Application Report

PCB/Substrate Passive SMT Design Guidelines

ABSTRACT

This application report discusses the PCB/Substrate Passive SMT Design Guidelines.

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1 Introduction

When TI designs substrate based modules, especially those that have very tight dimension challenges, very often we run into spacing issues between passive to passive and passive to edge of PCB/substrate. Instead of going through design reviews with subcon, we would like to come up with a set of design guidelines based on various subcon requirements so that our module design will be correct during our first design cycle.

2 Objective

To define the minimum spacing requirement between passive to passive and passive to edge of PCB/substrate.

3 Scope

Review and summarize design rules from subcons that TI normally use for module assembly.

4 Guidelines

Minimum gap of Passive to Passive and minimum gap from Passive to Edge of PCB/Substrate (all dimensions are in mm).

Table 4-1. Minimum Spacing Requirement between Passive to Passive and Passive to Edge of PCB/ Substrate Guidelines

	Flextronics	SVTronics	PTI	ASEK	JCET	CARSEM
Passive to Passive Minimum Gap	0.15-.020	0.25-0.40	0.2	0.065	0.175	0.15-0.2
Passive to Edge of PCB/Substrate	0.3	0.3	0.1-0.3	0.1-0.115	0.2	0.2

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