



SE05Q1BDDBH

ESD PROTECTION DIODE

FEATURES

- High Reliability
- Bi-directional ESD Protection
- Suffix " H " indicated Halogen-free part, ex.SE05Q1BDDBH

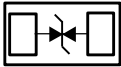
APPLICATIONS

- Cellular handsets and accessories
- Communication systems

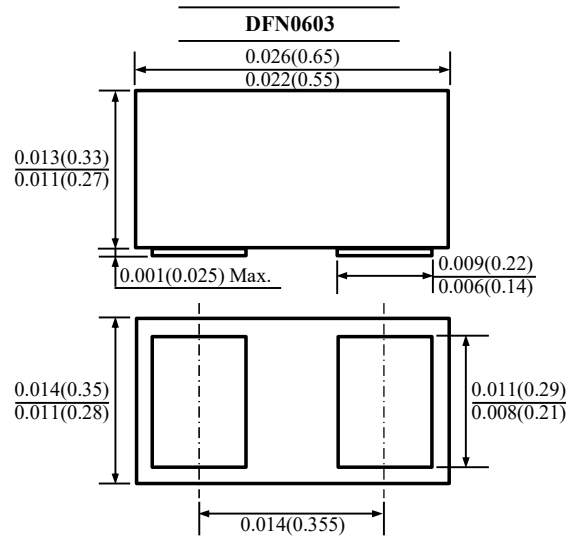
MECHANICAL DATA

Case : DFN0603

PIN CONFIGURATION



Top View



Dimensions in inches and (millimeters)

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

Parameter	Symbol	Value	Units
Peak Pulse Power ($t_p=8/20\mu s$)	P_{PP}	90	W
Peak Pulse Current ($t_p=8/20\mu s$)	I_{PP}	7	A
ESD per IEC 61000-4-2 (Air)	V_{ESD}	± 30	kV
ESD per IEC 61000-4-2 (Contact)		± 30	
Junction Temperature	T_J	125	°C
Storage Temperature Range	T_{STG}	-55 to +150	°C



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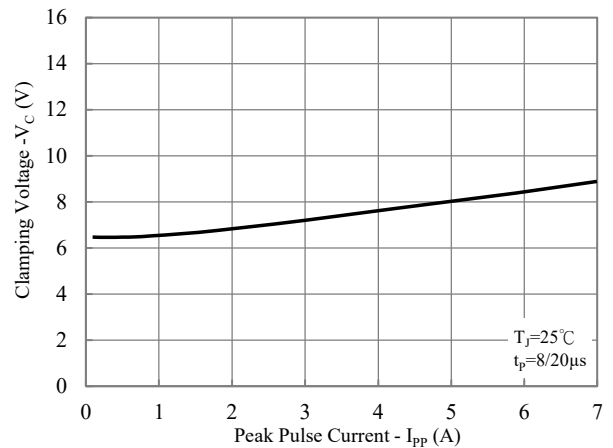
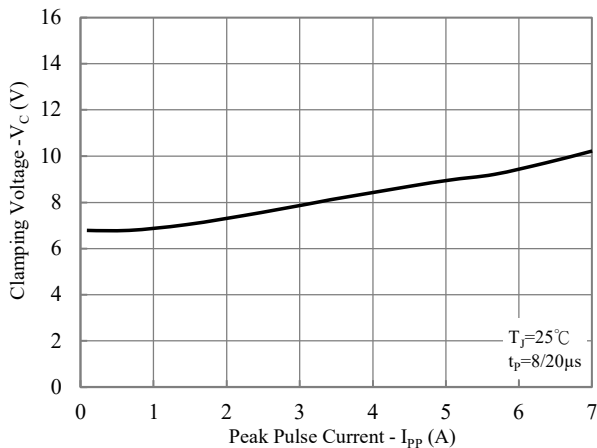
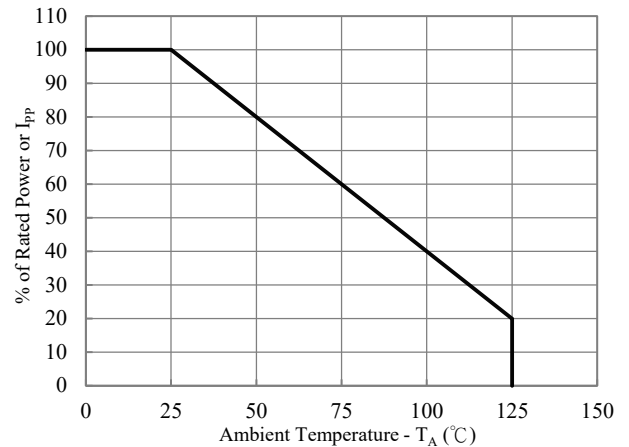
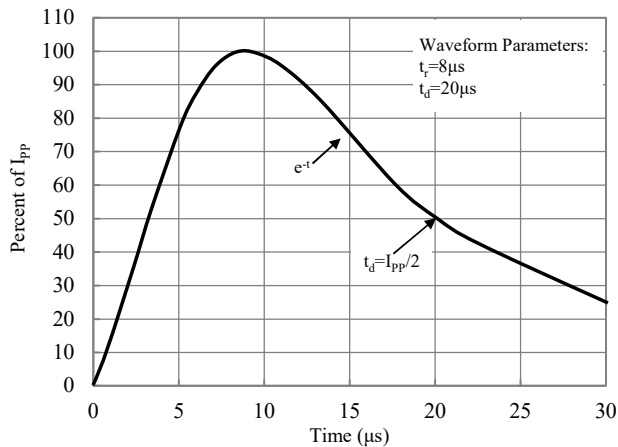
Electrical Characteristics (Rating at 25°C ambient temperature unless otherwise specified)

Parameter	Test Condition	Symbol	Min	Typ	Max	Units
Reverse Stand-Off Voltage	-	V_{RWM}	-	-	5	V
Reverse Breakdown Voltage	$I_R=1\text{mA}$	$V_{(BR)R}$	6	-	9	V
Reverse Leakage Current	$V_{RWM}=5\text{V}$	I_R	-	-	100	nA
Clamping Voltage	$I_{pp}=1\text{A}, t_p=8/20\mu\text{s}$	V_C	-	-	9.0	V
	$I_{pp}=5\text{A}, t_p=8/20\mu\text{s}$		-	-	10.5	
	$I_{pp}=7\text{A}, t_p=8/20\mu\text{s}$		-	-	12.5	
ESD Clamping Voltage	$I_{TLP}=4\text{A}, t_p=0.2/100\text{ns}$	V_C	-	8	-	V
	$I_{TLP}=16\text{A}, t_p=0.2/100\text{ns}$		-	11	-	
Dynamic Resistance (Note 1)	-	R_{DYN}	-	0.25	-	Ω
Junction Capacitance	$V_R=0\text{V}, f=1\text{MHz}$	C_J	-	-	16	pF

Note:

1. Dynamic Resistance calculated from $I_{TLP}=4\text{A}$ to $I_{TLP}=16\text{A}$.

RATINGS AND CHARACTERISTIC CURVES





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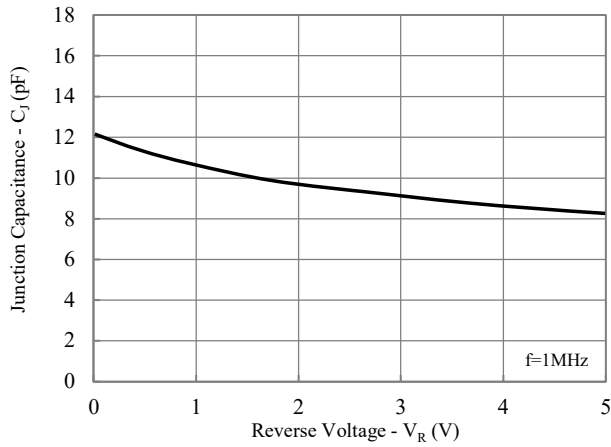


Fig.5-Junction Capacitance vs. Reverse Voltage (Pin 1 to Pin 2)

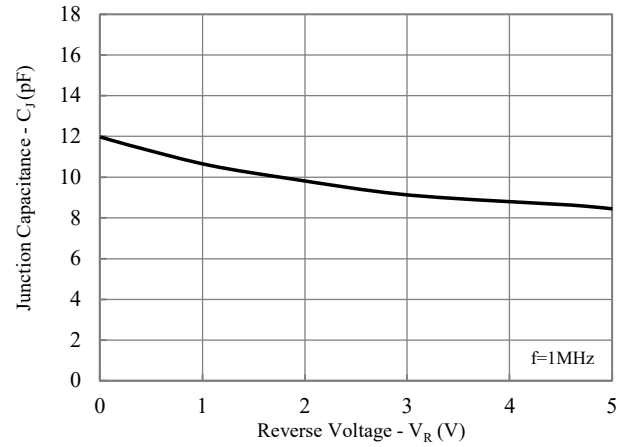


Fig.6-Junction Capacitance vs. Reverse Voltage (Pin 2 to Pin 1)

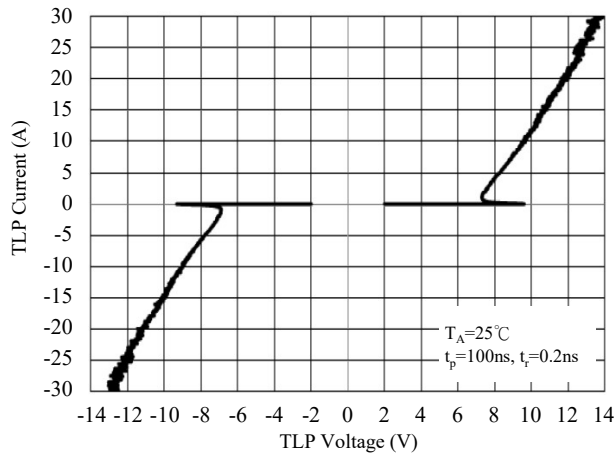


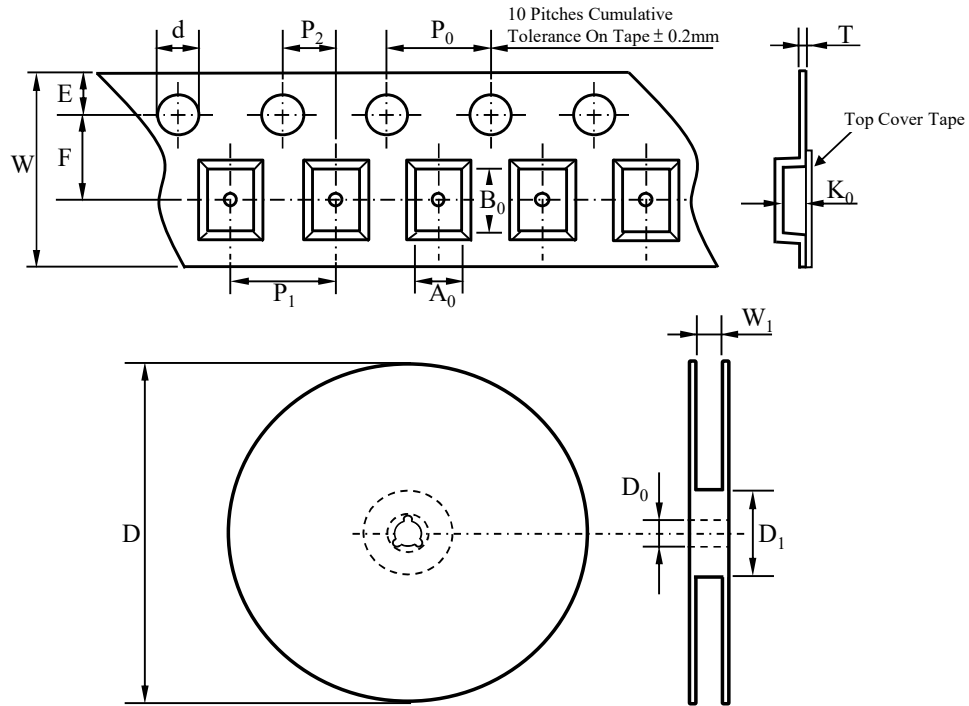
Fig.7-TLP Curve



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TAPE & REEL SPECIFICATION



Item	Symbol	DFN0603
Carrier width	A_0	*
Carrier length	B_0	
Carrier depth	K_0	
Sprocket hole	d	1.50 ± 0.10
Reel outside diameter	D	178.00 ± 2.00
Feed hole width	D_0	13.00 ± 0.50
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	2.00 ± 0.10
Embossment center	P_2	2.00 ± 0.10
Overall tape thickness	T	MAX. 0.60
Tape width	W	8.00 ± 0.30
Reel width	W_1	8.40 ± 1.50

ORDER INFORMATION

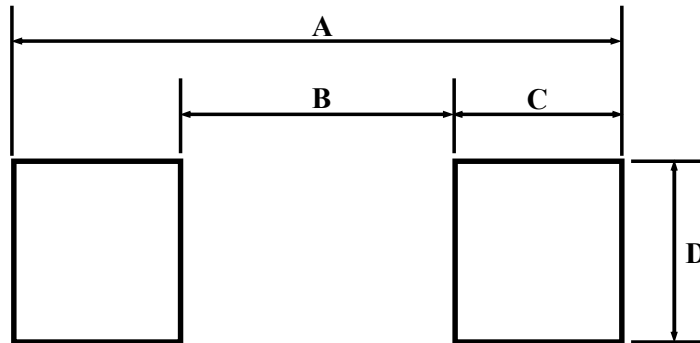
Part Number	Marking Code	Reel Size	Quantity
SE05Q1BDDBH	G5	7"	10,000



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SUGGESTED SOLDER PAD LAYOUT



Unit :mm

PACKAGE	A	B	C	D
DFN0603	0.675	0.175	0.250	0.270