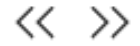


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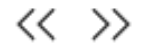
CHAPTER 6 APPENDIX

- 6.1 Characteristics of Constituent Materials
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CHAPTER 6 APPENDIX

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CHAPTER 6 APPENDIX

6.1 Characteristics of Constituent Materials

6.1.1 Thermal expansion coefficients of constituent materials

The thermal expansion coefficients (linear expansion coefficients) for the materials used to configure packages are shown below.

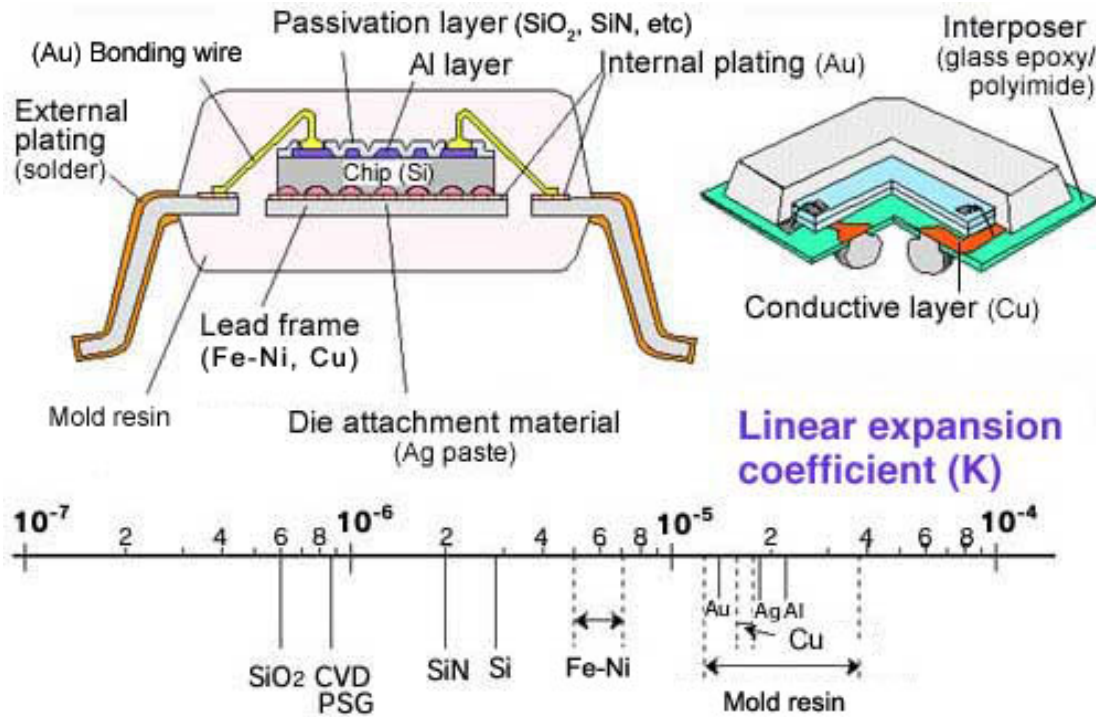


Figure 6-1. Thermal Expansion Coefficients of Constituent Materials



CHAPTER 6 APPENDIX

6.2 Package Samples

NEC Electronics provides **package samples** (**without chips, and not 1-metal TBGAs**) to enable verification of the package outline and product loadability by customers. To request a package sample, contact your NEC Electronics sales representative.

To verify solder joint reliability following mounting for **BGAs, CSP**, etc., samples **loaded with chip** are also available. To request such loaded samples, contact your NEC Electronics sales representative.

*** "Semiconductor Device Mount Manual" END ***



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