



SE03Q1BPDA

ESD Protection Diode

FEATURES

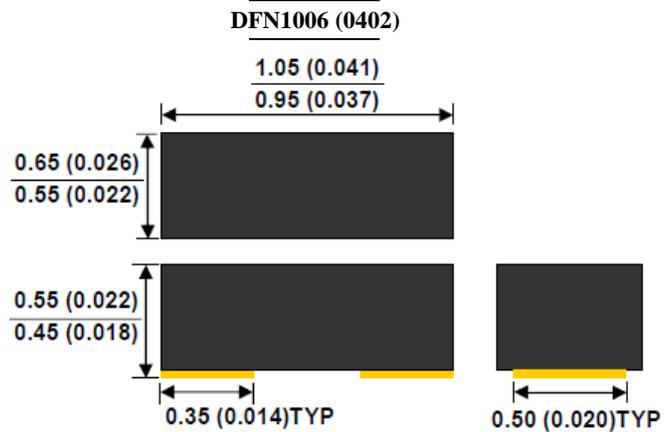
- Meet IEC61000-4-2 (ESD)±20kV (air),±12kV (contact)
- Protects one bi-directional I/O line
- Suffix "H" indicates Halogen-free parts, ex. SE03Q1BPDAH

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



Dimensions in millimeters and (inches)

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 _{PP}	40	W
ESD per IEC 61000-4-2 (Air)	V _{ESD}	±20	kV
ESD per IEC 61000-4-2 (Contact)		±12	
Operating Junction Temperature Range	T _J	-55 to +125	°C
Storage Temperature Range	T _{STG}	-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
Peak Pulse Current $t_p=8/20\ \mu s$	I_{PP}	-	5	-	A
Reverse Stand-Off Voltage	V_{RWM}	-	-	3.3	V
Reverse Breakdown Voltage $I_T = 1\text{mA}$	$V_{(BR)}$	-	-	6.5	V
Reverse Leakage Current $V_R = 3.3\text{V}$	I_R	-	0.01	1	μA
Clamping Voltage	V_C	$I_{pp} = 1\text{A}, t_p = 8/20\ \mu s$	-	5.5	V
		$I_{pp} = 5\text{A}, t_p = 8/20\ \mu s$	-	8.0	V
Junction Capacitance	C_J	-	8	10	pF
		Between I/O Pin and GND			
		$V_R=0\text{V}, f=1\text{MHz}$			

RATINGS AND CHARACTERISTIC CURVES

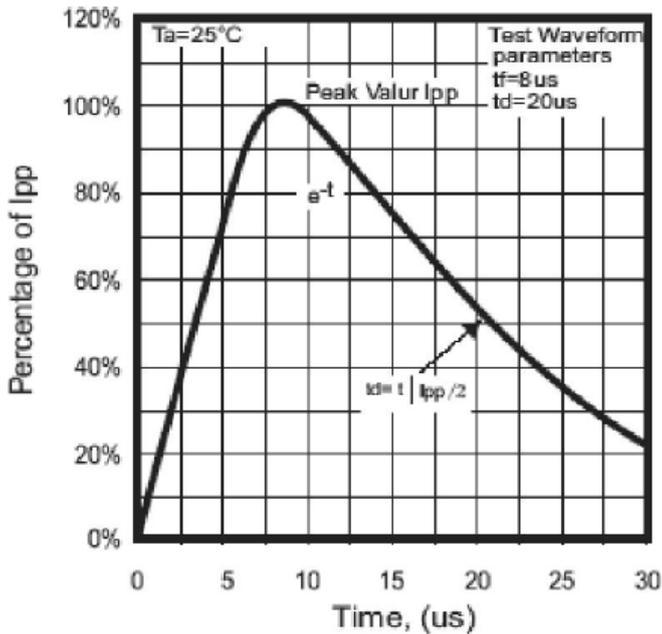


Fig. 1 - 8/20us Peak pulse current waveform acc. IEC 61000-4-5

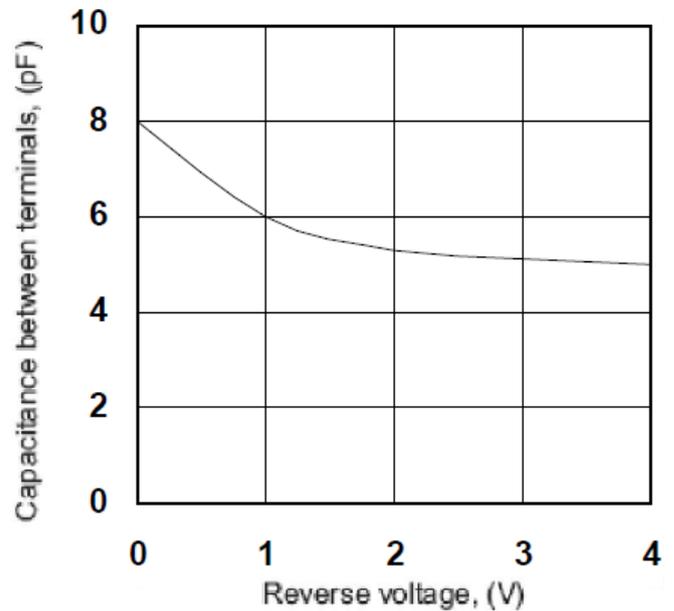


Fig. 2 - Capacitance between terminals characteristics

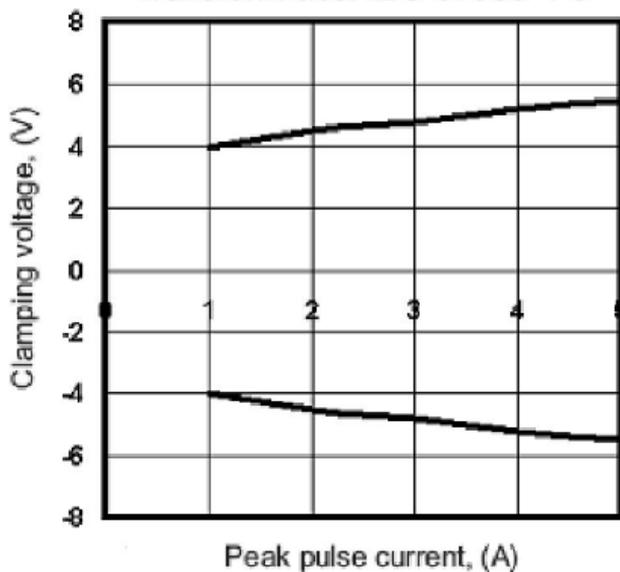


Fig.3 - Clamping voltage vs. peak pulse current

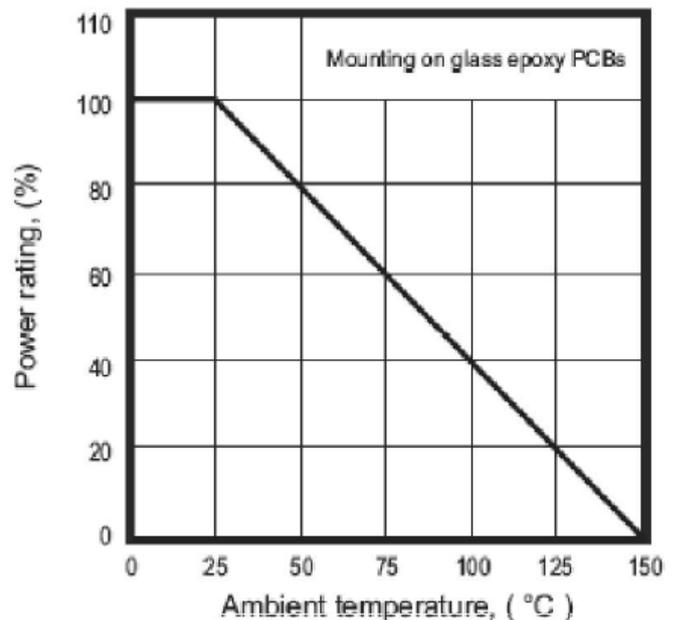


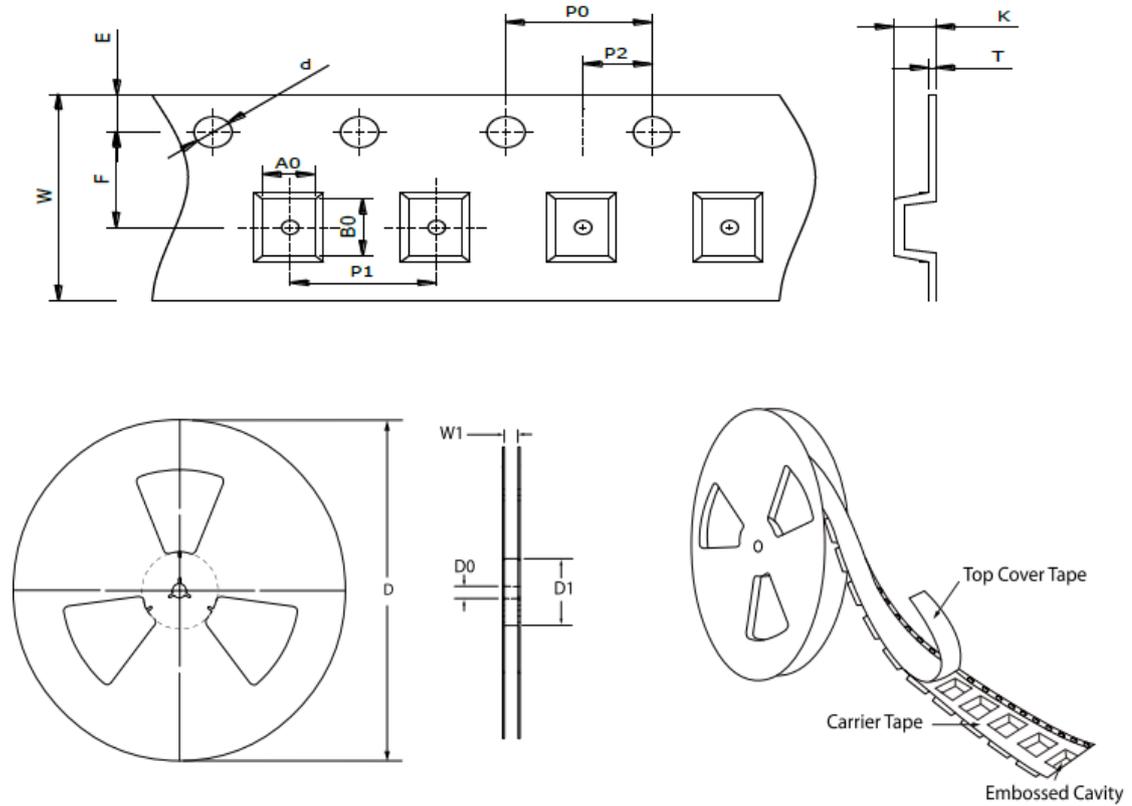
Fig. 4 - Power rating derating curve



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TAPE & REEL SPECIFICATION



Unit:mm

Item	Symbol	DFN1006 (0402)
Carrier width	A ₀	0.67 ± 0.10
Carrier length	B ₀	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 ₀	13.00 ± 0.20
Reel inner diameter	D ₁	MIN. 54.00
Sprocket hole position	E	1.75 ± 0.10
Punch hole position	F	3.50 ± 0.10
Sprocket hole pitch	P ₀	4.00 ± 0.10
Punch hole pitch	P ₁	4.00 ± 0.10
Embossment center	P ₂	2.00 ± 0.10
Overall tape thickness	T	0.22 ± 0.05
Tape width	W	8.00 ± 0.20
Reel width	W1	MAX. 13.50

ORDER INFORMATION

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

MARKING CODE

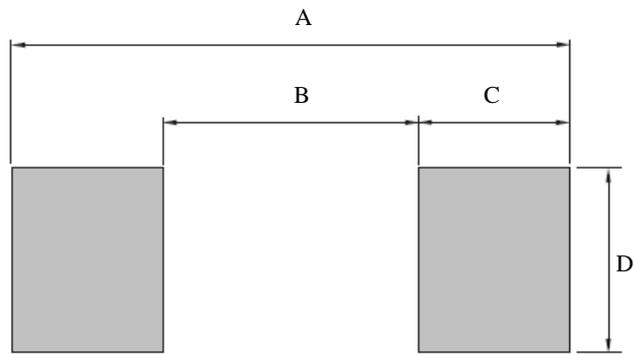
Part Number	Marking Code
SE03Q1BPDA	E3



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SUGGESTED SOLDER PAD LAYOUT



PACKAGE	A	B	C	D
DFN1006(0402)	1.25	0.25	0.50	0.70

Unit:mm