

## TVN FB02 01 AD0 Engineering Specification

### 1. Scope

TVN FB02 01 AD0 is the single array voltage-stabilized transistor voltage, it features high ESD, low leakage, fast response and excellent voltage clamping capability.

These interfaces can be used in computer interfaces protection, microprocessors protection, serial and parallel ports protection, control signal lines protection, power lines on PCB protection, latchup protection, etc. The ESD protection of TVS arrays meets the immunity standard of IEC 61000-4-2, level 4 ( $\pm 15\text{kV}$  air,  $\pm 8\text{kV}$  contact discharge).

### 2. Features

- ◆ Single array ESD protection structure;
- ◆ Provides ESD protection to IEC61000-4-2(ESD) :
  - $\pm 30\text{kV}$  (air discharge)
  - $\pm 30\text{kV}$  (contact discharge);
- ◆ Low clamping voltage;
- ◆ Low operating voltage: 5V;
- ◆ Reliable Silicon avalanche breakdown structure;

### 3. Applications

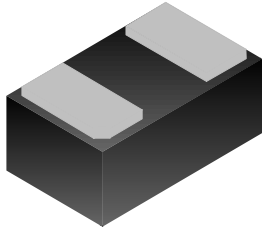
- ◆ Mobile phone accessories;
- ◆ Portable computer;
- ◆ Digital Camera;
- ◆ MP3/MP4/PMP.

### 4. Explanation of Part Number

<u>TV</u>	<u>N</u>	<u>FB02</u>	<u>01</u>	<u>AD0</u>
(1)	(2)	(3)	(4)	(5)

- (1) Product Type : TV=TVS Diode
- (2) Capacitance Code : N=Normal Capacitance
- (3) Package Size Code
- (4) Channel Code : 01=1 Channels
- (5) Specialized Specification Code

## 5. Circuit Diagram /Pin Configuration



## 6. Specifications

### 6.1. ABSOLUTE MAXIMUM RATINGS

Characteristics	Symbol	Ratings	Unit
Peak pulse power (tp=8/20us)	Ppp	107	W
Maximum peak pulse current (tp=8/20us)	Ipp	12.3	A
ESD Per IEC61000-4-2 (Air)	Vpp	+/-30	KV
ESD Per IEC61000-4-2 (Contact)		+/-30	KV
Storage temperature range	Tstg	-55 to +150	°C
Operating temperature range	Topr	-55 to +125	°C

### 6.2. ELECTRICAL CHARACTERISTICS

Characteristics	Symbol	Test Conditions	Min.	Typ.	Max.	Unit
Reverse Working Voltage	$V_{RWM}$	Any I/O pin to GND	--	--	5	V
Reverse Breakdown Voltage	$V_{BR}$	Any I/O pin to GND It=1mA	6.2	--	--	V
Reverse Leakage Current	$I_R$	VRWM =5V; T=25°C Any I/O pin to GND	--	--	1	μA
Positive Clamping Voltage	$V_C$	IPP=1A, tP=8/20μS; Positive pulse; Any I/O pin to GND	--	--	12.3	V
Junction Capacitance Between I/O And GND	$C_J$	VR=0V, f=1MHz; Any I/O pin to GND	--	--	65	pF

### 6.3. TYPICAL CHARACTERISTICS

Fig.1. ESD lamping voltage  
Positive 8kV IEC61000-4-2 contact discharge

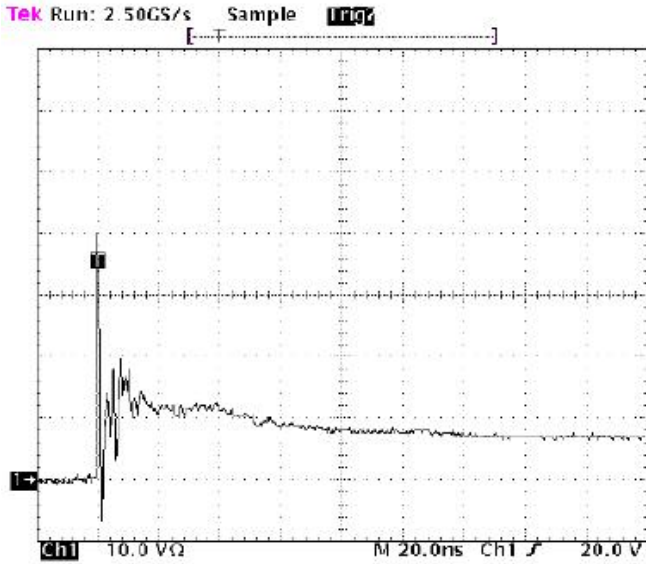
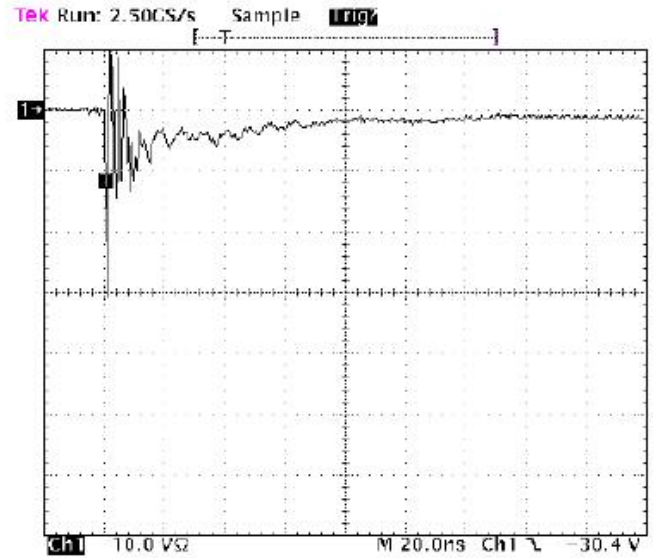
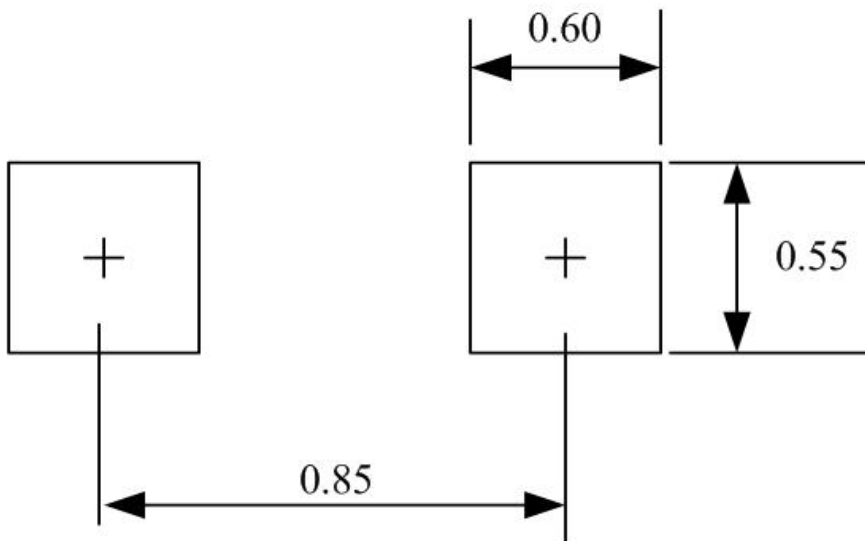


Fig.2. ESD lamping voltage  
Negative 8kV IEC61000-4-2 contact discharge



### 7. LAND LAYOUT



UNIT: mm

## 8. MARKING CODE

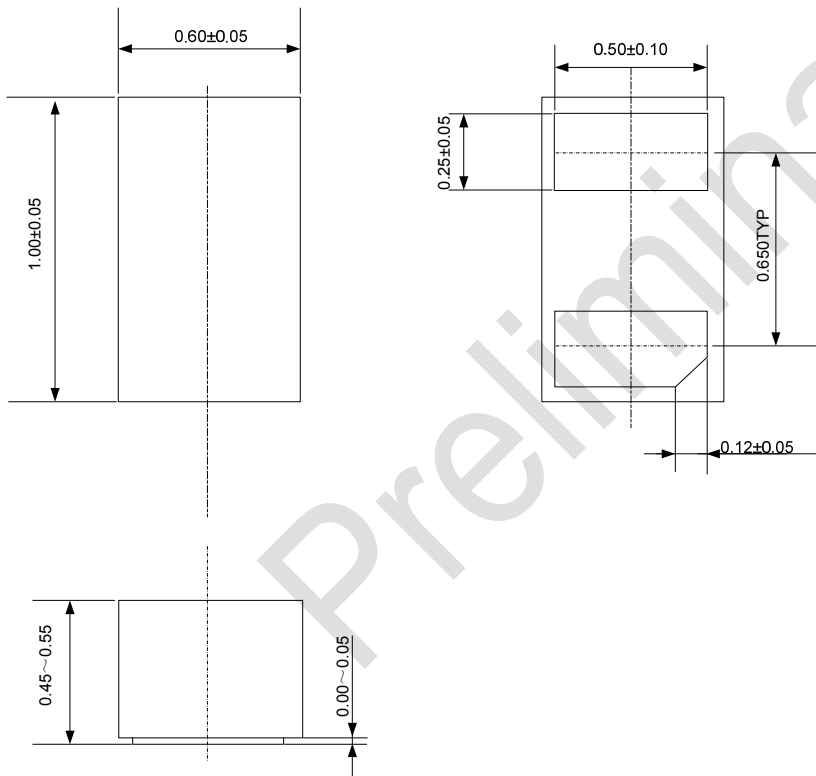


A = Product Code  
W = Date Code (Week)

## 9. Mechanical Details

1.0x0.6x0.50-0.62

UNIT: mm



9.1. Taping Quantity:  
12,000pcs/ Reel