

## TVL FB02 01 AC1 Engineering Specification

### 1. Scope

TVL FB02 01 AC1 is the Bi-directional 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

- ◆ Bi-directional ESD protection;
- ◆ Provides ESD protection to IEC61000-4-2(ESD):  
 $\pm 15\text{kV}$  (air discharge)  
 $\pm 8\text{kV}$  (contact discharge);
- ◆ Response time  $< 1\text{ns}$ ;
- ◆ Low clamping voltage;
- ◆ Low operating voltage  $3.3\text{V}$ ;
- ◆ Reliable Silicon avalanche breakdown structure

### 3. Application

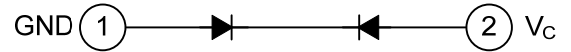
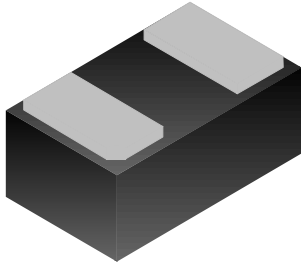
- ◆ Mobile phone accessories;
- ◆ Portable computer;
- ◆ Digital Camera;
- ◆ MP3/MP4/PMP.

### 4. Explanation of Part Number

<u>TV</u>	<u>L</u>	<u>FB02</u>	<u>01</u>	<u>AC1</u>
(1)	(2)	(3)	(4)	(5)

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

## 5. Circuit Diagram /Pin Configuration



## 6. Specifications

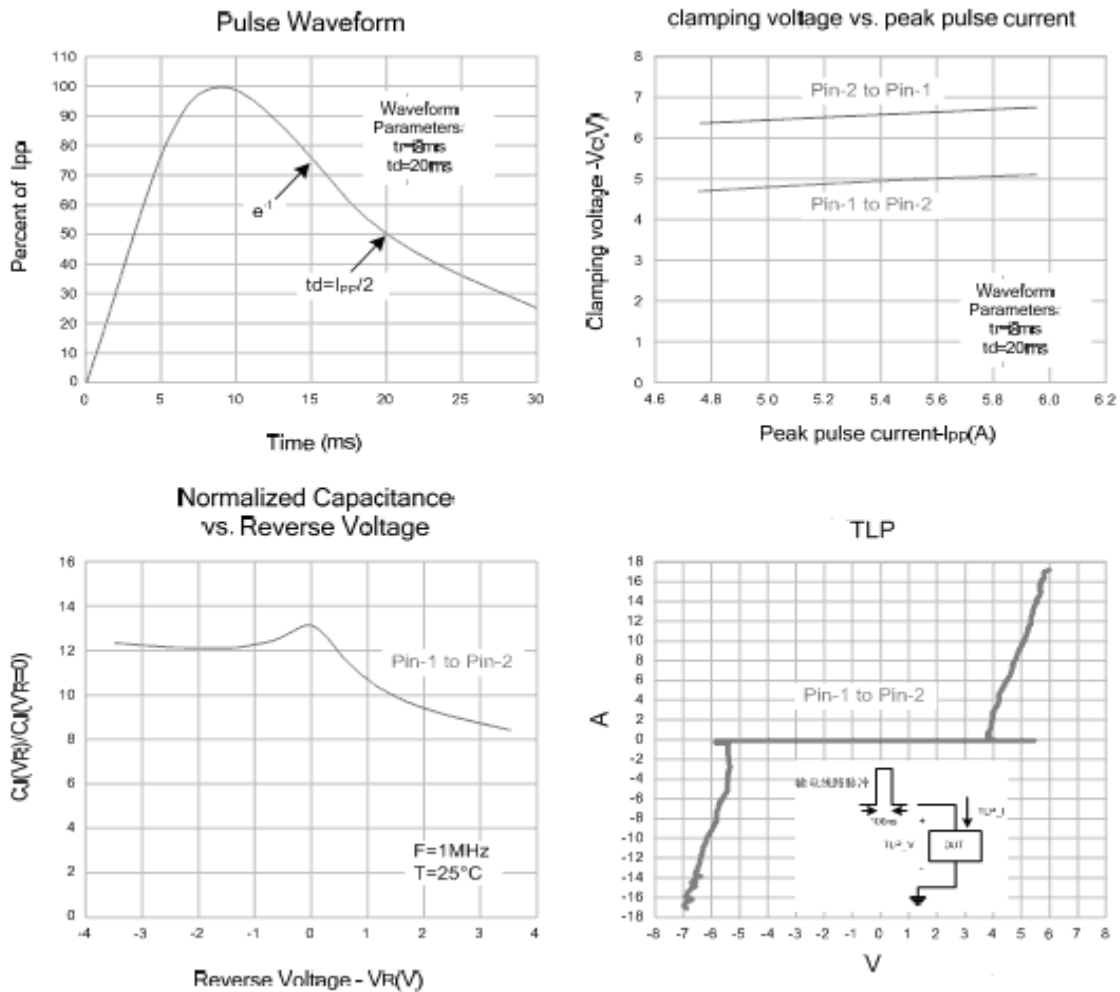
### 6.1. ABSOLUTE MAXIMUM RATINGS

Characteristics	Symbol	Ratings	Unit
Peak pulse Current (tp=8/20us)	Ipp	8	A
ESD Per IEC61000-4-2 (Air)	Vpp	+/-15	KV
ESD Per IEC61000-4-2 (Contact)		+/-15	KV
Storage temperature range	Tstg	-55 to +150	°C
Operating temperature range	Topr	-55 to +85	°C

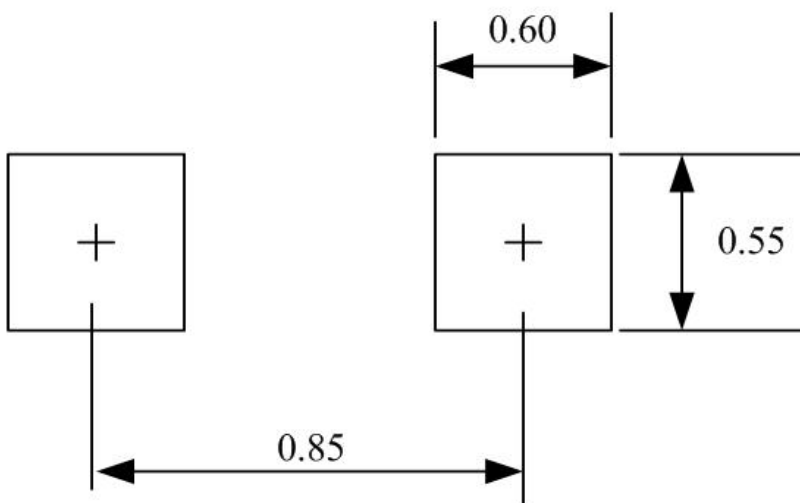
### 6.2. ELECTRICAL CHARACTERISTICS

Characteristics	Symbol	Test Conditions	Min.	Typ.	Max.	Unit
Reverse Working Voltage	V <sub>RWM</sub>	--	--	--	3.3	V
Reverse Breakdown Voltage	V <sub>BR</sub>	I <sub>t</sub> =1mA	4	--	6.5	V
Reverse Leakage Current	I <sub>R</sub>	V <sub>RWM</sub> =3.3V; T=25°C	--	--	1	μA
Positive Clamping Voltage	V <sub>C1</sub>	I <sub>PP</sub> =5A, T <sub>P</sub> =8/20μS;	--	6.5	8	V
Capacitance Between I/O And GND	C <sub>J2</sub>	V <sub>R</sub> =0V, f=1MHz;	--	13.5	15	pF

### 6.3. TYPICAL ELECTRICAL CHARACTERISTICS CURVE



### 7. LAND LAYOUT

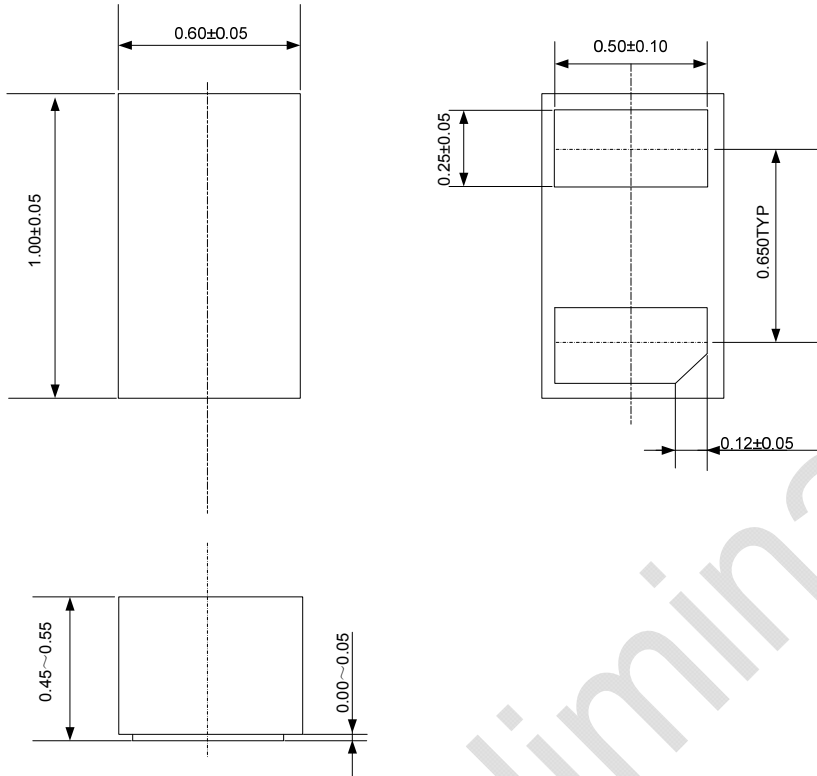


UNIT: mm

## 8. Mechanical Details

1.0x0.6x0.50-0.65

UNIT: mm



8.1. Taping Quantity:  
12,000pcs/ Reel