

## Transient Voltage Suppressors for ESD Protection

### SE12NMP11GZ

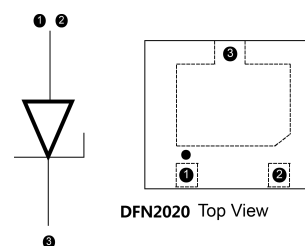
#### Features

- ◆ Low Operating Voltage: 12V.
- ◆ Ultra Low Leakage: nA Level.
- ◆ Low Clamping Voltage.
- ◆ Response time is typically < 1 ns.

#### DFN2020



#### Pin encapsulation



#### Absolute Maximum Ratings ( $T_A = 25^\circ\text{C}$ unless otherwise specified)

Parameter	Symbol	Value	Units
ESD per IEC61000-4-2 (Air)	$V_{\text{ESD}}$	$\pm 30$	kV
ESD per IEC61000-4-2 (Contact)		$\pm 30$	
Operating Temperature Range	$T_J$	-55 to +150	$^\circ\text{C}$
Storage Temperature Range	$T_{\text{stg}}$	-55 to +150	$^\circ\text{C}$

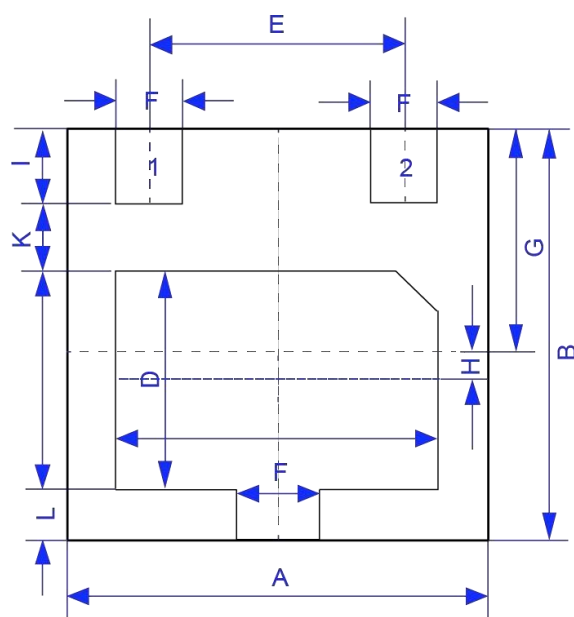
#### Electrical Characteristics ( $T_A = 25^\circ\text{C}$ unless otherwise specified)

Parameter	Symbol	Conditions	Min.	Typ.	Max.	Units
Reverse Working Voltage	$V_{\text{RWM}}$	--	--	--	12	V
Breakdown Voltage	$V_{\text{BR}}$	$I_T = 1\text{mA}$	14.2	--	16.2	V
Leakage Current	$I_{\text{Leak}}$	$V_{\text{RWM}} = 12\text{V}$	--	--	500	nA
Clamping Voltage	$V_C$	$I_{\text{PP}} = 100\text{A}$ , $t_P = 8/20\mu\text{s}$	--	21	24	V
		$I_{\text{PP}} = 130\text{A}$ , $t_P = 8/20\mu\text{s}$	--	--	33	V
Junction Capacitance	$C_J$	$V_R = 0\text{V}$ , $f = 1\text{MHz}$	--	1000	--	pF

#### Product dimension

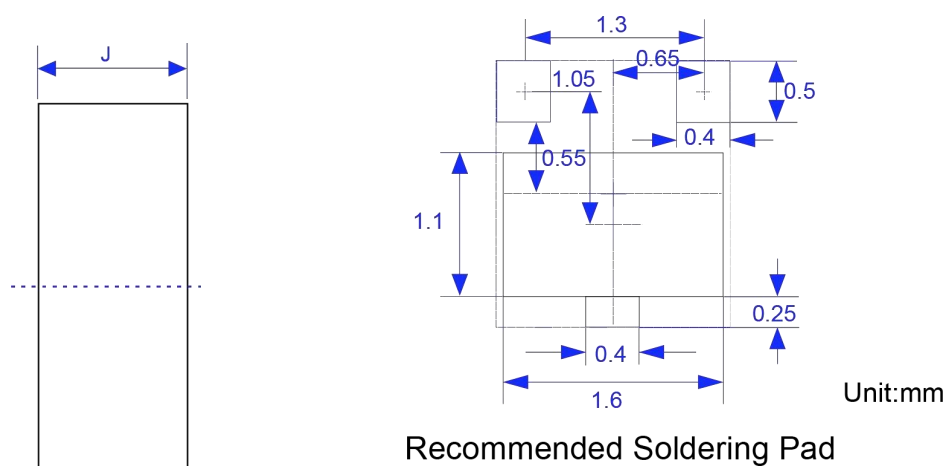
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Bottom View

Dim	Millimeters	
	MIN	MAX
A	1.90	2.10
B	1.90	2.10
C	1.40	1.60
D	0.90	1.10
E	1.30BSC	
F	0.25	0.35
G	0.95	1.05
H	0.20	0.30
I	0.35	0.45
J	—	0.65
K	0.30	0.35
L	0.15	0.20

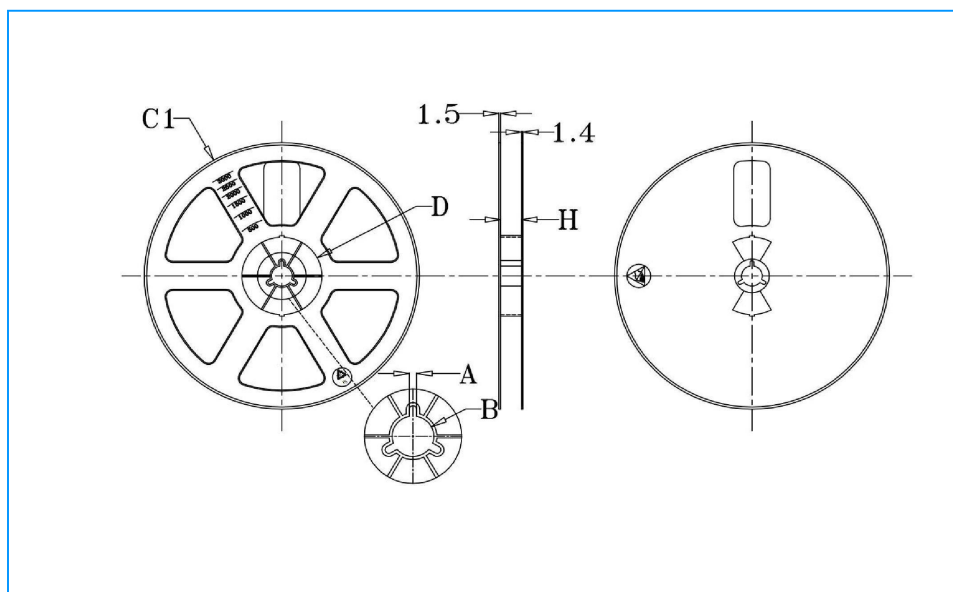


Recommended Soldering Pad

### Tape And Reel Information

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Spec	8
C1±1	178
A±0.2	3.6
B±0.2	14.6
D±0.5	52.8
H±0.2	8.5