



# SE03Q1BPDA

## ESD Protection Diode

### FEATURES

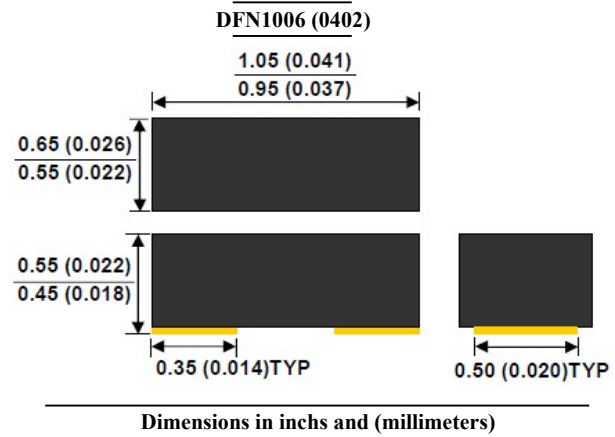
- Meet IEC61000-4-2 (ESD)±20kV (air),±12kV (contact)
- Protects one bi-directional I/O line
- Suffix "H" indicates Halogen-free parts, ex. SE03Q1BPDAH

### APPLICATIONS

- Cell Phone Handsets and Accessories
- Subscriber Identity Module(SIM) Card Protection
- Audio and Video Equipment
- Portable Instrumentation

### MECHANICAL DATA

Case : DFN1006(0402) mold package  
 Terminal : Au/Sn plated, solderable per  
 MIL-STD-750, method 2026  
 High temperature soldering guaranteed : 260°C/10second



### 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>	40	W
ESD per IEC 61000-4-2 (Air)	V <sub>ESD</sub>	±20	kV
ESD per IEC 61000-4-2 (Contact)		±12	
Operating Junction Temperature Range	T <sub>J</sub>	-55 to +125	°C
Storage Temperature Range	T <sub>J</sub> , T <sub>STG</sub>	-55 to +150	°C



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

Parameter	Symbol	Min	Typ.	Max	Units
Reverse Stand-Off Voltage	$V_{RWM}$	-	-	3.3	V
Reverse Breakdown Voltage	$V_{(BR)}$	4.0	-	-	V
Reverse Leakage Current	$I_R$	-	0.01	1	$\mu A$
Clamping Voltage	$V_C$	$I_{pp} = 1A, t_p = 8/20\mu s$	-	5.5	V
		$I_{pp} = 5A, t_p = 8/20\mu s$	-	8.0	V
Junction Capacitance	$C_J$	-	8	10	pF

### RATINGS AND CHARACTERISTIC CURVES

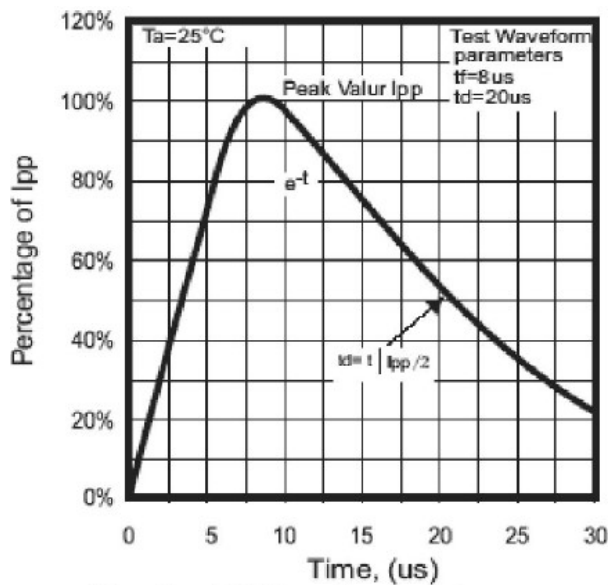


Fig. 1 - 8/20us Peak pulse current waveform acc. IEC 61000-4-5

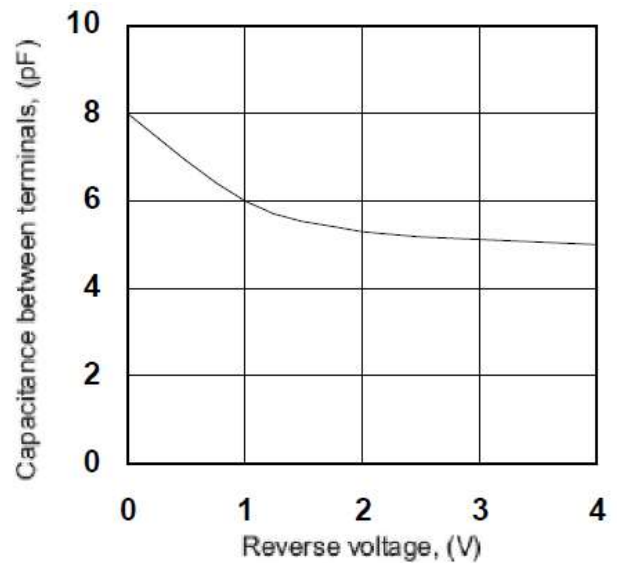


Fig. 2 - Capacitance between terminals characteristics

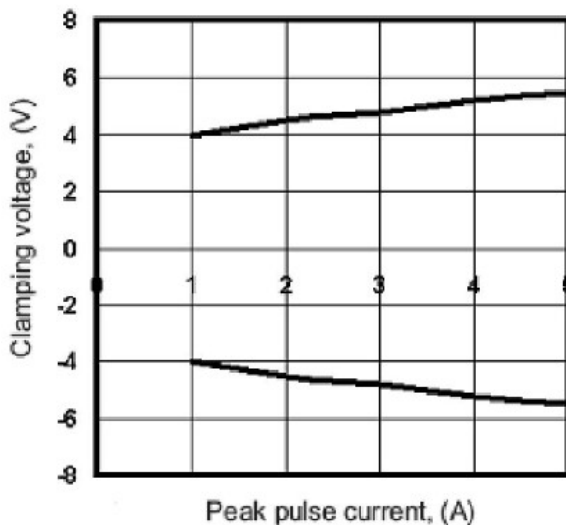


Fig.3 - Clamping voltage vs. peak pulse current

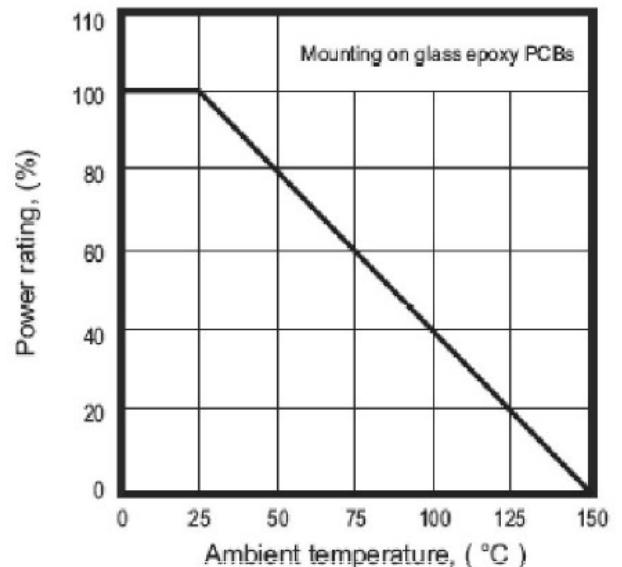


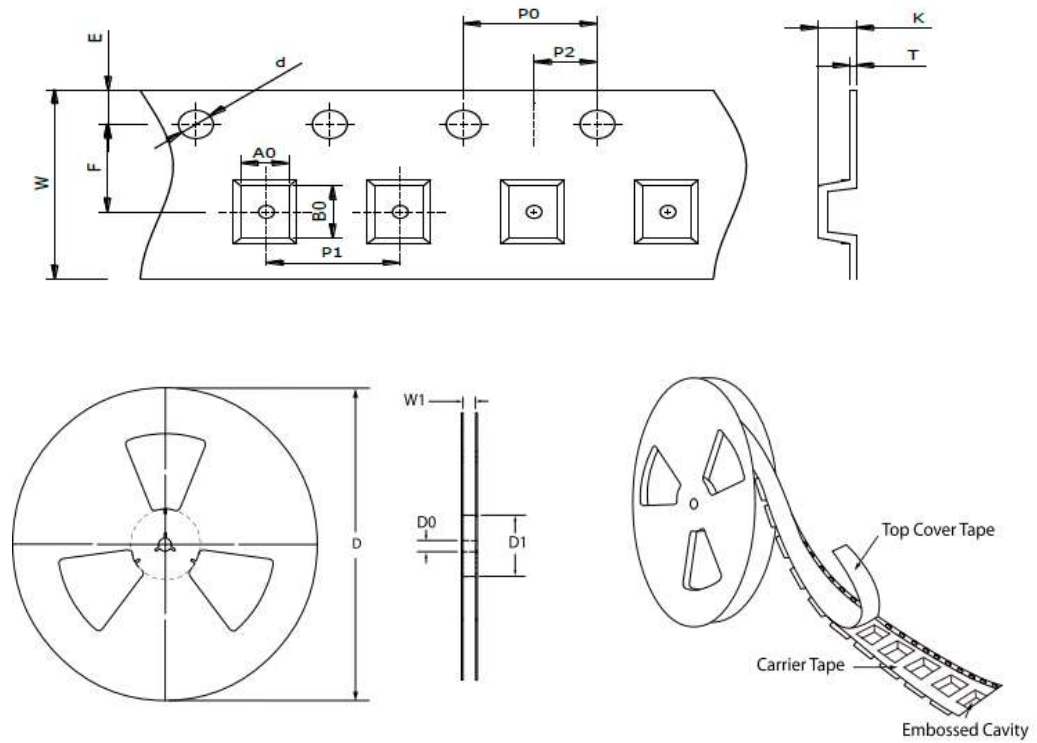
Fig. 4 - Power rating derating curve



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### 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

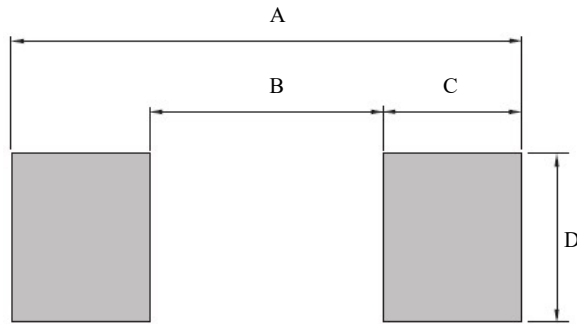
Package	Reel Size	Quantity
DFN1006 (0402)	7"	5,000



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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