

# XBP06V1E4MR-G

ETR2901-004

## Transient Voltage Suppressor (TVS)

### GENERAL DESCRIPTION

Four elements in SOT-25 package (Anode Common)

High ESD

### APPLICATIONS

ESD protection

### ABSOLUTE MAXIMUM RATINGS

Ta=25°C

PARAMETER	SYMBOL	RATINGS	UNITS
Peak Pulse Power <sup>(*1)</sup>	Ppk	200	W
Power Dissipation	Pd	250	mW
		750 <sup>(*2)</sup>	
Junction Temperature	Tj	150	°C
Storage Temperature Range	Tstg	-55~+150	°C
ESD Durability <sup>(*3)(*4)</sup>	Vpp	30	kV
Contact Discharge			

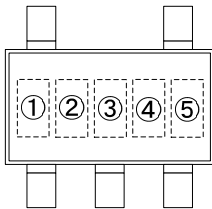
(\*1): tp=8/20 μs

(\*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

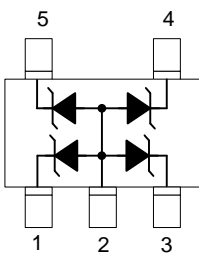
### MARKING RULE



: BP3(Product Number)

: Lot Number

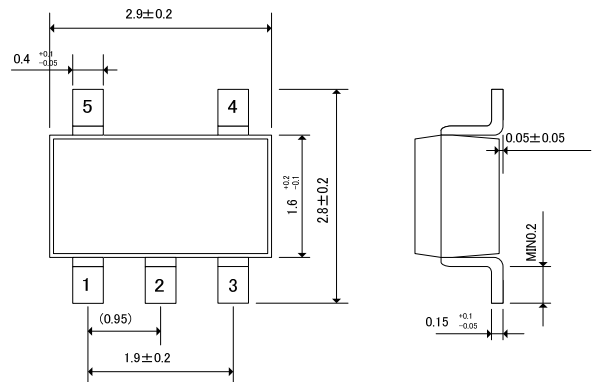
### PIN CONFIGURATION



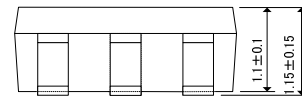
TOP VIEW

1. Cathode
2. Anode
3. Cathode
4. Cathode
5. Cathode

### PACKAGING INFORMATION



(unit : mm)



SOT-25 Package

PRODUCT NAME	PACKAGE	ORDER UNIT
XBP06V1E4MR-G*	SOT-25	3,000/Reel

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

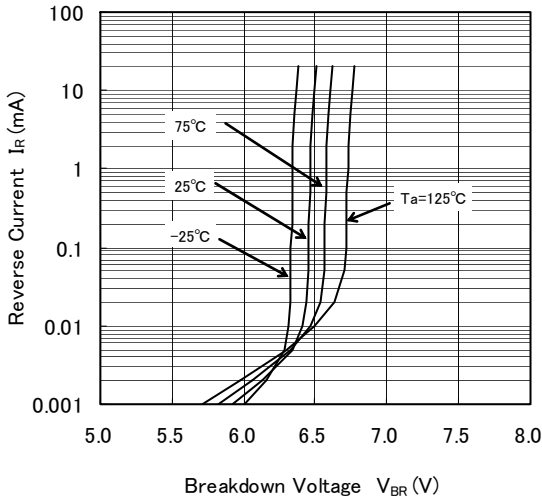
### ELECTRICAL CHARACTERISTICS

Ta=25°C

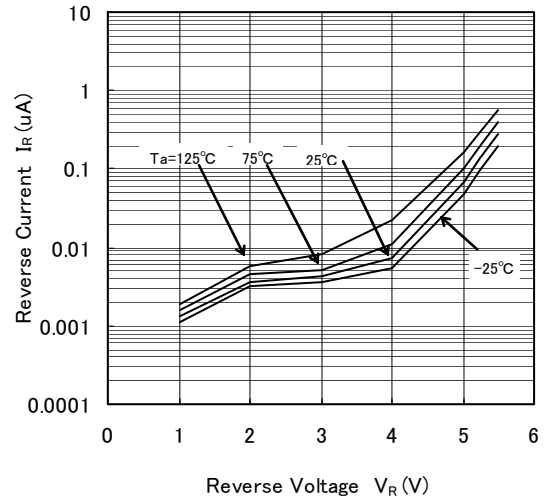
PARAMETER	SYMBOL	TEST CONDITION	LIMITS			UNITS
			MIN.	TYP.	MAX.	
Breakdown Voltage	V <sub>BR</sub>	I <sub>R</sub> =1mA	6.1	6.65	7.2	V
Leakage Current	I <sub>RM</sub>	V <sub>RM</sub> =5.25V	-	-	2.5	μA
Forward Voltage	V <sub>F</sub>	I <sub>F</sub> =200mA	-	-	1.25	V
Inter-Terminal Capacity	C <sub>t</sub>	V <sub>R</sub> =0V, f=1MHz	-	170	-	pF

## TYPICAL PERFORMANCE CHARACTERISTICS

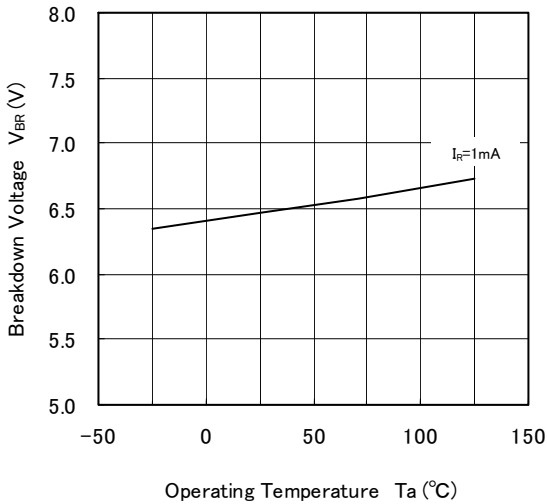
(1) Reverse Current vs. Breakdown Voltage



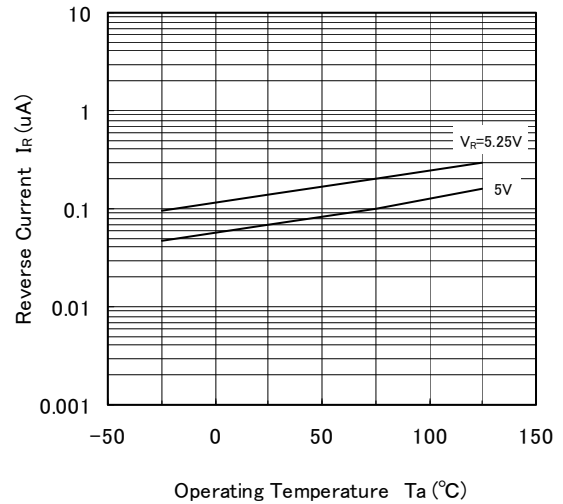
(2) Reverse Current vs. Reverse Voltage



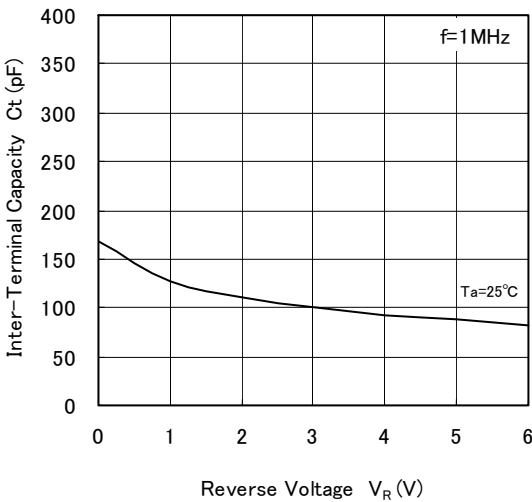
(3) Breakdown Voltage vs. Operating Temperature



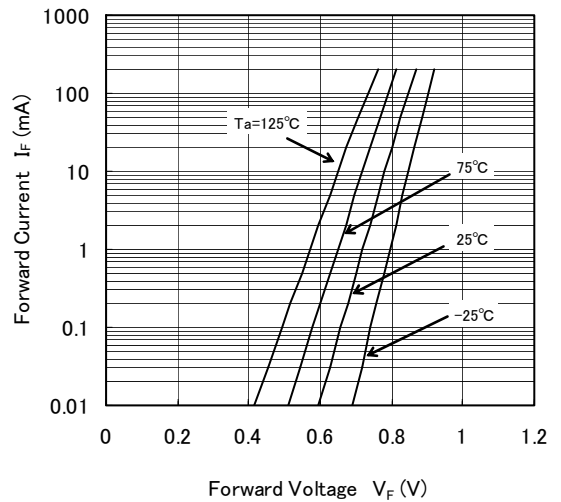
(4) Reverse Current vs. Operating Temperature



(5) Inter-Terminal Capacity vs. Reverse Voltage



(6) Forward Current vs. Forward Voltage



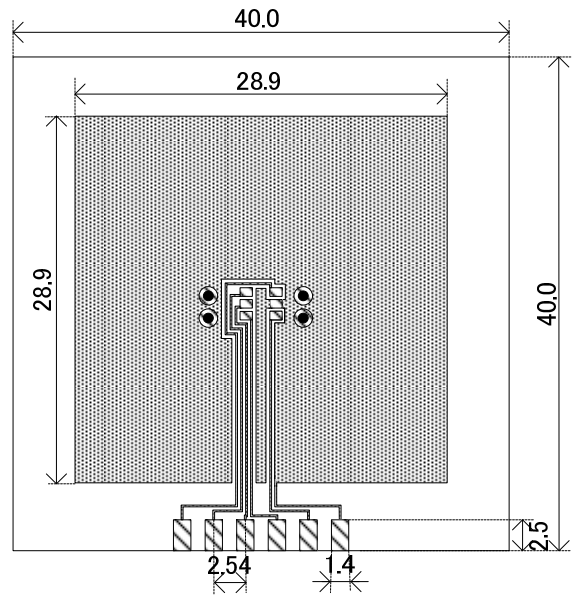
# PACKAGING INFORMATION

## SOT-25 Power Dissipation

Power dissipation data for the SOT-25 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  
 (Board of SOT-26 is used.)
- Material: Glass Epoxy (FR-4)
- Thickness: 1.6 mm
- Through-hole: 4 x 0.8 Diameter

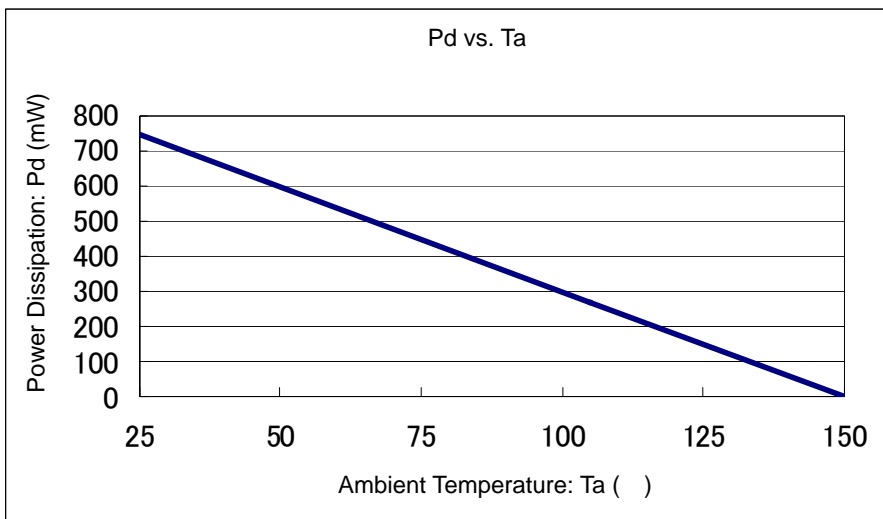


Evaluation Board (Unit: mm)

### 2. Power Dissipation vs. Operating temperature

Board Mount ( $T_j \text{ max} = 150$  )

Ambient Temperature (°C)	Power Dissipation Pd (mW)	Thermal Resistance (°C/W)
25	750	166.67
105	270	



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