

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 ^(*1)	Ppk	200	W
Power Dissipation	Pd	250	mW
		750 ^(*2)	
Junction Temperature	Tj	150	°C
Storage Temperature Range	Tstg	-55~+150	°C
ESD Durability ^{(*3)(*4)}	Vpp	30	kV
Contact Discharge			

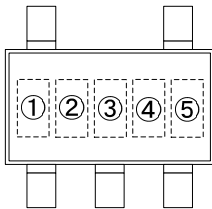
(*1): tp=8/20 μs

(*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

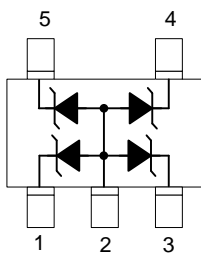
MARKING RULE



: BP3(Product Number)

: Lot Number

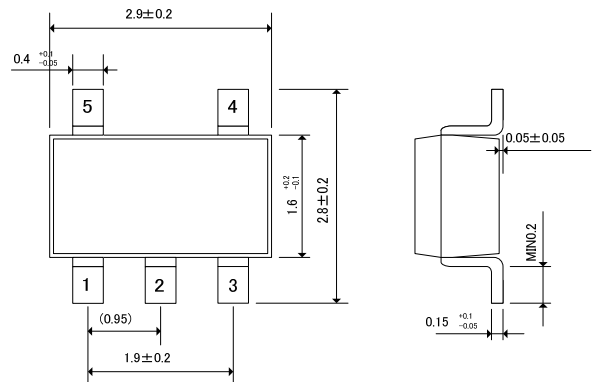
PIN CONFIGURATION



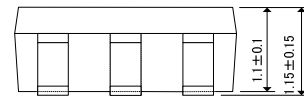
TOP VIEW

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.

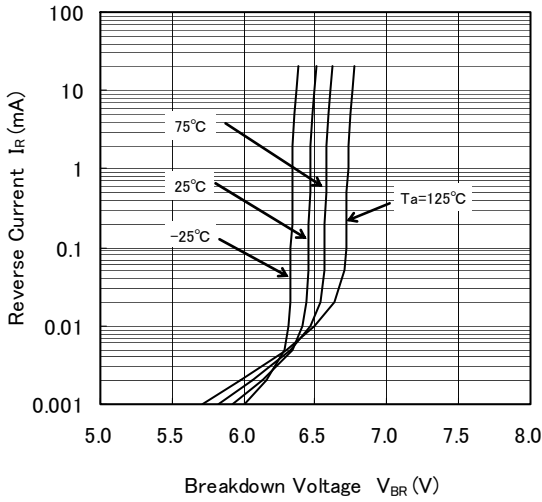
ELECTRICAL CHARACTERISTICS

Ta=25°C

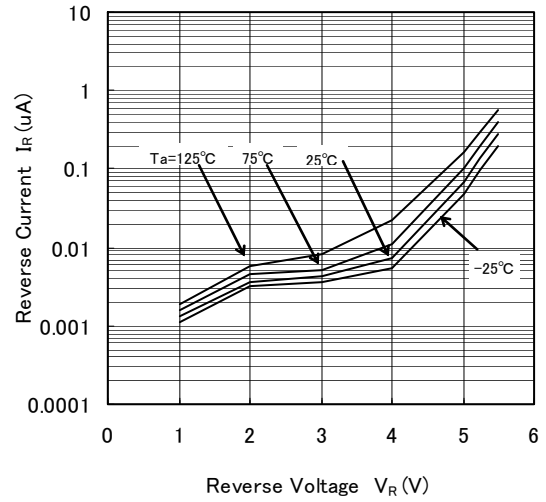
PARAMETER	SYMBOL	TEST CONDITION	LIMITS			UNITS
			MIN.	TYP.	MAX.	
Breakdown Voltage	V _{BR}	I _R = 1mA	6.1	6.65	7.2	V
Leakage Current	I _{RM}	V _{RM} = 5.25V	-	-	2.5	μA
Forward Voltage	V _F	I _F = 200mA	-	-	1.25	V
Inter-Terminal Capacity	C _t	V _R = 0V, f = 1MHz	-	170	-	pF

TYPICAL PERFORMANCE CHARACTERISTICS

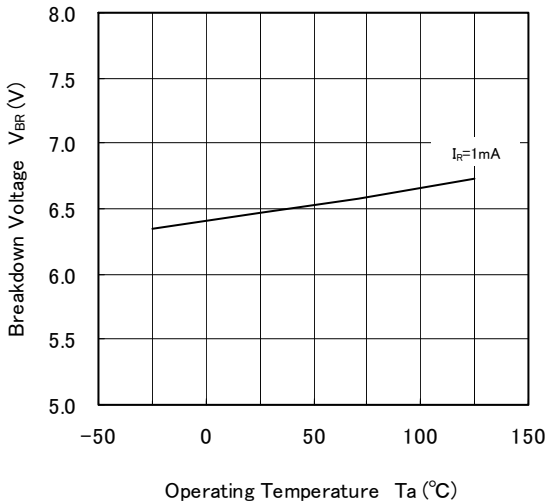
(1) Reverse Current vs. Breakdown Voltage



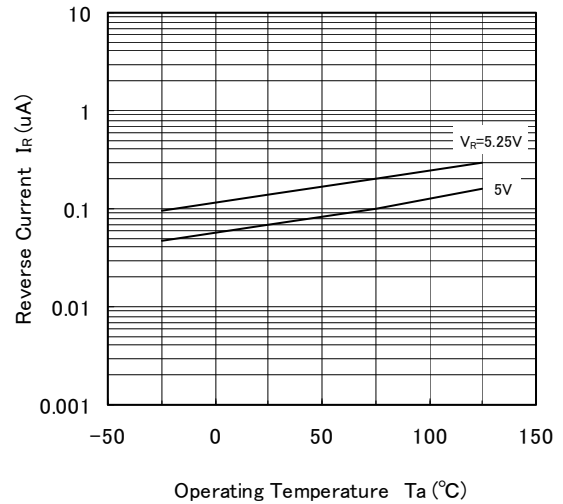
(2) Reverse Current vs. Reverse Voltage



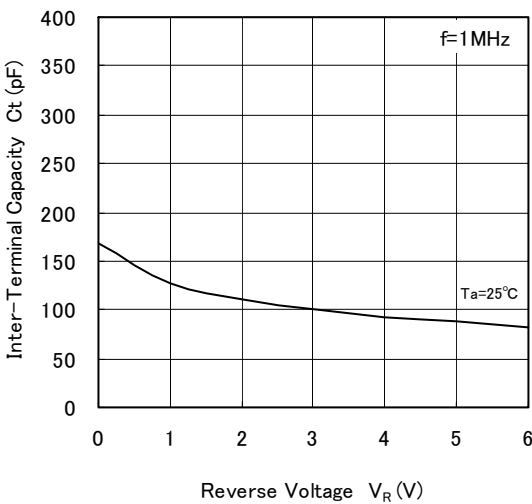
(3) Breakdown Voltage vs. Operating Temperature



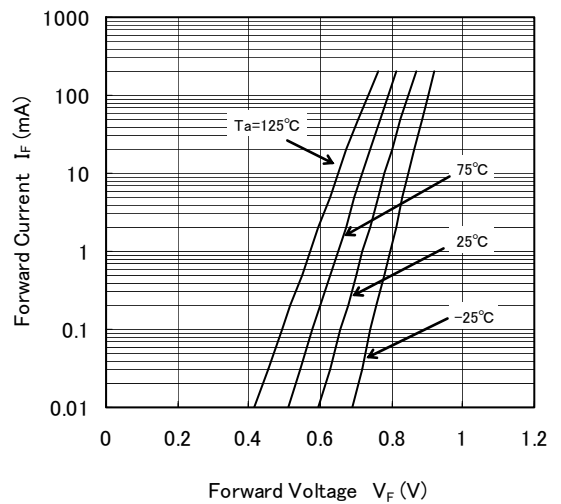
(4) Reverse Current vs. Operating Temperature



(5) Inter-Terminal Capacity vs. Reverse Voltage



(6) Forward Current vs. Forward Voltage



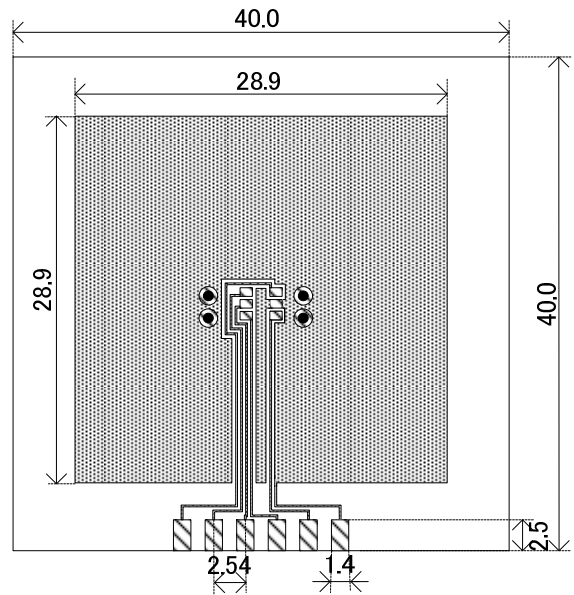
PACKAGING INFORMATION

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 mm² 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

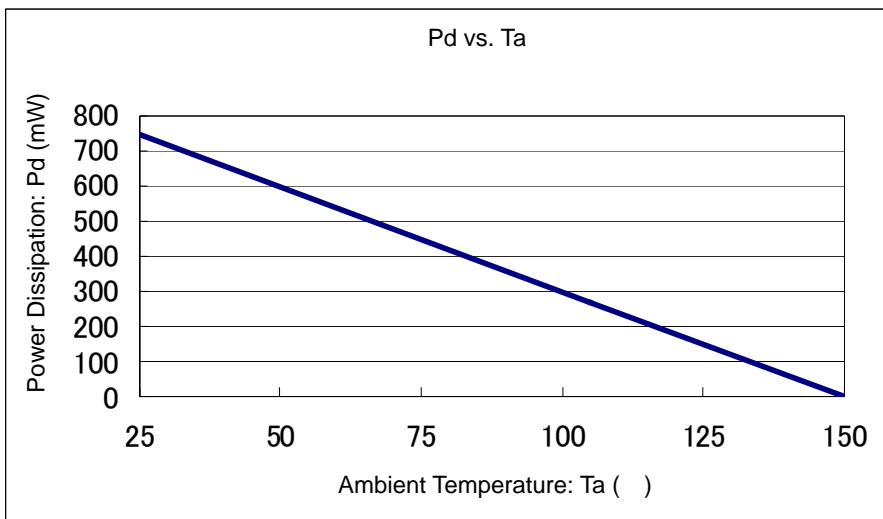


Evaluation Board (Unit: mm)

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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