



# SE05Q2BPDA

## ESD Protection Diode

### FEATURES

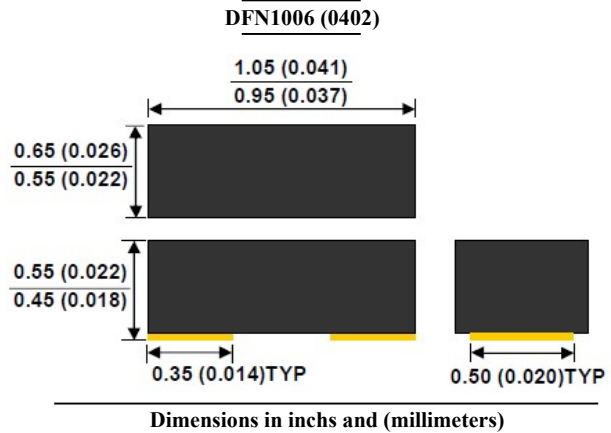
- Meet IEC61000-4-2 (ESD)±30kV (air),±30kV (contact)
- Bi-directional ESD protection
- Working Voltage : 5V
- Suffix "H" indicates Halogen-free parts, ex. SE05Q2BPDAH

### APPLICATIONS

- Cell Phone Handsets and Accessories
- Notebooks, Desktops, and Servers
- PCI express, SATA, USB 2.0,DVI, Display port
- Portable Instrumentation

### MECHANICAL DATA

Case : DFN1006(0402) mold package  
 Terminal : Au/Sn plated, solderable per  
 MIL-STD-750, method 2026



### PIN CONFIGURATION



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

Parameter	Symbol	Value	Units
Peak Pulse Power (tp=8/20μs waveform)	P <sub>PP</sub>	138	W
Maximum Peak Pulse Current (tp=8/20μs waveform)	I <sub>PP</sub>	7.9	A
ESD per IEC 61000-4-2 (Air)	V <sub>ESD</sub>	±30	kV
ESD per IEC 61000-4-2 (Contact)		±30	
Operating Junction Temperature	T <sub>J</sub>	125	°C
Storage Temperature Range	T <sub>STG</sub>	-55 to +150	°C



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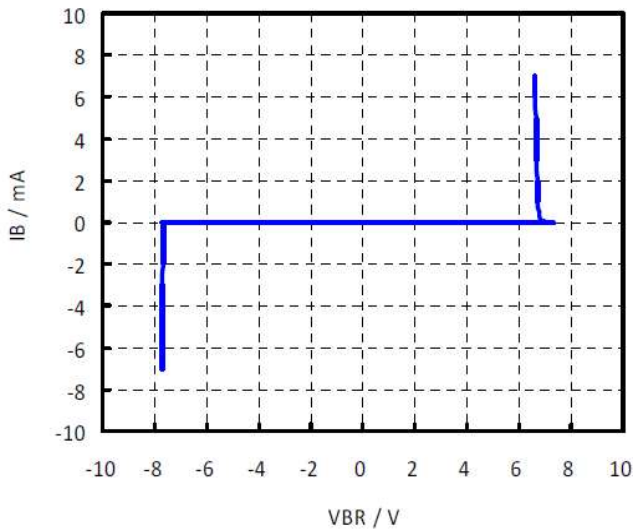
## ESD Protection Diode

*Electrical Characteristics (Rating at 25°C ambient temperature unless otherwise specified)*

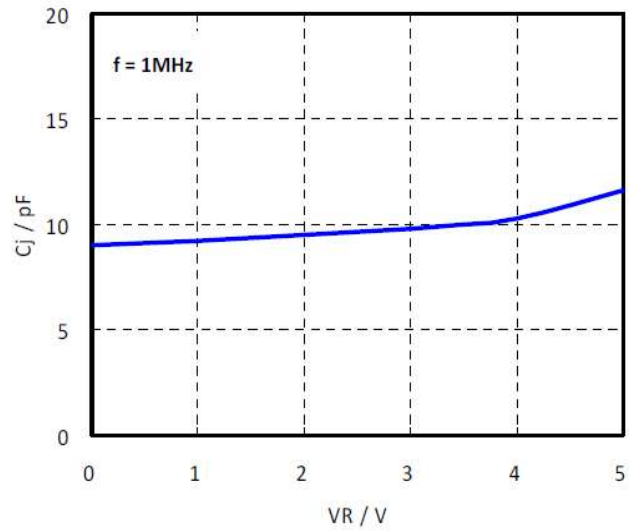
Parameter	Symbol	Min	Typ.	Max	Units	
Reverse Stand-Off Voltage	$V_{RWM}$	-	-	5	V	
Reverse Breakdown Voltage	$V_{(BR)}$	-	-	8.5	V	
Reverse Leakage Current	$I_R$	-	-	50	nA	
Clamping Voltage	$V_C$	$I_{pp} = 1A, t_p = 8/20\mu s$	-	-	9	V
		$I_{pp} = 7.9A, t_p = 8/20\mu s$	-	-	17.5	V
Junction Capacitance	$C_J$	-	10	20	pF	

### RATINGS AND CHARACTERISTIC CURVES

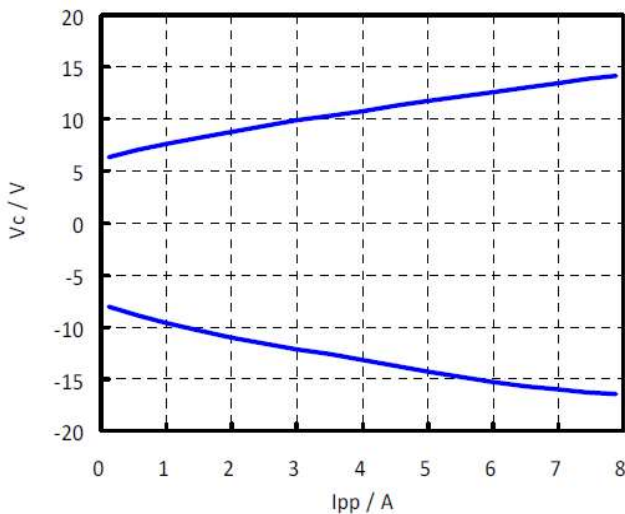
VBR - IB ( 25°C )



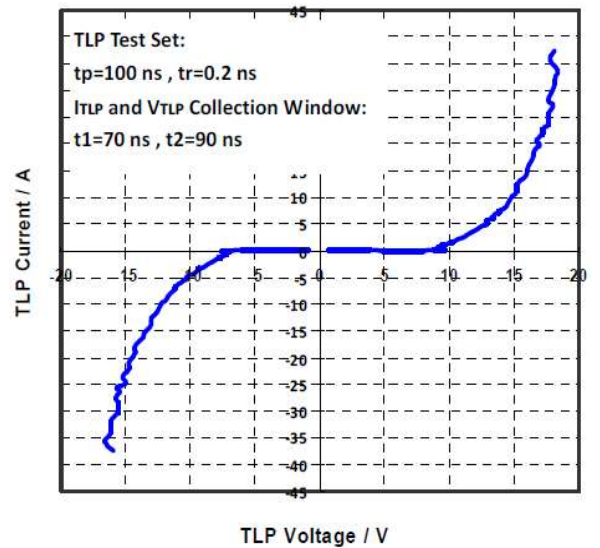
Cj--VR(25°C)



Vc - Ipp ( 25°C )



TLP Measurement

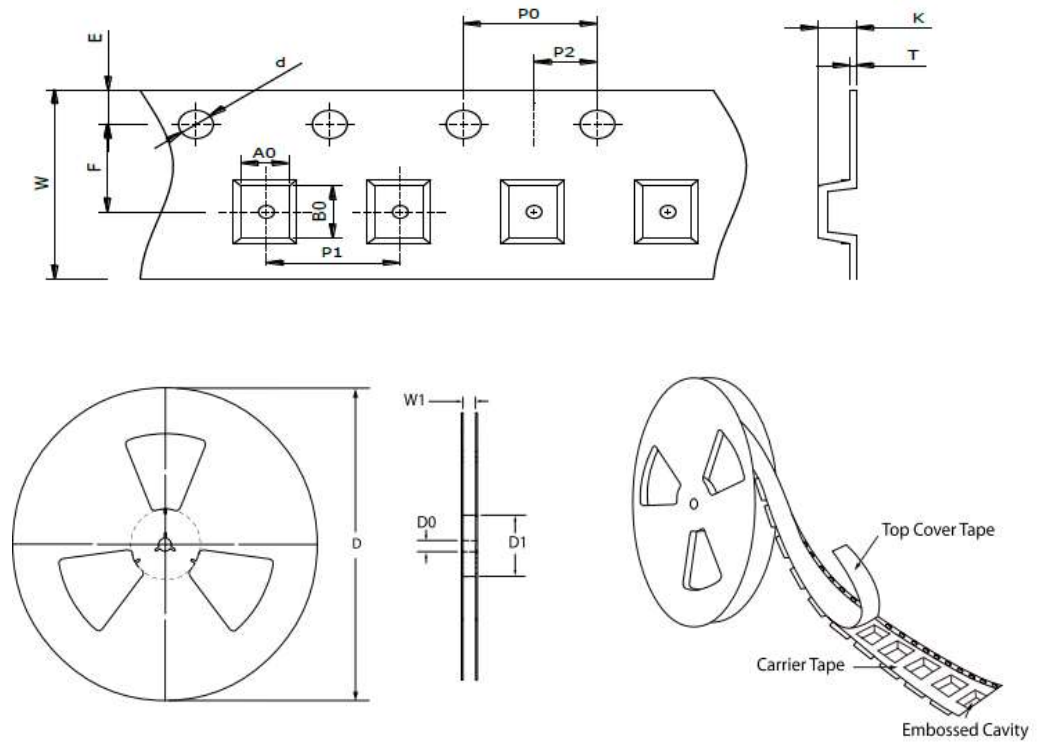




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## ESD Protection Diode

### TAPE & REEL SPECIFICATION



Item	Symbol	DFN1006 (0402)
Carrier width	A <sub>0</sub>	0.67 ± 0.10
Carrier length	B <sub>0</sub>	1.12 ± 0.10
Carrier depth	K	0.60 ± 0.10
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	0.22 ± 0.05
Tape width	W	8.00 ± 0.20
Reel width	W <sub>1</sub>	MAX. 13.50

### ORDER INFORMATION

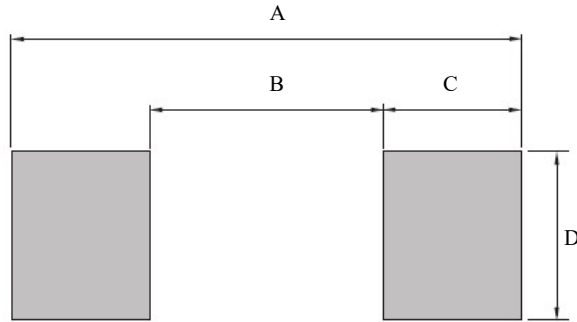
Package	Marking Code	Reel Size	Quantity
DFN1006 (0402)	E5	7"	5,000



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### SUGGESTED SOLDER PAD LAYOUT



Unit : mm

PACKAGE	A	B	C	D
DFN1006 (0402)	1.30	0.30	0.50	0.70