ESD PROTECTION DIODE

Discription

The FTV05BDFN0603 is designed to protect voltage sensitive components from ESD. Excellent clamping capability, lowleakage, and fast responsetime, make these parts ideal for ESD protection on designs where board space is at a premium. Because of its small size,it is suited for use in cellular phones, MP3 players,digital cameras and many other portable applications where board space is at a premium.

FTV05BDFN0603

DFN0603

PIN 1

A = Specific Device Code
M = Month Code

Applications

- Cellular phones audio
- MP3 players
- Digital cameras
- Portable applicationss
- mobile telephone

Features

- Small Body Outline Dimensions: 0.61mm x 0.31mm
- Low Body Height: 0.28 mm
- Low Leakage
- Response Time is Typically < 1 ns
- ESD Rating of Class 3 (> 16 kV) per Human Body Model
- IEC61000−4−2 Level 4 ESD Protection
- Theseare Pb−Free Devices
- We declare that the material of product compliance with RoHS requirements.

Ordering information

Device	Marking	Shipping
FTV05BDFN0603	A	15000/ Tape&Reel

MAXIMUM RATINGS

Rating	Symbol	Value	Unit
IEC 61000-4-2 (ESD) Air discharge Contact discharge		± 25 ± 20	kV kV
ESD Voltage Per Human Body Model		16	kV
Total Power Dissipation on FR-5 Board (Note 1) @ T_A=25	PD	200	mW
Junction and Storage Temperature Range	TJ,TSTG	-55 to150	
Lead Solder Temperature – Maximum (10 Second Duration)	TL	260	

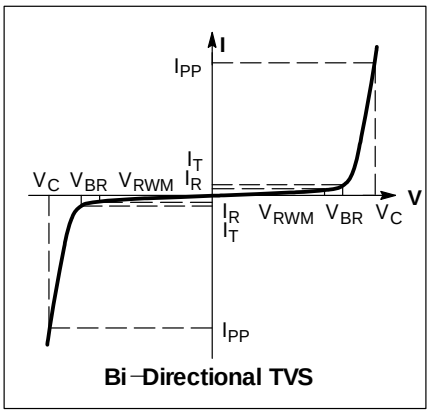
Stresses exceeding Maximum Ratings may damage the device. Maximum Rating are stress ratings only. Functional operation above the Recommended Operating Conditions is not implied. Extended exposure to stresses above the Recommended Operating Conditions may affect device reliability.

1. FR-5 = 1.0*0.75*0.62 in.

ELECTRICAL CHARACTERISTICS

(T_A = 25℃ unless otherwise noted)

Symbol	Parameter
I_{PP}	Maximum Reverse Peak Pulse Current
V_C	Clamping Voltage @ I_{PP}
V_{RWM}	Working Peak Reverse Voltage
I_R	Maximum Reverse Leakage Current @ V_{RWM}
V_{BR}	Breakdown Voltage @ I_T
I_T	Test Current
P_{pk}	Peak Power Dissipation
C	Capacitance @ V_R = 0 and f = 1.0 MHz



ELECTRICAL CHARACTERISTICS

Device	V_{RWM} (V)	I_{R1}(μA) @ V_{RWM}	I_{R2}(μA) @ V_R=3.5V	V_{BR} (V) @ I_T (Note 2)	I_T	V_C (V) @ I_{PP} = 1A (Note 3)	V_C (V) @MAX I_{PP} (Note 3)	I_{PP}(A) (Note 3)	P_{PK}(W) (Note 3)	C (pF)
	Max	Max	Max	Min	mA	Max	Max	Max	Max	Max
FTV05BDFN0603	5.0	0.5	0.3	5.6	1.0	9.8	12.5	5.5	69	15

Other voltage available upon request.

2. V_{BR} is measured with a pulse test current IT at an ambient temperature of 25

3. Surge current waveform per Figure 3.

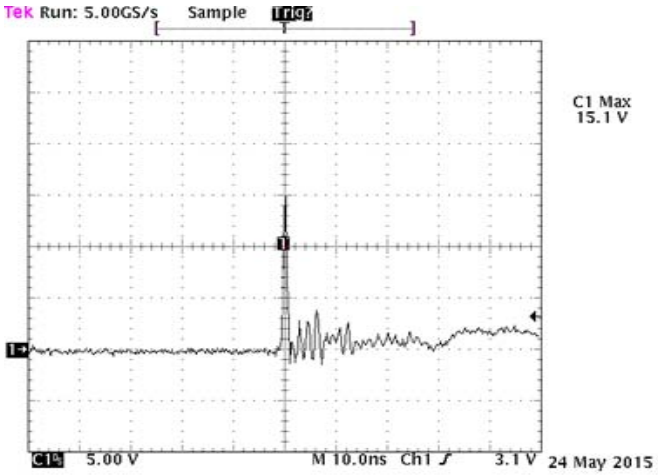


Fig1. ESD Clamping Voltage Screenshot
Positive 8 kV Contact per IEC61000-4-2

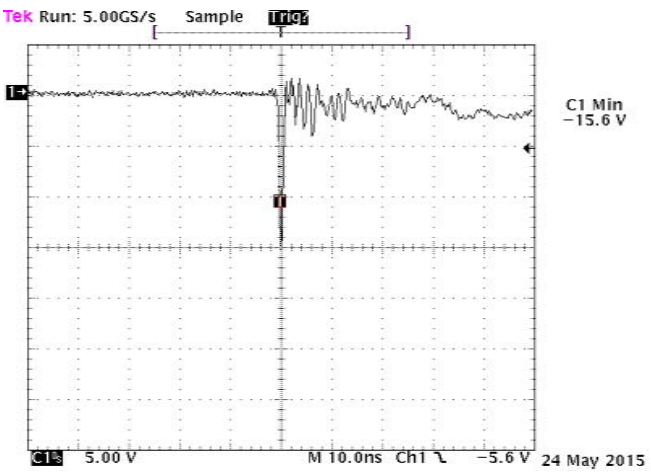


Fig2. ESD Clamping Voltage Screenshot
Negative 8 kV Contact per IEC61000-4-2

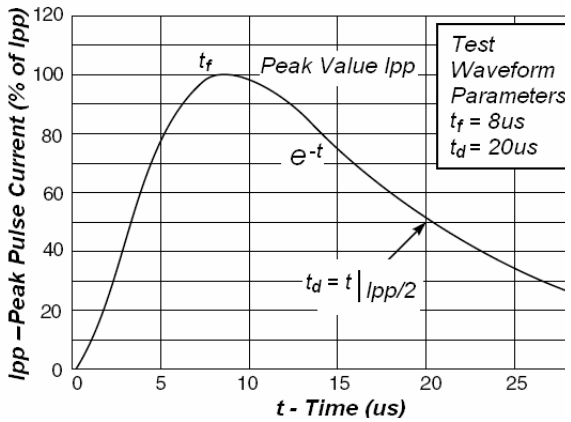
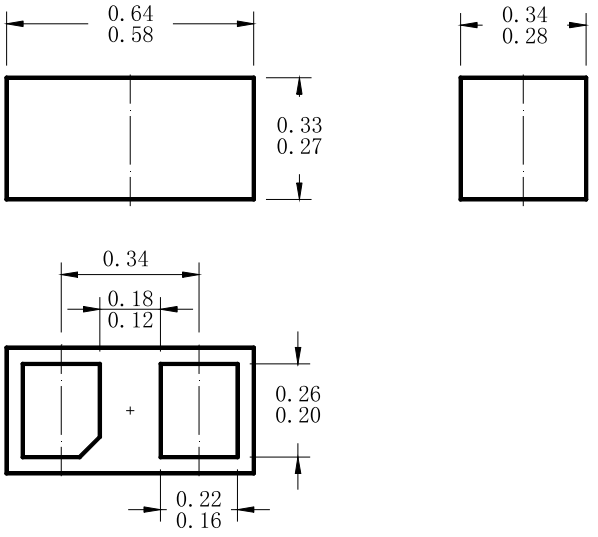


Fig3. Pulse Waveform

DFN0603

DIMENSION OUTLINE: Unit:mm



Soldering Footprint