



# SE05Q1BPDB

## ESD PROTECTION DIODE

### FEATURES

- Bi-directional ESD protection
- IEC61000-4-2 15kV(Contact), 15kV(air)
- Ultra small SMD package:0201
- Operating voltage: 5V
- Suffix "H" indicates Halogen-free parts, ex. SE05Q1BPDBH

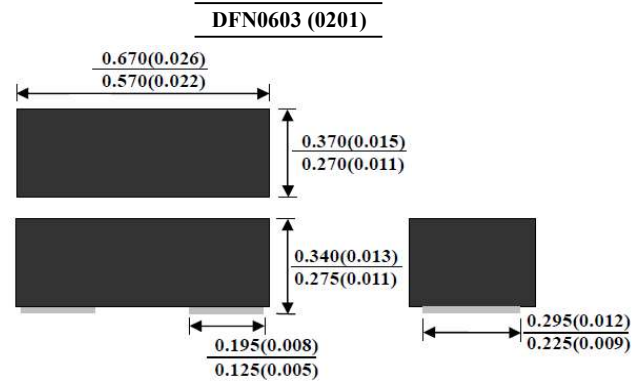
### APPLICATIONS

- Computers and peripherals
- High speed data lines
- Audio and video equipment
- Cellular handsets and accessories
- Portable electronics

### MECHANICAL DATA

Case : DFN0603(0201) standard package  
 Terminals : Au / Sn plated, Solderable per MIL-STD-750,  
 method 2026

### PIN CONFIGURATION



Dimensions in inchs and (millimeters)

### Maximum Ratings (Rating at 25°C ambient temperature unless otherwise specified)

Parameter	Symbol	Value	Units
IEC 61000-4-2 ESD Voltage	$V_{ESD}$	±15	KV
Air Model		±15	
Peak Pulse Power $t_p=8/20$ us	$P_{pp}$	50	W
Maximum Peak Pulse Current $t_p=8/20$ us	$I_{pp}$	4	A
Operating Junction Temperature	$T_j$	-55 to +125	°C
Storage Temperature Range	$T_{stg}$	-55 to +150	°C



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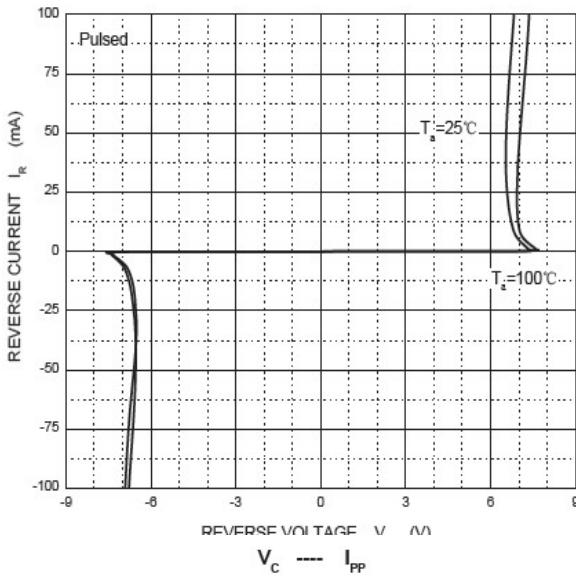
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### Electrical Characteristics ( $T_a=25^\circ\text{C}$ unless otherwise specified)

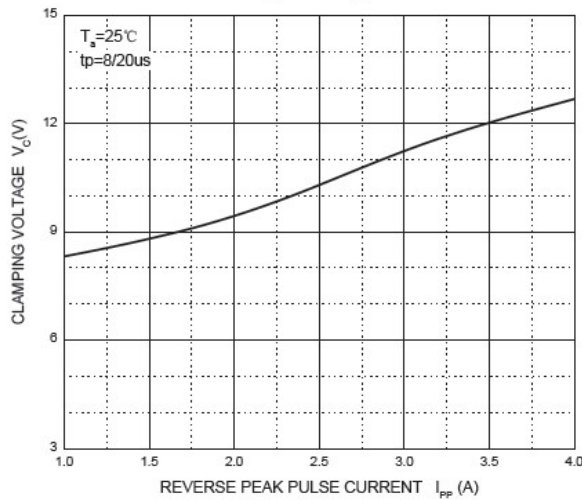
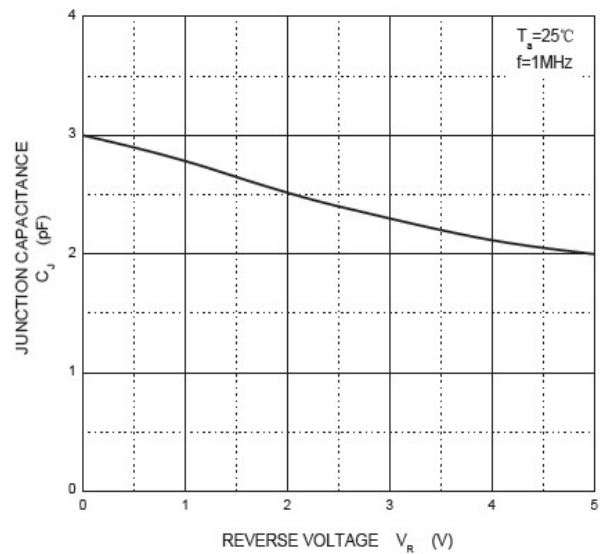
Parameter	Test conditions	Symbol	Min	Typ	Max	Unit
Reverse stand off voltage	-	$V_{RWM}$	-	-	5	V
Reverse leakage current	$V_{RWM}=5\text{V}$	$I_R$	-	-	1	$\mu\text{A}$
Reverse breakdown voltage	$I_T=1\text{mA}$	$V_{(BR)}$	5.6	-	8.0	V
Clamping voltage	$I_{pp}=3.5\text{A}$ , $t_p=8/20\ \mu\text{s}$	$V_C$	-	-	13	V
Junction capacitance	Between I/O Pin and GND $V_R=0\text{V}$ , $f=1\text{MHz}$	$C_J$	-	3	10	pF

### RATINGS AND CHARACTERISTIC CURVES

Reverse Characteristics



Capacitance Characteristics

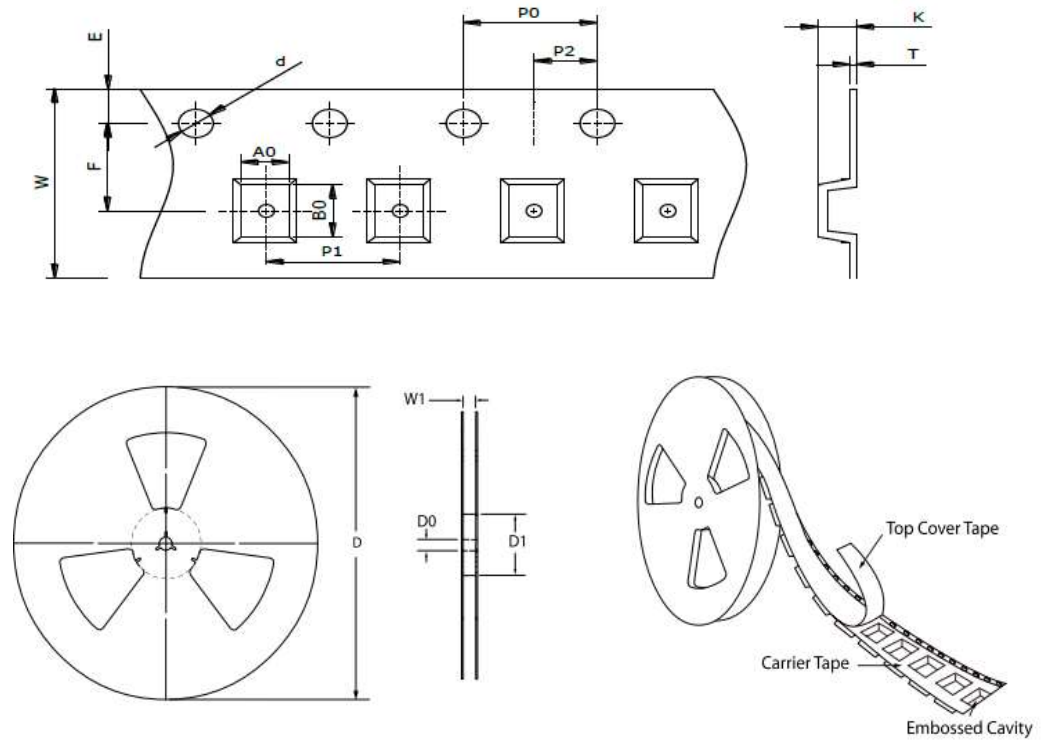




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### TAPE & REEL SPECIFICATION



Item	Symbol	DFN0603 (0201)
Carrier width	A <sub>0</sub>	0.37 ± 0.05
Carrier length	B <sub>0</sub>	0.67 ± 0.05
Carrier depth	K	0.50 ± 0.05
Sprocket hole	d	1.50 ± 0.10
Reel outside diameter	D	178.00 ± 2.00
Feed hole width	D <sub>0</sub>	13.00 ± 0.20
Reel inner diameter	D <sub>1</sub>	MIN. 54.00
Sprocket hole position	E	1.75 ± 0.10
Punch hole position	F	3.50 ± 0.10
Sprocket hole pitch	P <sub>0</sub>	4.00 ± 0.10
Punch hole pitch	P <sub>1</sub>	4.00 ± 0.10
Embossment center	P <sub>2</sub>	2.00 ± 0.10
Overall tape thickness	T	0.18 ± 0.05
Tape width	W	8.00 ± 0.20
Reel width	W1	MAX. 13.50

### ORDER INFORMATION

Package	Reel Size	Quantity
DFN0603 (0201)	7"	10,000

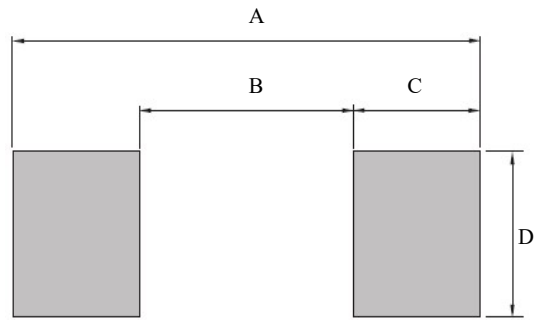


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### *SUGGESTED SOLDER PAD LAYOUT*



PACKAGE	A	B	C	D
DFN0603 (0201)	0.64	0.20	0.22	0.36