

JEDEC DESIGN STANDARD

DESIGN REQUIREMENTS FOR OUTLINES OF SOLID STATE AND RELATED PRODUCTS

JEDEC PUBLICATION 95

DESIGN GUIDE 4.15

THIN SMALL OUTLINE PACKAGE (TSOP - TYPE II)

**JEDEC
SOLID STATE TECHNOLOGY ASSOCIATION**

**Date: May 2004
Item: 11.2-675S**

Issue: B

THIN SMALL OUTLINE PACKAGE, (TSOP -TYPE II) DESIGN REQUIREMENTS

CONTENTS

SECTIONS	Pages
4.15.1 Introduction	4.15-3
4.15.2 Scope	4.15-3
4.15.3 Outline Format	4.15-3
4.15.4 Symbols, Dimesional Values and Tolerances	4.15-3
 Tables	
4.15-1 Symbols, Dimensions and Tolerances for TSOP-TYPE II Packages	4.15-4,5,6,7,8,9
 Figures	
4.15-1 Thin Small Outline (TSOP - TYPE II) Packages	4.15-2
4.15-2 Typical TSOP-TYPE II Top and Side View	4.15-10
4.15-3 Typical TSOP-TYPE II End and Lead Detail View	4.15-11
4.15-4 Typical TSOP-TYPE II Notes	4.15-12

4.15 THIN SMALL OUTLINE PACKAGE, (TSOP-TYPE II)

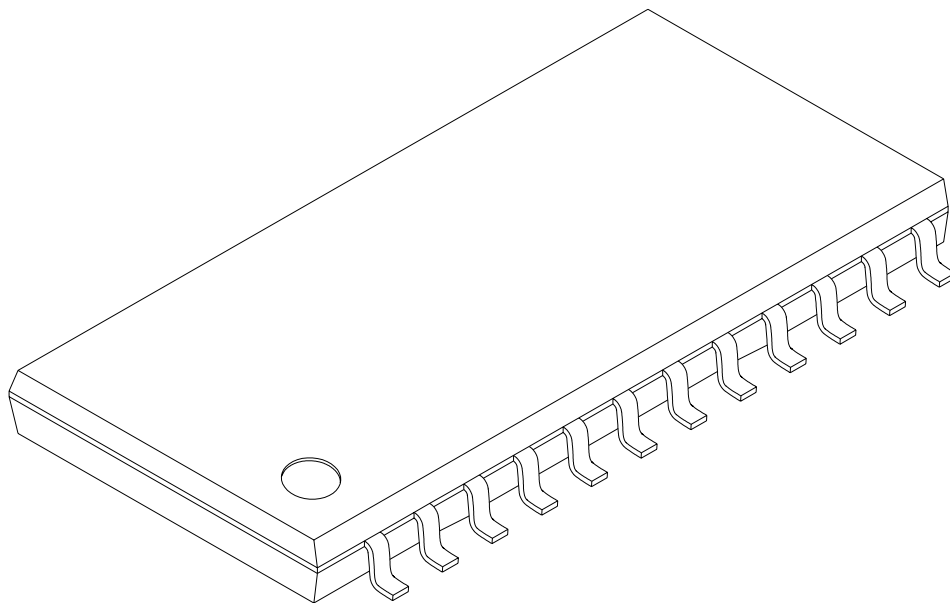


FIGURE 4.15-1
Thin Small Outline Package (TSOP- TYPE II)
Isometric View

4.15 Thin Small Outline Package, (TSOP - TYPE II)

4.15.1 Introduction

A Thin Small Outline Package (TSOP) is a rectangular semiconductor package with metal leads extending from two sides of the body. The leads are formed in a gull wing configuration with the portion of the lead in contact with the printed wiring board bent outward from the body and parallel to the component seating plane. The main body of the component is generally a molded plastic. Alternative materials such as ceramic may be used.

The Type II designation denotes that the leads exit the body perpendicular to the longest axis of the body.

4.15.2 Scope

This Design Guide defines the symbology, definitions, algorithms, recommended dimensions and tolerances for a family of TSOP, Type II devices. The specification uses metric dimensioning per JEP 95, SPP-003, and adheres to geometric dimensioning and tolerancing methods defined in ASME Y14.5M-1994.

4.15.3 Outline Format

Refer to Figures 4.15-2 through 4.15-4 for the recommended outline format and symbology for a TSOP, Type II package.

4.15.4 Symbols, Dimensional Values and Tolerances

Table 4.15-1 defines the symbols, algorithms, dimensions, and tolerances that shall be used when preparing TSOP - Type II outlines.