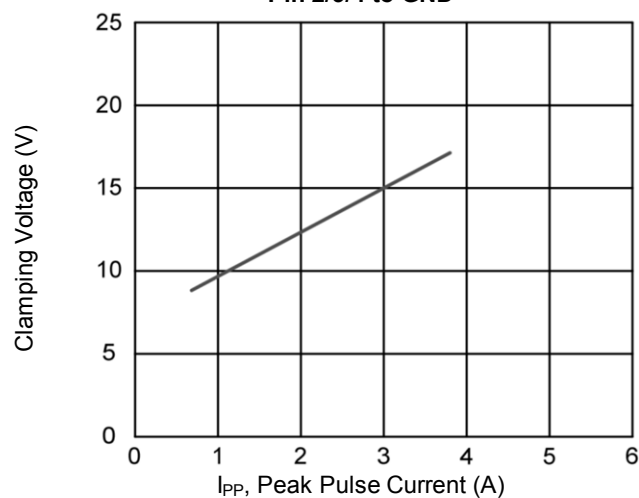
8/20μs Pulse Waveforms



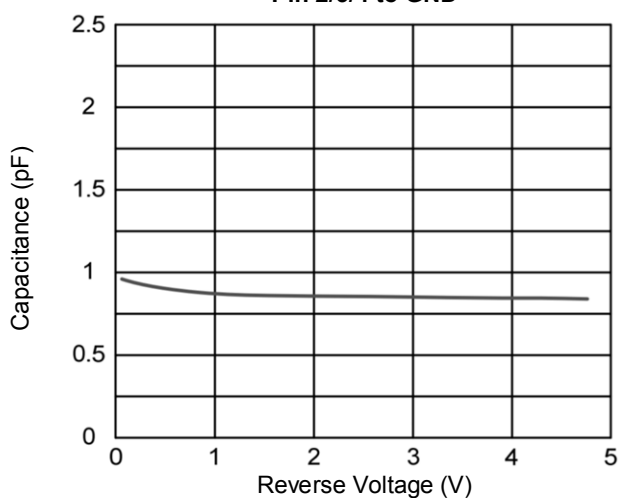
Clamping Voltage vs. Peak Pulse Current
Pin 1 to GND



Clamping Voltage vs. Peak Pulse Current
Pin 2/3/4 to GND



Capacitance vs. Reverse Voltage
Pin 2/3/4 to GND



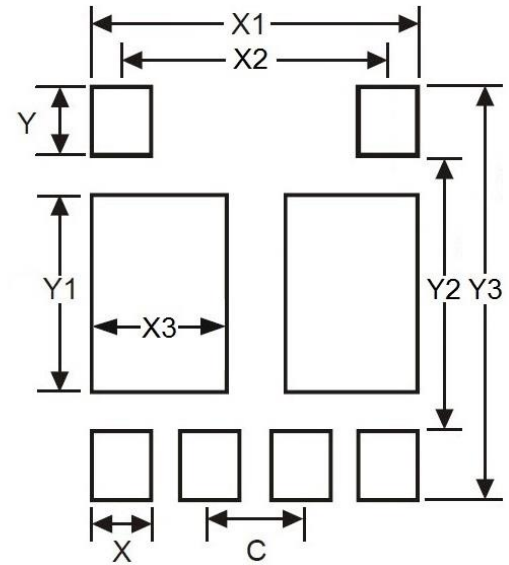
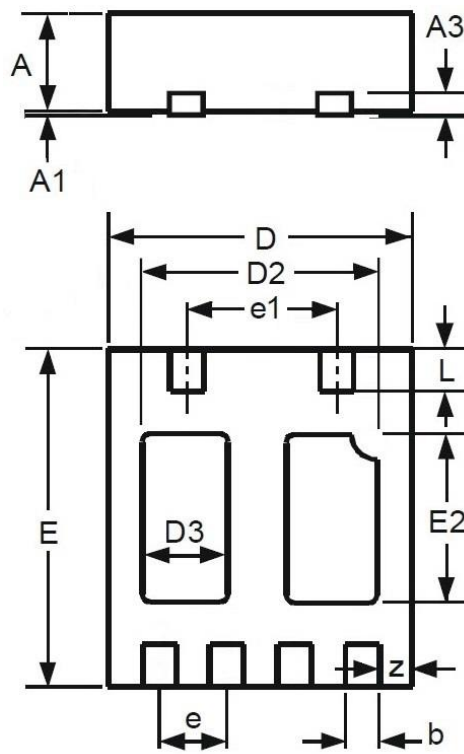
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DIMENSIONS AND RECOMMENDED LAND PATTERN

Item	Min (mm)	Max (mm)
A	0.50	0.65
A1	0.00	0.03
A3	0.12	0.12
b	0.15	0.25
D	1.70	1.90
D2	1.40	1.40
E	1.90	2.10
E2	0.69	0.94
e	0.40	0.40
L	0.25	0.35
C	0.40	0.40
X	0.20	0.20
X1	1.40	1.40
X2	0.80	0.80
X3	0.45	0.45
Y	0.60	0.60
Y1	0.84	0.84
Y2	1.35	1.35
Y3	2.55	2.55



*Specifications subject to change without notice.