



FEATURES

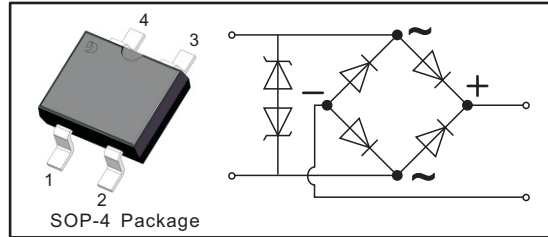
- Lead Free Finish/RoHS Compliant
- Green Molding Compound (No Halogen and Antimony)
- Lower clamping voltage and excellent performance on ringing waves testing.
- Glass Passivated Chip Junction
- High Surge Current Capability
- Designed for Surface Mount Application

PINNING

PIN	DESCRIPTION
1	Input Pin (~)
2	Input Pin (~)
3	Output Anode (+)
4	Output Cathode (-)

MECHANICAL DATA

- Case: SOP-4
- Terminals: Solderable per MIL-STD-750, Method 2026
- Approx. Weight: 75mg / 0.0026oz



Maximum Ratings and Thermal Characteristics(TA = 25°C unless otherwise specified)
Ratings at 25 °C ambient temperature unless otherwise specified.
Single phase half-wave 60 Hz, resistive or inductive load, for capacitive load current derate by 20 %.

Parameter of Bridge Rectifier	Symbols	4MBT3048	Units
Average Rectified Output Current at T _C = 125 °C	I _O	1.0	A
Peak Forward Surge Current 8.3 ms Single Half Sine Wave Superimposed on Rated Load (JEDEC Method)	I _{FSM}	15	A
Maximum Forward Voltage at 1.0 A	V _F	1.1	V
Maximum DC Reverse Current at Rated DC Blocking Voltage @T _A =25 °C @T _A =125 °C	I _R	5 100	μA
Typical Junction Capacitance (f=1MHz,4V DC)	C _j	8	pF
Typical Thermal Resistance (Note1)	R _{θJA}	130	°C/W
Operating and Storage Temperature Range	T _j , T _{stg}	-55 ~ +150	°C

Note: 1. Mounted on glass epoxy PC board with 4×1.5"×1.5" (3.81×3.81 cm) copper pad.

Parameter of TVS	Symbol	4MBT3048	Unit
Working peak reverse voltage	V _{RWM}	48	V
Breakdown voltage @ 1mA	V _{BR}	53.3~58.9	V
Reverse Leakage @VR=48V	I _R	1	uA
Peak Pulse Current on 10/1000 us waveform (Note 2, Fig 7)	I _{PPM}	See Table 1	A
Operating and Storage Temperature Range	T _j , T _{stg}	-55 ~ +150	°C

Table 1

Type	Typ. Clamp Voltage V _C @ I _{PP} (V)	Peak Pulse Current @10/1000us I _{PP} (A)
4MBT3048	77.4	5.2

NOTE2:Non-repetitive current pulse, per Fig.8 and derated above TA = 25°C per Fig. 7.



Fig.1 Average Rectified Output Current Derating Curve

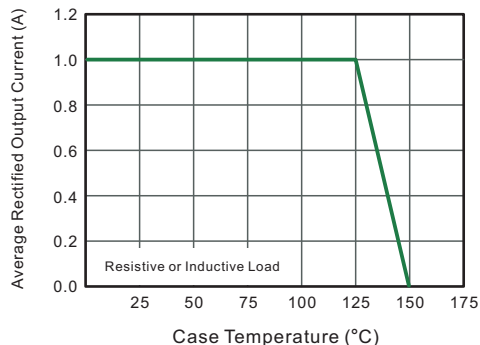


Fig.2 Typical Reverse Characteristics

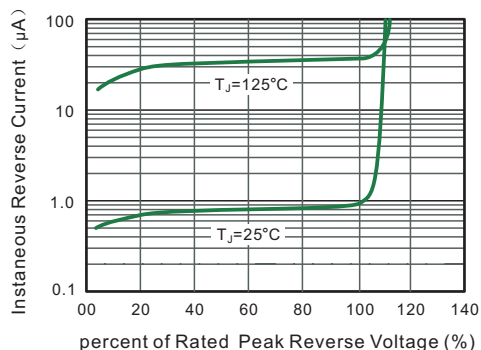


Fig.3 Typical Instantaneous Forward Characteristics

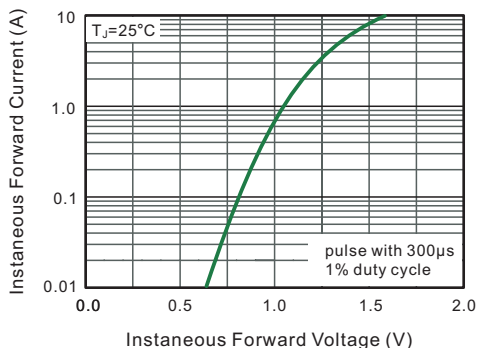


Fig.4 Typical Junction Capacitance

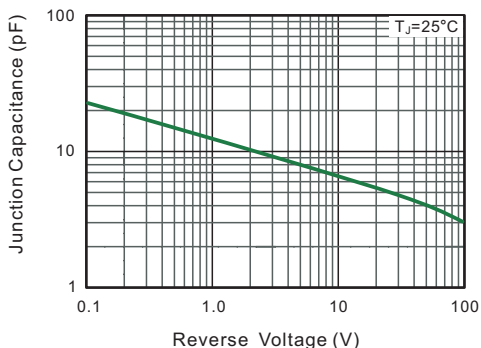


Fig.5 Maximum Non-Repetitive Peak Forward Surge Current

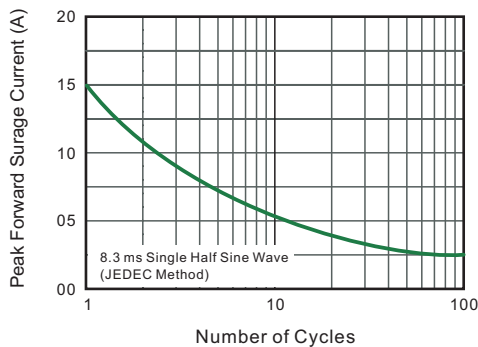


Fig.6 Peak Pulse Power Rating Curve

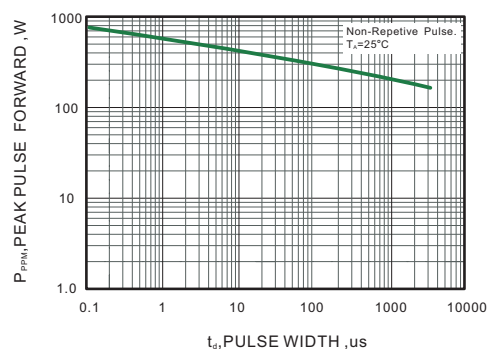


Fig.7 Forward Current Derating Curve

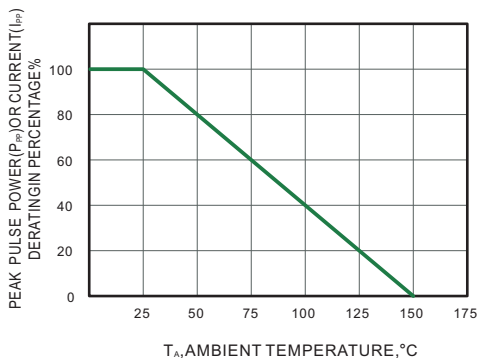
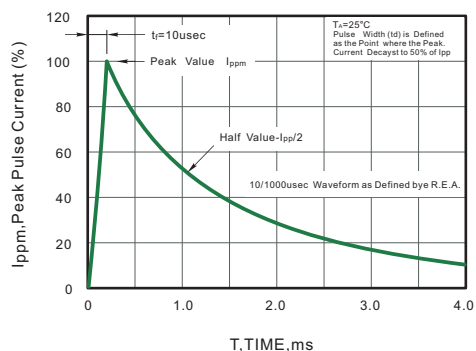
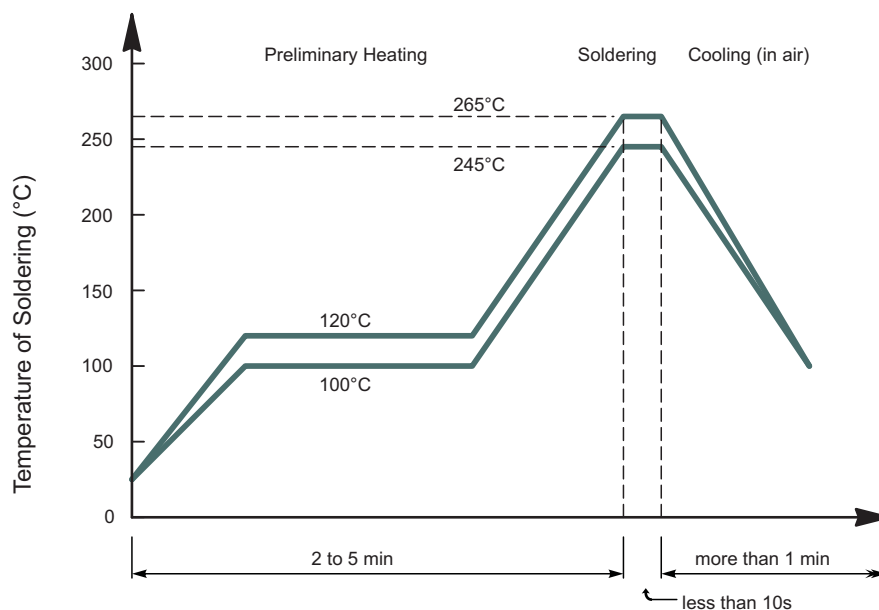


Fig.8 Pulse Waveform

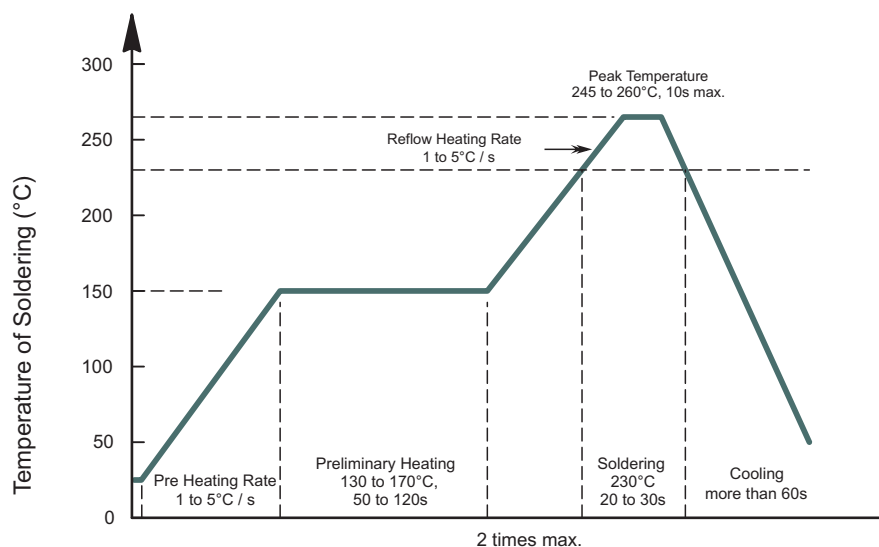




• Recommended condition of flow soldering



• Recommended condition of reflow soldering



Recommended peak temperature is over 245 °C. If peak temperature is below 245 °C, you may adjust the following parameters; time length of peak temperature (longer), time length of soldering (longer), thickness of solder paste (thicker)

• Condition of hand soldering

Temperature: 370°C

Time: 3s max.

Times: one time

• Remark:

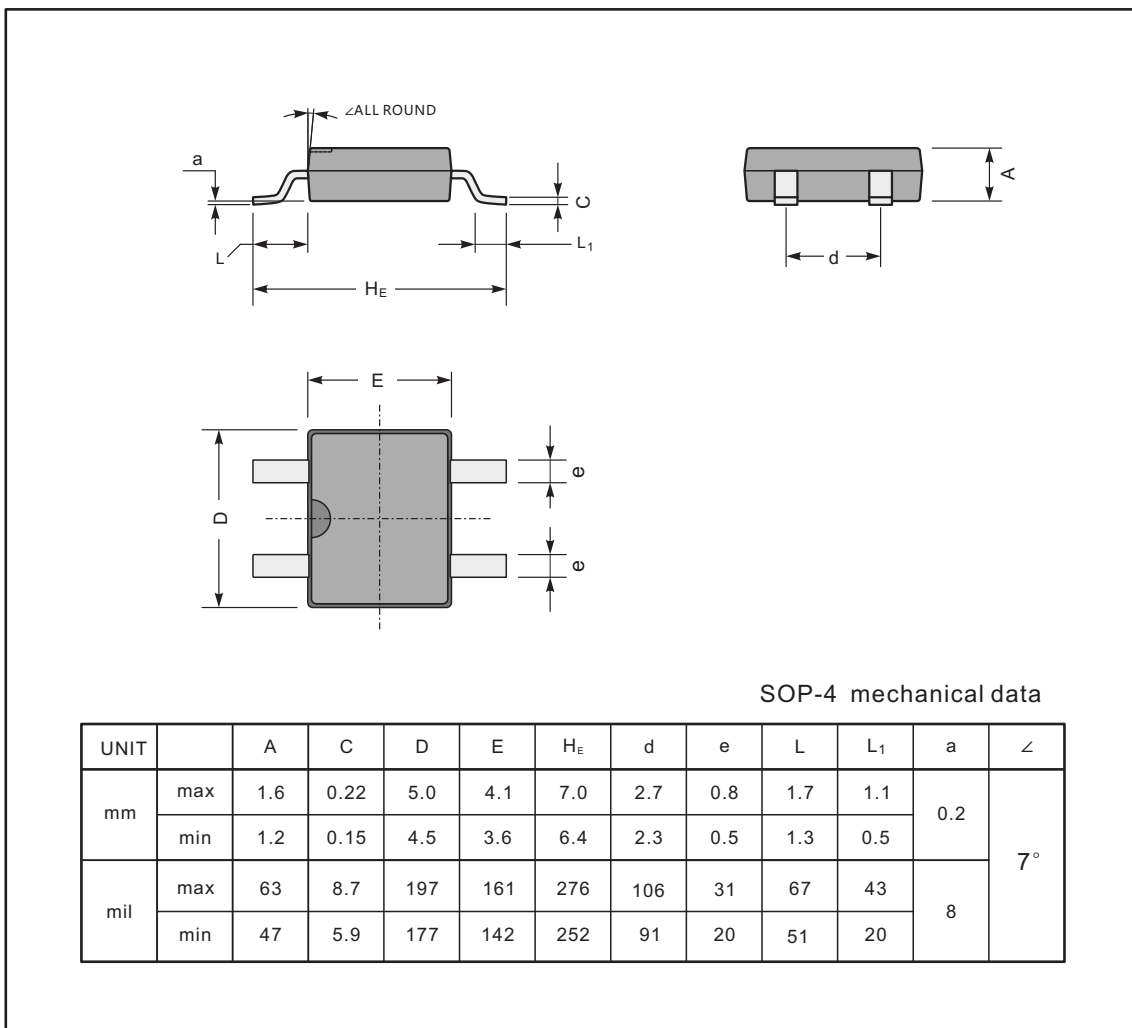
Lead free solder paste (96.5Sn/3.0Ag/0.5Cu)



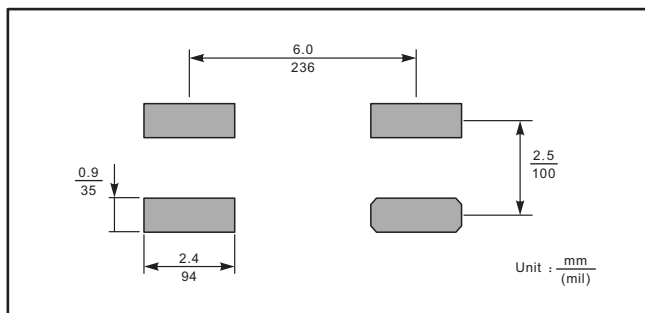
PACKAGE OUTLINE

Plastic surface mounted package; 4 leads

SOP-4



The recommended mounting pad size



Marking

