

ABSTRACT

PASTE-LIKE ADHESIVE COMPOSITION, SEMICONDUCTOR DEVICE, METHOD FOR
MANUFACTURING SEMICONDUCTOR DEVICE, AND METHOD FOR BONDING HEATSINK

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A paste-like adhesive composition of the present invention
contains metal particles (A) and a thermally polymerizable compound
(B), in which the metal particles (A) form a particle coupling
structure by causing sintering through a thermal treatment; when
10 dynamic viscoelasticity of the composition is measured under a
condition of a measurement frequency of 1 Hz, within a temperature
region of 140°C to 180°C, the composition has a temperature width
of equal to or larger than 10°C in which a shear modulus of elasticity
is equal to or higher than 5,000 Pa and equal to or lower than 100,000
15 Pa; and an acetone insoluble fraction of a sample, which is obtained
by removing the metal particles (A) and then heating the composition
under conditions of 180°C and 2 hours, is equal to or lower than 5%
by weight.

20 FIG. 1