



ALLOY SOLDER CONNECT ASSEMBLY AND METHOD OF CONNECTION

Abstract of the Disclosure

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An electronic assembly (100) includes multiple solder connections (101) coupling faying surfaces (202, 204) of two substrates (106, 108). A solder connection (201) is fabricated by reflow heating of a first, less compliant solder paste (312, 314) and a compliant preform (210) so as to cause compliant material of the preform (210) to dissolve into the solder paste (312, 314). Upon solidification of the solder paste (312, 314), blended regions (520, 522), having a gradual, changing concentration of compliant material form between resulting fillets (212, 214) and the preform (210). The blended regions (520, 522) transfer temperature induced shear stresses, caused by thermal cycling of the electronic assembly (100), from the fillets (212, 214) into the compliant preform (210).

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