

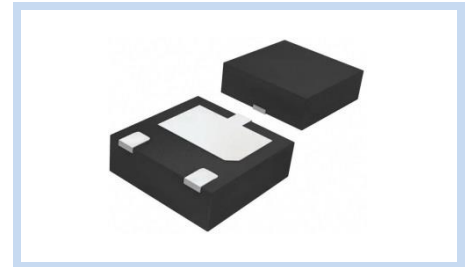
# ESD Suppressor 10V Unidirectional DFN2020

ME101U40D2020

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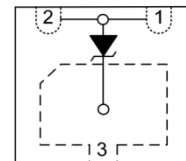
## FEATURE

- IEC 61000-4-2 ESD:  $\pm 30\text{KV}$  (Air)  $\pm 30\text{KV}$  (Contact)
- ESD Protection for one Unidirectional Channel
- High Surge Capability
- Low Leakage Current
- Low Clamping Voltage
- Solid-State Silicon-Avalanche Technology



## APPLICATION

- Power Port Protection
- I<sup>2</sup>C Bus Protection
- Computer Interfaces Protection
- Microprocessors Protection
- Peripherals



## MAXIMUM RATINGS AND CHARACTERISTICS

Parameter	Symbol	Value	Unit
ESD Voltage (Contact discharge)	$V_{ESD}$	$\pm 30$	KV
ESD Voltage (Air discharge)		$\pm 30$	
Peak Pulse Power ( $t_p=10/1000\mu\text{s}$ )	$P_{PP}$	400	W
Peak Pulse Power ( $t_p=8/20\mu\text{s}$ )	$P_{PP}$	4000	W
Operating & Storage Temperature Range	$T_J, T_{STG}$	-55~+150	$^{\circ}\text{C}$

## ELECTRICAL CHARACTERISTICS

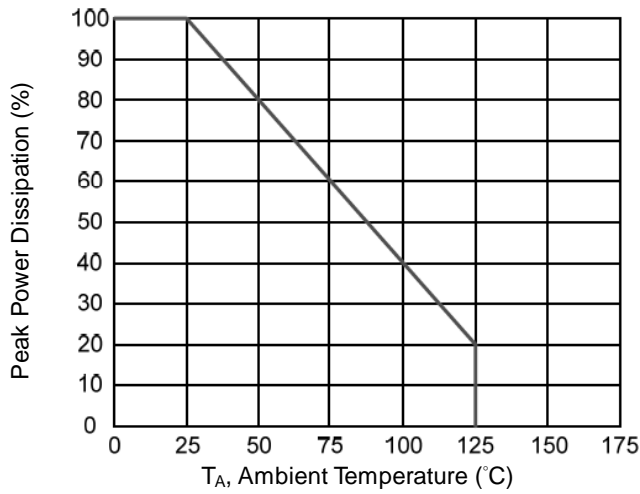
Parameter	Condition	Symbol	Min.	Typ.	Max.	Unit
Reverse Stand-Off Voltage	--	$V_{RWM}$	--	--	10	V
Reverse Breakdown Voltage	$I_{BR}=1\text{mA}$	$V_{BR}$	11	--	--	V
Reverse Leakage Current	$V_R=10\text{V}$	$I_R$	--	--	1	$\mu\text{A}$
Clamping Voltage	$I_{PP}=180\text{A}, t_p=8/20\mu\text{s}$	$V_C$	--	40	--	V
Off State Junction Capacitance	$V_{dc}=0, f=1\text{MHz}$ Between I/O pins and GND	$C_J$	--	1300	1600	pF

Notes:

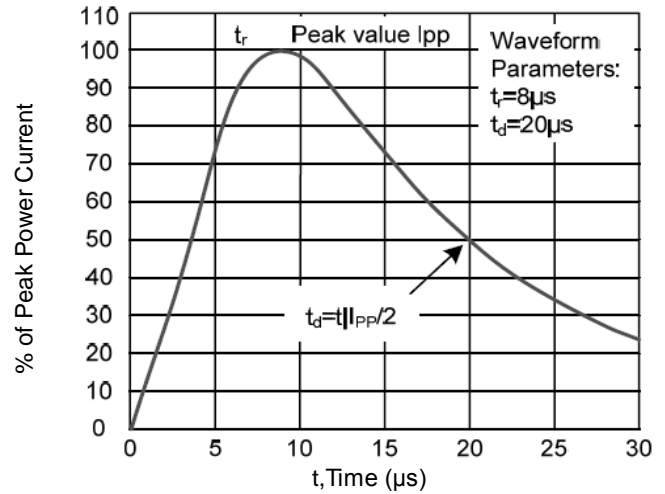
1.  $T_J=25^{\circ}\text{C}$  unless otherwise specified

## CHARACTERISTIC CURVES

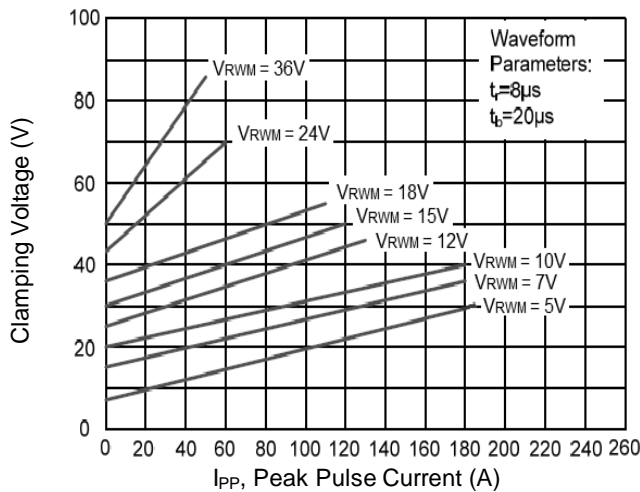
Power Derating Curve



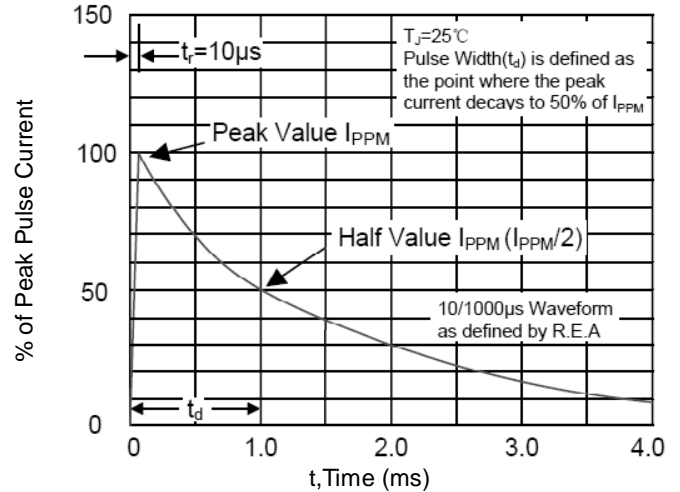
8/20µs Pulse Waveforms



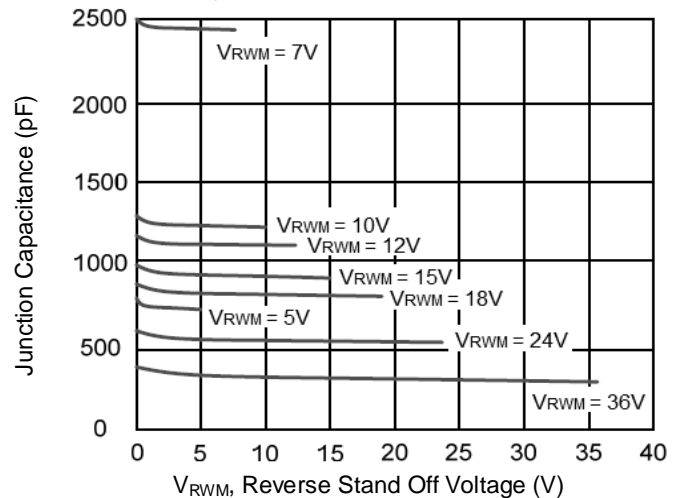
Clamping Voltage vs. Peak Pulse Current



10/1000µs Pulse Waveform



Typical Junction Capacitance



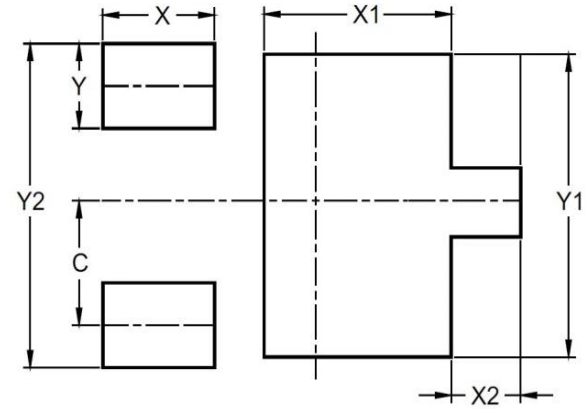
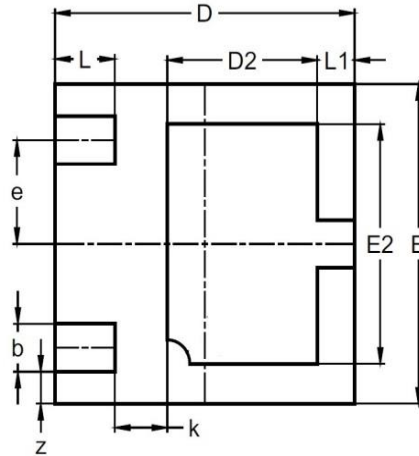
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## DIMENSIONS AND RECOMMENDED LAND PATTERN

Item	Min (mm)	Max (mm)
A	0.50	0.60
b	0.30	0.30
D	1.90	2.10
D2	0.90	1.15
E	1.90	2.10
E2	1.40	1.60
e	0.65	0.65
k	0.20	0.45
L	0.32	0.47
L1	0.20	0.30
z	0.50	0.50
C	0.60	0.60
X	0.50	0.50
X1	1.10	1.10
X2	0.25	0.25
Y	0.40	0.40
Y1	1.60	1.60
Y2	1.60	1.60



\*Specifications subject to change without notice.