

Features

- Small Body Outline Dimensions:
0.60 mm x 0.30 mm
- Bidirectional ESD Protection of one line
- Low Clamping Voltage
- Low Capacitance: 0.3 pF
- Working Voltage: 5 V
- Low Leakage Current

IEC COMPATIBILITY (EN61000-4)

- IEC 61000-4-2 (ESD) $\pm 15\text{kV}$ (air), $\pm 10\text{kV}$ (contact)
- IEC 61000-4-4 (EFT) 40A (5/50ns)
- IEC 61000-4-5 (Lightning) 4A (8/20 μs)

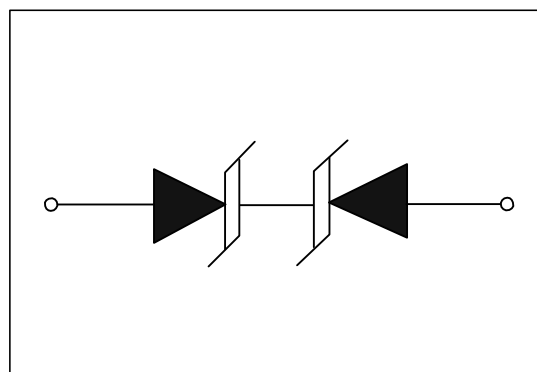
Mechanical Characteristics

- DFN0603-D package
- Molding compound flammability rating:
UL 94V-0
- Marking: Marking Code
- Packaging: Tape and Reel per EIA 481
- RoHS Compliant

Applications

- Cellular handsets and accessories
- Portable electronics
- Communication systems
- Computers and peripherals

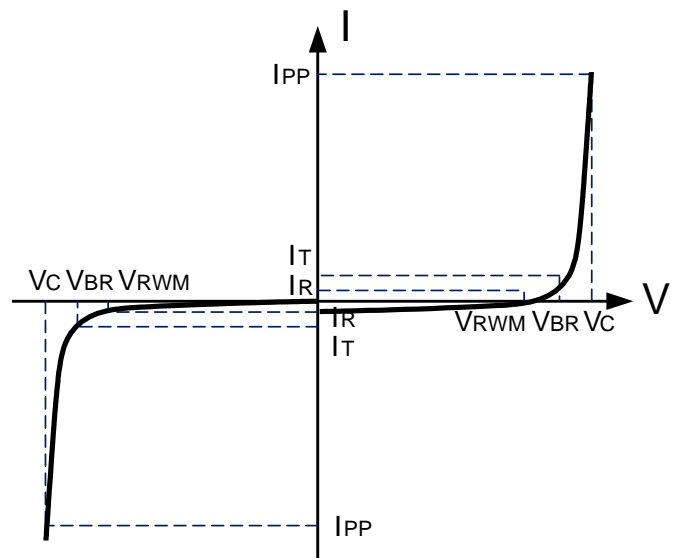
Schematic & PIN Configuration



Absolute Maximum Rating			
Rating	Symbol	Value	Units
Electrostatic discharge Voltage	V_{ESD}	10KV (contact)	Volts
		15KV (air)	
Operating Temperature	T_J	-55 to +125	°C
Storage Temperature	T_{STG}	-55 to +150	°C

Electrical Parameters (T=25°C)

Symbol	Parameter
I_{PP}	Reverse Peak Pulse Current
V_C	Clamping Voltage @ I_{PP}
V_{RWM}	Working Peak Reverse Voltage
I_R	Reverse Leakage Current @ V_{RWM}
V_{BR}	Breakdown Voltage @ I_T
I_T	Test Current
I_F	Forward Current
V_F	Forward Voltage @ I_F



Electrical Characteristics

BDFN1C051R						
Parameter	Symbol	Conditions	Minimum	Typical	Maximum	Units
Reverse Stand-Off Voltage	V_{RWM}				5.0	V
Reverse Breakdown Voltage	V_{BR}	$I_T=1mA$	5.5			V
Reverse Leakage Current	I_R	$V_{RWM}=5V, T=25^\circ C$			0.1	μA
Clamping Voltage	V_C	$I_{PP}=1A, t_p=8/20\mu s$			12	V
		$I_{PP}=4A, t_p=8/20\mu s$			13	
Junction Capacitance	C_j	$V_R = 0V, f = 1MHz$		0.2	0.3	pF

Note1: ESD Pulse Waveform according to IEC 61000-4-2. see Table1 and Figure4.

Note2: ESD tests Setup see Figure 5.

Typical Characteristics

Figure 1: Pulse Waveform

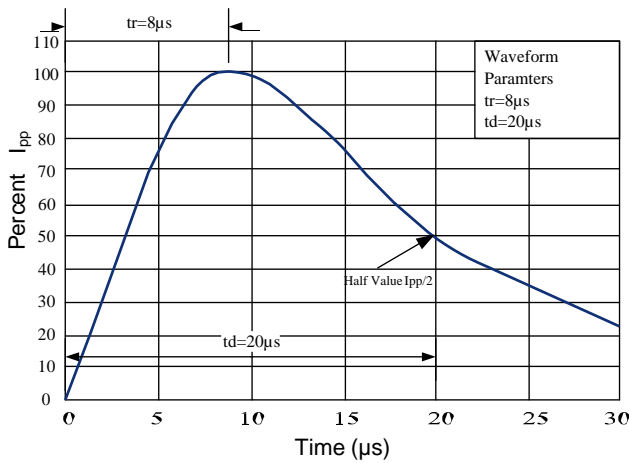


Figure 2: Power Derating Curve

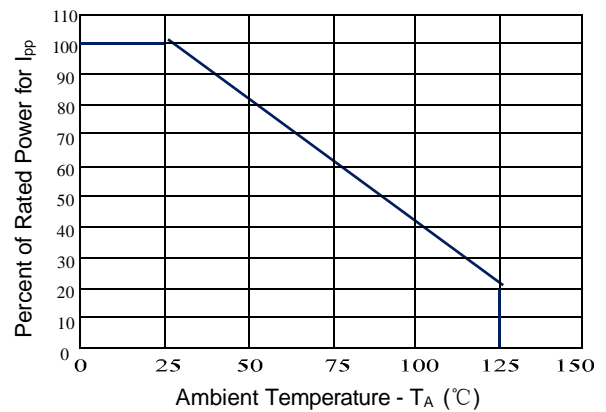


Figure 3: Normalized Junction Capacitance

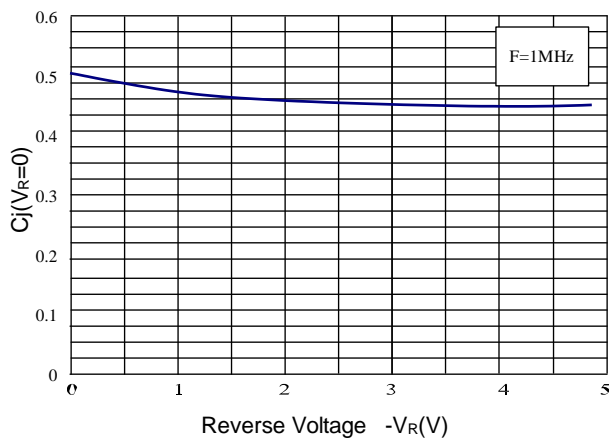


Table 1. IEC 61000-4-2 Discharge Parameters

Level	First Peak Current (A)	Peak Current at 30 ns (A)	Peak Current at 60 ns (A)	Test Voltage (Contact Discharge) (kV)	Test Voltage (Air Discharge) (kV)
1	7.5	4	2	2	2
2	15	8	4	4	4
3	22.5	12	6	6	8
4	30	16	8	8	15

Figure 4: ESD Clamping (8kV Contact per IEC 61000-4-2)

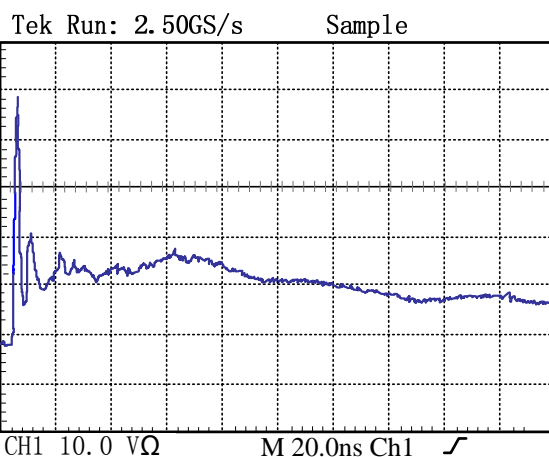
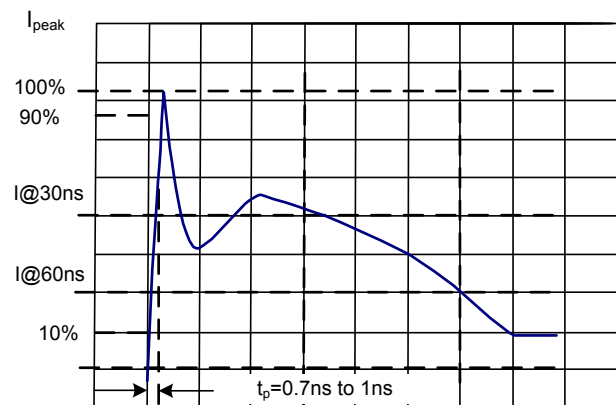
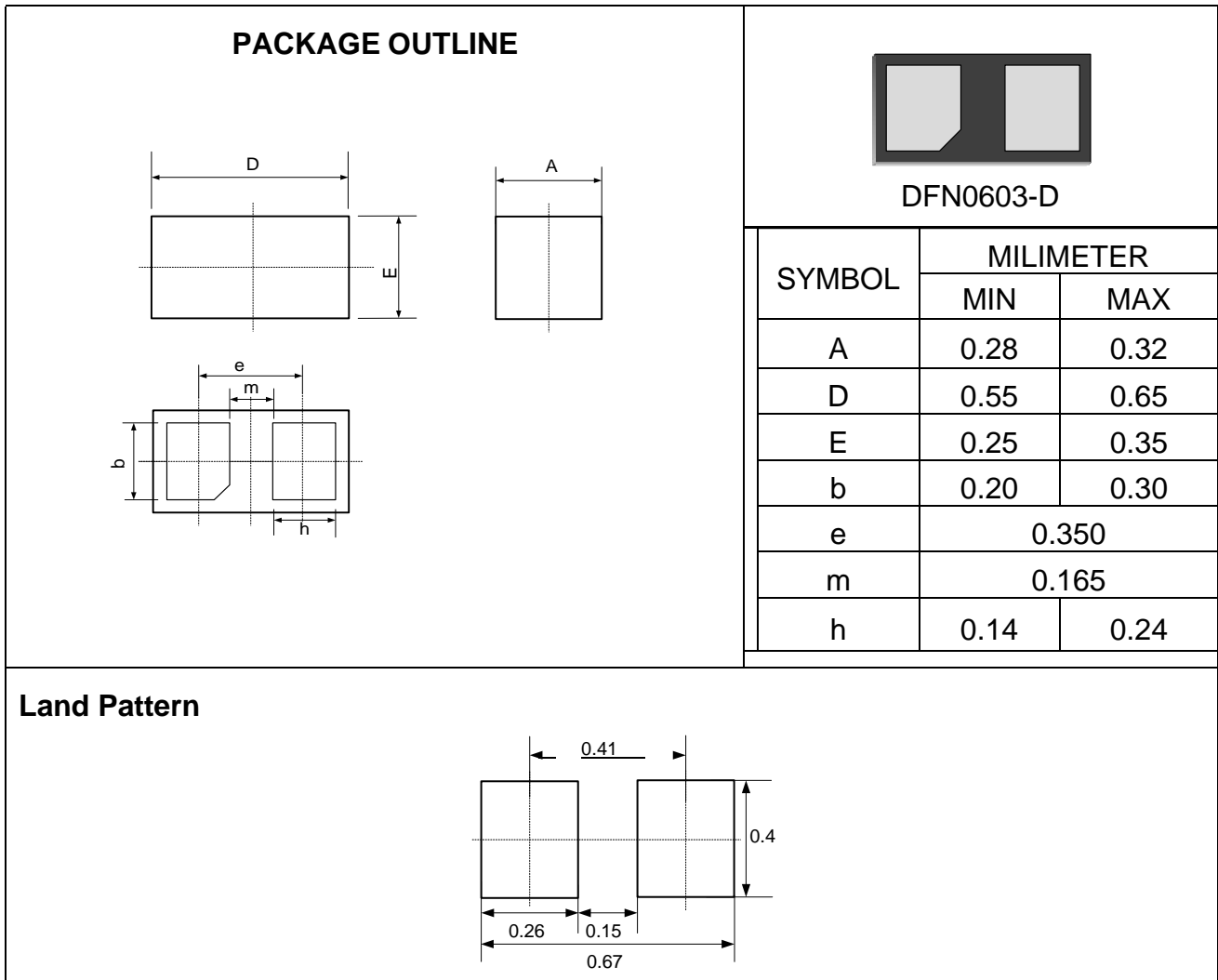


Figure 5 : IEC 61000-4-2 Waveform



Outline Drawing –DFN0603-D



Marking Codes

Part Number	Marking Code
BDFN1C051R	U 5

Package Information

Qty: 15k/Reel