



# SE05Q4BDDAH

## ESD PROTECTION DIODE

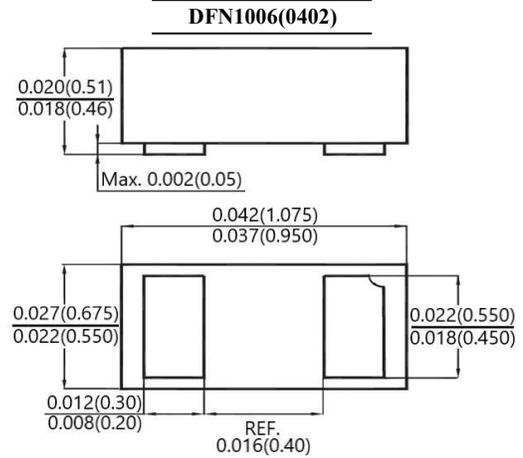
### FEATURES

- IEC61000-4-2(ESD)  $\pm 30\text{kV}$ (air),  $\pm 30\text{kV}$ (Contact)
- Bi-direction High Reliability
- Low Clamping Voltage
- Low Reverse Current
- Suffix " H " indicated Halogen-free part, ex.SE05Q4BDDAH

### MECHANICAL DATA

Case : DFN1006(0402) mold package

### PIN CONFIGURATION



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

Parameter	Symbol	Value	Units
Peak Pulse Power ( $t_p = 8/20\mu\text{s}$ )	$P_{PP}$	130	W
Peak Pulse Current ( $t_p = 8/20\mu\text{s}$ )	$I_{PP}$	12	A
ESD per IEC 61000-4-2 (Air)	$V_{ESD}$	$\pm 30$	kV
ESD per IEC 61000-4-2 (Contact)		$\pm 30$	
Operating Temperature Range	$T_{STG}$	-55 to +125	°C
Storage Temperature Range	$T_J$	-55 to +150	°C



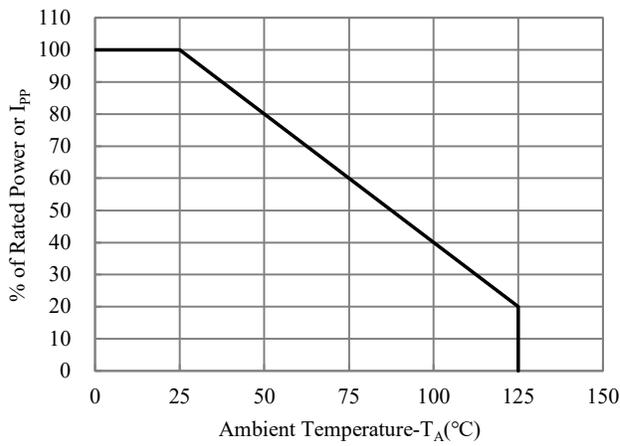
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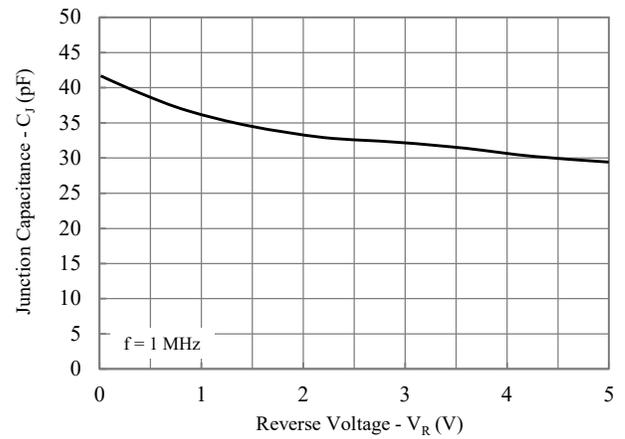
Electrical Characteristics Per line @ 25°C Unless Otherwise Specified

Parameter	Test Conditon	Symbol	Min	Max	Units
Reverse Stand-Off Voltage	-	$V_{RWM}$	-	5	V
Reverse Breakdown Voltage	$I_R=1mA$	$V_{BR}$	5.5	9.5	V
Reverse Leakage Current	$V_{RWM}=5V$	$I_R$	-	100	nA
Clamping Voltage	$I_{pp}=1A, t_p=8/20\mu s$	$V_C$	-	10	V
	$I_{pp}=12A, t_p=8/20\mu s$		-	14	
Junction Capacitance	$V_R=0V, f=1MHz$	$C_J$	-	45	pF

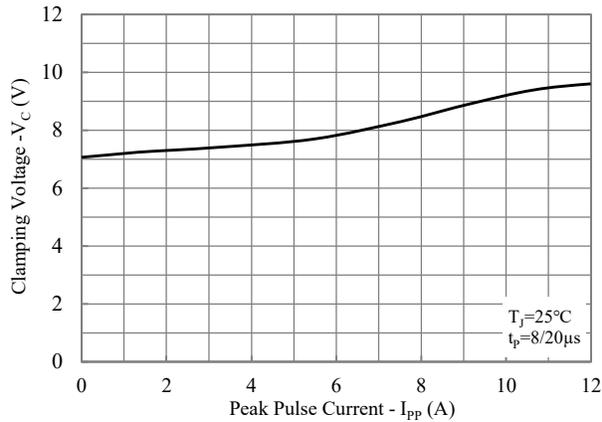
### RATINGS AND CHARACTERISTIC CURVES



**Power Derating Curve**



**Junction Capacitance vs. Reverse Voltage**



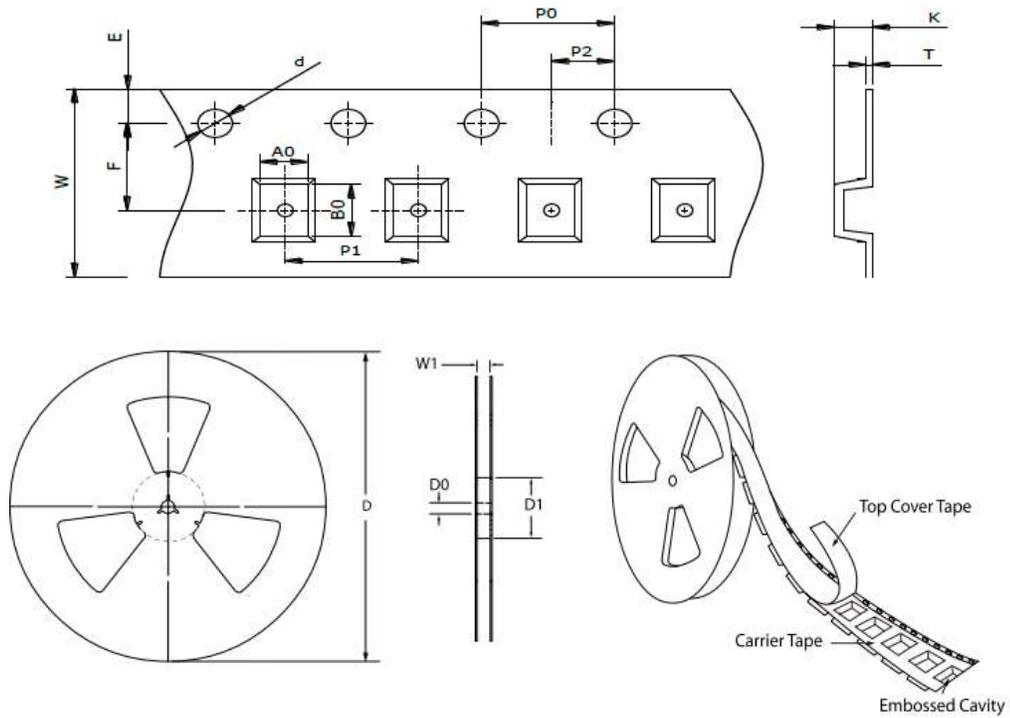
**Clamping Voltage vs. Peak Pulse Current**



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### TAPE & REEL SPECIFICATION



Item	Symbol	DFN1006(0402)
Carrier width	A <sub>0</sub>	0.70 ± 0.10
Carrier length	B <sub>0</sub>	1.10 ± 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 ± 0.50
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>	2.00 ± 0.10
Embossment center	P <sub>2</sub>	2.00 ± 0.10
Overall tape thickness	T	MAX. 0.60
Tape width	W	8.00 ± 0.30
Reel width	W1	8.40 ± 1.50

### ORDER INFORMATION

Package	Reel Size	Quantity
DFN1006(0402)	7"	10,000

### MARKING CODE

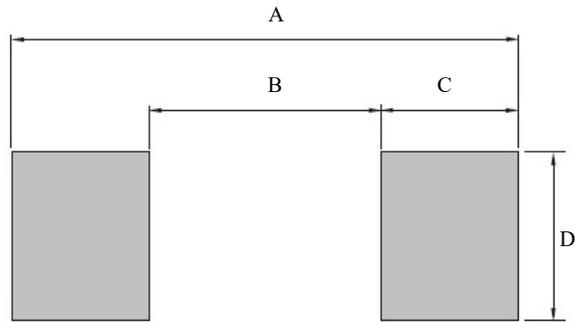
Part Number	Marking Code
SE05Q4BDDAH	F1



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## ESD PROTECTION DIODE

### SUGGESTED SOLDER PAD LAYOUT



Unit:mm

Package	A	B	C	D
DFN1006(0402)	1.10	0.30	0.40	0.60