

**Transient Voltage Suppressor (TVS)****GENERAL DESCRIPTION**

Two elements in USP-3 package (Anode Common)  
High ESD

**ABSOLUTE MAXIMUM RATINGS**

Ta=25°C

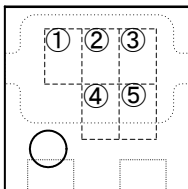
PARAMETER	SYMBOL	RATINGS	UNITS
Peak Pulse Power (*1)	Ppk	70	W
Power Dissipation	Pd	120	mW
		1000(*2)	
Junction Temperature	Tj	150	°C
Storage Temperature Range	Tstg	-55~+150	°C
ESD Durability (*3)(*4)	Vpp	30	kV

(\*1): tp=8/20 μs

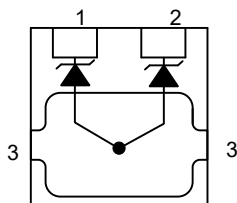
(\*2): This is a reference data taken by using the test board.

(\*3): Test Condition IEC61000-4-2 Standard

(\*4): Criterion: No damage to device elements

**MARKING RULE**

①②③ : BP1(Product Number)  
④⑤ : Lot Number

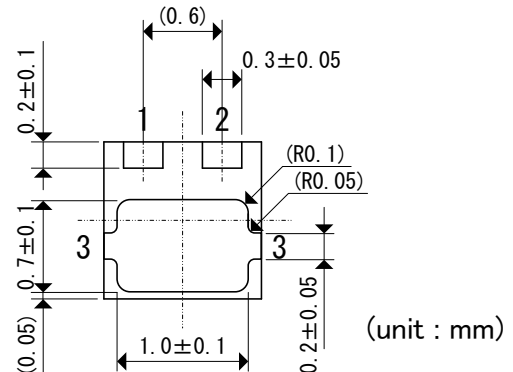
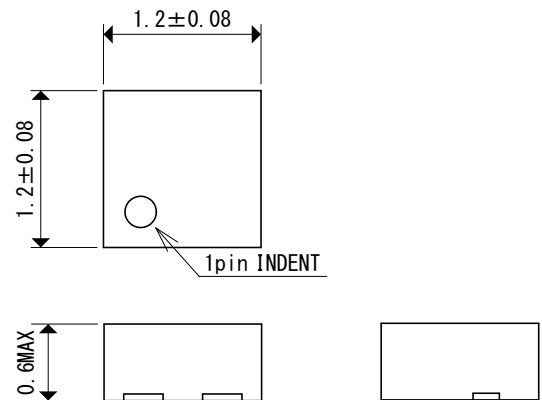
**PIN CONFIGURATION**

BOTTOM VIEW

1. Cathode
2. Cathode
3. Anode

**APPLICATIONS**

ESD protection

**PACKAGING INFORMATION**

(unit : mm)

USP-3 Package

**PRODUCT NAME**

PRODUCT NAME	PACKAGE	ORDER UNIT
XBP06V4E2HR-G*	USP-3	3,000/Reel

\*The "-G" suffix indicates that the products are Halogen and Antimony free as well as being fully RoHS compliant.

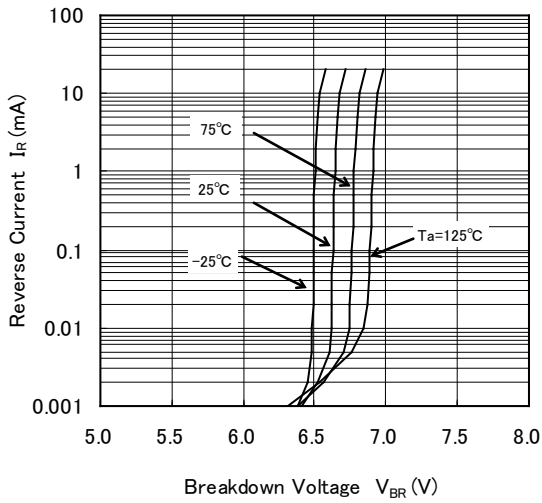
**ELECTRICAL CHARACTERISTICS**

Ta=25°C

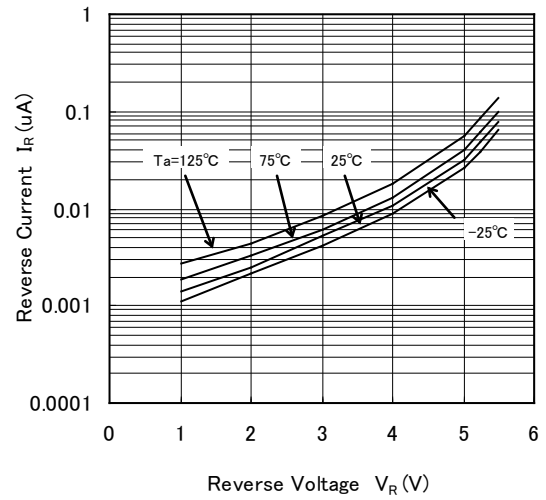
PARAMETER	SYMBOL	TEST CONDITION	LIMITS			UNITS
			MIN.	TYP.	MAX.	
Breakdown Voltage	V <sub>BR</sub>	I <sub>R</sub> =5mA	6.4	6.8	7.2	V
Leakage Current	I <sub>RM</sub>	V <sub>RM</sub> =5V	-	-	1.0	μA
Forward Voltage	V <sub>F</sub>	I <sub>F</sub> =10mA	-	-	1.25	V
Inter-Terminal Capacity	C <sub>t</sub>	V <sub>R</sub> =0V, f=1MHz	-	40	-	pF

## TYPICAL PERFORMANCE CHARACTERISTICS

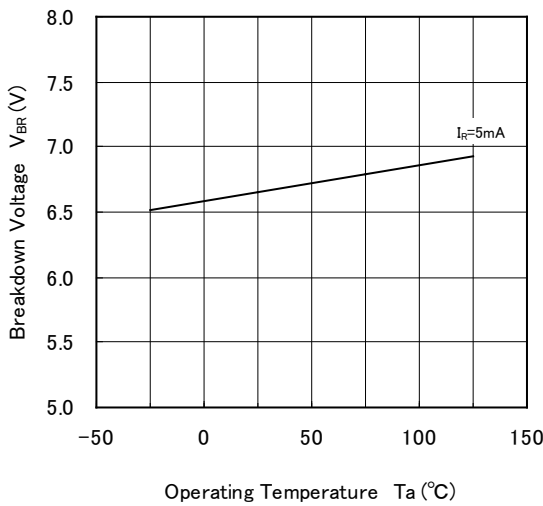
(1) Reverse Current vs. Breakdown Voltage



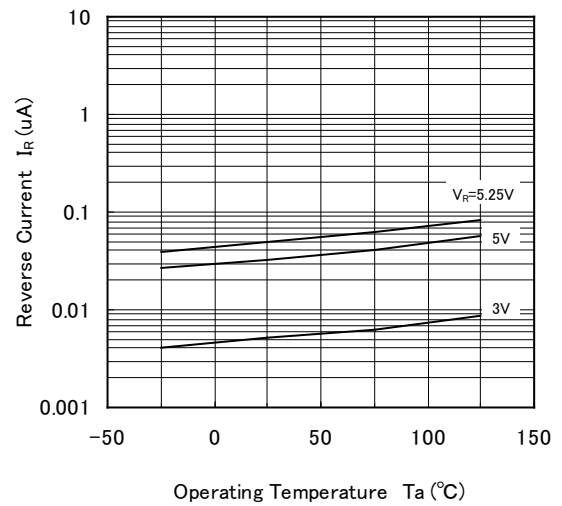
(2) Reverse Current vs. Reverse Voltage



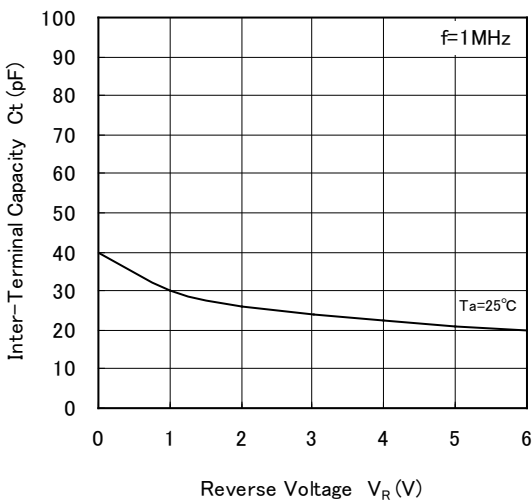
(3) Breakdown Voltage vs. Operating Temperature



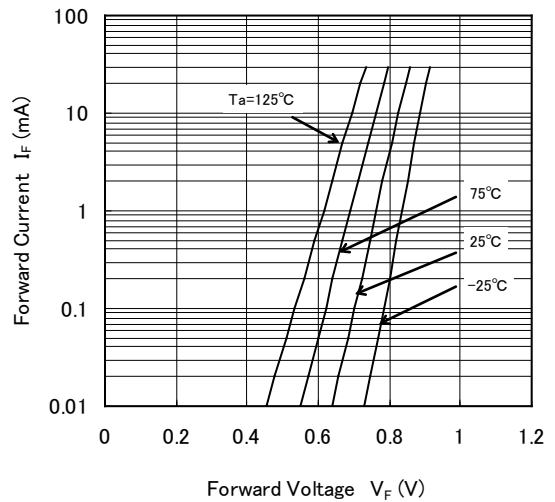
(4) Reverse Current vs. Operating Temperature



(5) Inter-Terminal Capacity vs. Reverse Voltage



(6) Forward Current vs. Forward Voltage



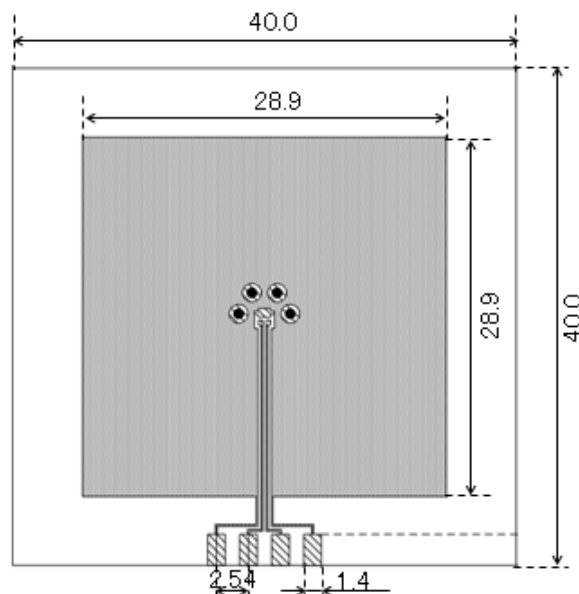
## ■ PACKAGING INFORMATION

### ● USP-3 Power Dissipation

Power dissipation data for the USP-3 is shown in this page.  
The value of power dissipation varies with the mount board conditions.  
Please use this data as one of reference data taken in the described condition.

#### 1. Measurement Condition (Reference data)

- Condition: Mount on a board
- Ambient: Natural convection
- Soldering: Lead (Pb) free
- Board: Dimensions 40 x 40 mm (1600 mm<sup>2</sup> in one side)  
Copper (Cu) traces occupy 50% of the board area in top and back faces.  
Package heat-sink is tied to the copper traces.
- Material: Glass Epoxy (FR-4)
- Thickness: 1.6 mm
- Through-hole: 4 x 0.8 Diameter

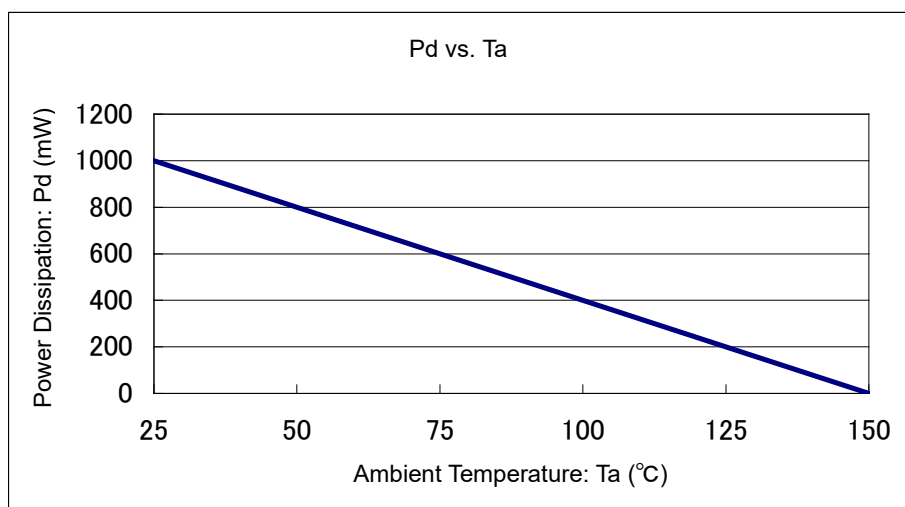


Evaluation Board (Unit: mm)

#### 2. Power Dissipation vs. Ambient temperature

Board Mount (T<sub>j</sub> max = 150°C)

Ambient Temperature (°C)	Power Dissipation Pd (mW)	Thermal Resistance (°C/W)
25	1000	125.00
150	0	



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