

## Thermal Coupling Example - Card Edge Guide

Using a *Length Proportional* type thermal coupling you can easily model conduction across a card edge guide without modeling the geometry or element mesh.

1. Use a *Length Proportional* thermal coupling and specify the heat transfer coefficient per unit length ( $h_{\text{guide}}$ ) for the edge guide where:

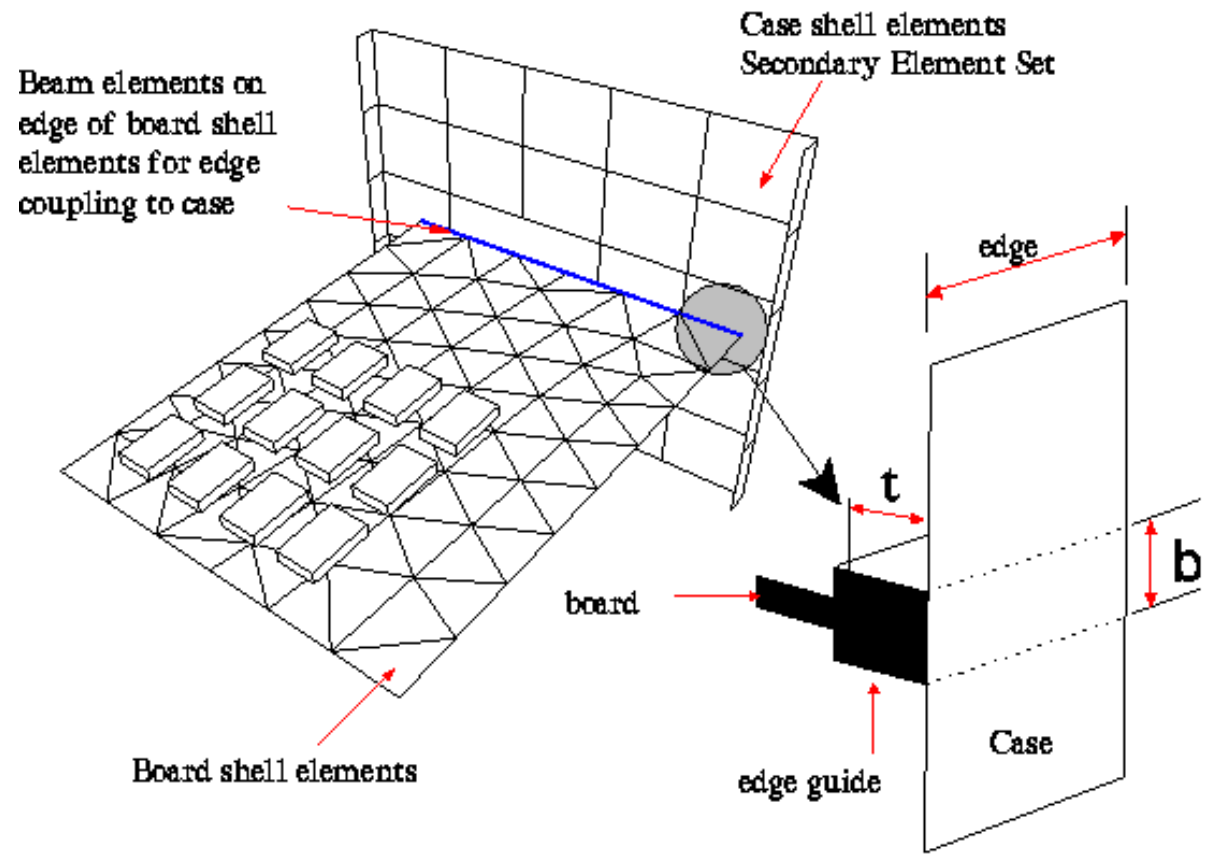
$$h_{\text{guide}} = k_{\text{guide}} \times b / t$$

2. The resulting conductance ( $G_{ij}$ ) is determined as:

$$G_{ij} = h_{\text{guide}} \times l_{\text{edge}}$$

3. To account for additional thermal resistances across the guide board or guide case interface recall:

$$1 / h_{\text{eff guide}} = 1 / h_{\text{guide}} + 1 / h_{\text{gb}} + 1 / h_{\text{gc}}$$



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