JEITA

Standard of Japan Electronics and Information Technology Industries Association

JEITA ED - 7715

Standard for open-top type socket
[54/66 Pin Thin Small Outline Package (Type 2)]

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Standard of Japan Electronics and Information Technology Industries Association

Standard of open-top type socket
[54/66 pin Thin Small Outline Packages (Type 2)]

Foreword

This standard is prepared by the Subcommittee on Semiconductor Socket, Technical Standardization Committee on Semiconductor Device Package. This is an individual standard which complies with the format of the "Rules for the drafting and presentation of JEITA Standards", **TSC-16**, as well as the normative references that were established with the intention of harmonizing with international standards.

1. Scope

This standard specifies the outlines and dimensions of the open-top type sockets among the test and burn-in sockets for TSOPs (type 2) that are specified in the **EIAJ EDR-7313**, more specifically for the 54 pin TSOP (type 2) with the terminal pitch e of 0.8 mm and the 66 pin TSOP (type 2) with e of 0.65 mm.

2. Normative references

The following referenced documents are indispensable for the application of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments or supplements) applies.

JEITA standards:

EIAJ EDR-7313 Design guideline of integrated circuits for Thin Small Outline Package (Type II) (TSOP (II))

EIAJ ED-7300A Recommended practice on standard for the preparation of outline drawings of semiconductor packages

EIAJ ED-7303B Name and code for integrated circuits package

EIAJ ED-7701 Glossary of semiconductor socket for BGA, LGA, FBGA, and FLGA

3. Terms and definitions

Most of the terminology used in this document complies with **EIAJ ED-7300A**, **ED-7303B**, and **ED-7701**, while the new terminology is defined in the text.
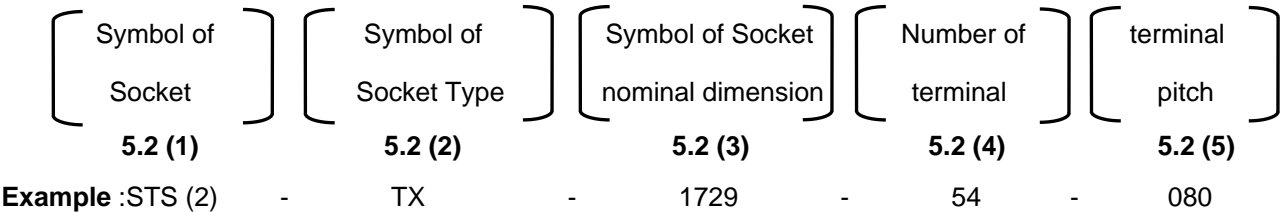
4. Background

Requirements for the higher functionality and performances of the electronic products have resulted in the sharp rise of the demand for the surface mount devices. Among them, the demand for thin small outline packages with the mounting height of 1.2 mm or lower (TSOP (2)) is significant, because these are used in the thinner electronics products such as memory card.

This standard aims at standardizing the outline dimensions of sockets for 54 and 66 pin TSOP (2), which are the majority in production, and ensuring compatibility between sockets from various suppliers.

5. Socket code

5.1 Designation system of the socket code

The designation system of the socket code is as follows:

Symbol of Socket	Symbol of Socket Type	Symbol of Socket nominal dimension	Number of terminal	terminal pitch
5.2 (1)	**5.2 (2)**	**5.2 (3)**	**5.2 (4)**	**5.2 (5)**

Example :STS (2)　　　　　TX　　　　　　　1729　　　　　54　　　　　080

5.2 Symbol

(1) Socket designator

The socket designator is expressed by six characters. "STS(2)" is designated for the socket of TSOP(2), where the first character of "S" denotes socket and the following five characters are the part of the package code.

NOTE : Thin Small Outline Package (Type 2) is a derived package name, and the package code is expressed by seven characters, "TSOP(2)". Since the package code TSOP(II) is no longer used, socket code shall not be "STS(II)".

(2) Socket type designator

The socket type designator is expressed by two alphabetic characters; the first character is "T" denoting open-top type, and the second character shown as "X" is optional.

(3) Socket nominal dimension

The socket nominal dimension is expressed by four numeric characters. The first two characters indicate the socket width (W) and the last two indicate the socket length (L). The numbers are rounded off to the whole numbers.

(4) Terminal count

Terminal count is expressed by two numeric characters which are the number of terminals, n, of the corresponding package.

(5) Terminal pitch

Terminal pitch is expressed by three numeric characters, where decimal point is omitted.

6. Reference symbols and schematics

Figure 1

n1 = Number of Alignment pin

Terminal Section

Diameter   Definition
of Terminal   Section
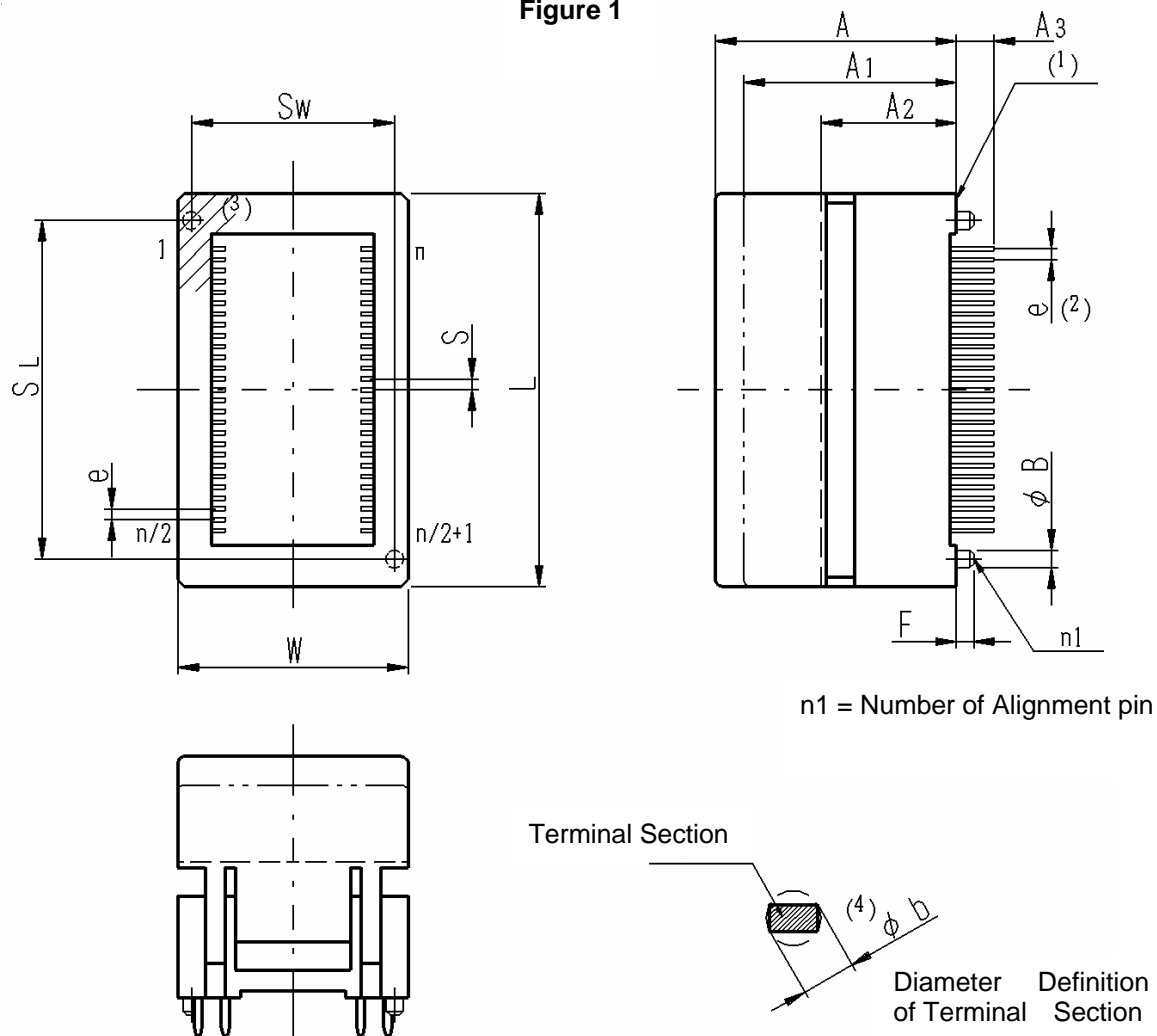
Notes: (^{1}) Indicates mounting plane. Mounting plane is defined by the plane where the socket
contacts its mounting surface.
(^{2}) Stipulates true geometric position of the terminals.
(^{3}) Indicates positional tolerance of the index mark.   Index mark should be completely
within the shaded area where less than 1/16 with socket body size. It must be included in
the shaded area entirely.
(^{4}) Terminal diameter is defined as the maximum diameter of a circle circumscribed about a
vertical projection of the terminal from the mounting plane.
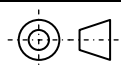
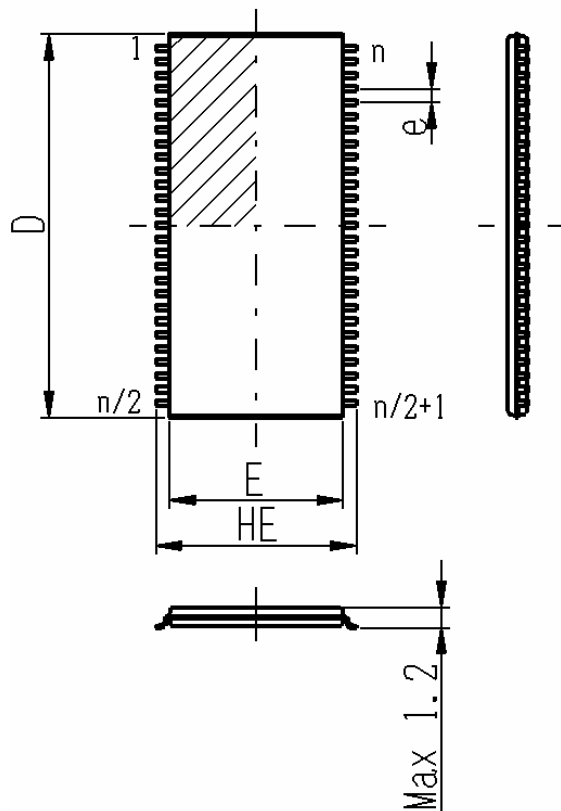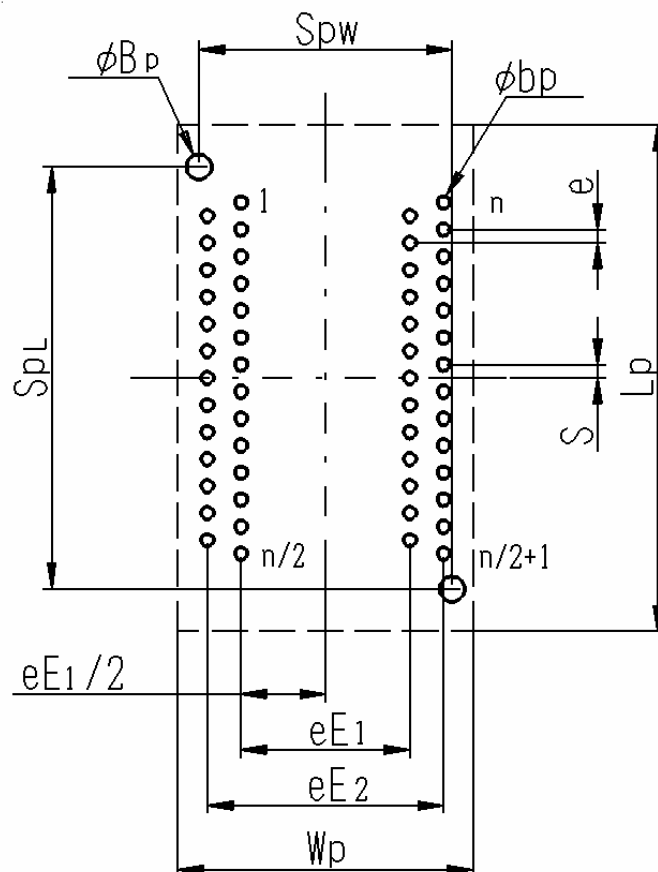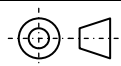|	JEITA STANDARD IC SOCKET OUTLINE DRAWING	DATE 06-XX-XX	SHEET 1 / 5
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Figure 2

Figure 3

Notes.

1. Outline Drawings

Outline drawings of the socket are shown in **Figure1** and that for applicable package is in **Figure2.**

2. Reference Symbols and Schematics of Recommended Socket Mounting Pattern on Printed Circuit Board

The drawing of the recommended socket mounting pattern on printed circuit board is shown in **Figure 3** for reference in printed circuit board designing.

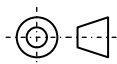| ⊕◁	JEITA STANDARD IC SOCKET OUTLINE DRAWING		DATE 06-XX-XX	SHEET 2 / 5
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7. REGISTRATION TABLE

Socket Name   STS(2)
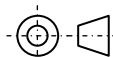
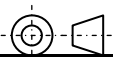Object package   TSOP(2)

Registration No. XX-771X-001

Nominal Dimension	Terminal pitch e	
	0.80	0.65
400mil	54-001-AA 54-002-AB	66-001-AC 66-002-AD

Note: Numbers in the Table Indicate "(Terminal number n)-(Consecutive number)-(Serial number)"

	JEITA STANDARD IC SOCKET OUTLINE DRAWING		DATE 06-XX-XX	SHEET 3 / 5
IC SOCKET NAME STS(2)		JEITA REGISTRATION NO. ED-7715-001		

Reference Number		AA			AB		
Socket Code		STS(2)-T-1729-54-080			STS(2)-T-2028-54-080		
Reference Symbol		min	nom	max	min	nom	max
Group 1	L		28.78			28.00	
	W		17.02			20.20	
	A		17.80			14.80	
	A_1		15.70			11.80	
	A_2		10.00			8.60	
	e		0.80			0.80	
	n		54			54	
	A_3		2.80			3.30	
	Øb			0.65			0.65
	n_1	0		2	0		2
	F		1.30			1.30	
	S_L		25.00			25.00	
	S_W		15.00			12.40	
	ØB		1.30			1.30	
	S		0.80			0.80	
Group 2	Lp			29.58			28.80
	Wp			17.82			21.00
	Spl		25.00			25.00	
	Spw		15.00			12.40	
	eE1		10.00			10.67	
	eE2		14.00			15.75	
	ØBp	1.40		1.50	1.40		1.50
	Øbp			0.80			0.80
Group 3	D		22.22			22.22	
	E		10.16			10.16	
	HE		11.76			11.76	

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IC SOCKET NAME STS(2)		JEITA REGISTRATION NO. ED-7715-001		

Reference Number		AC			AD		
Socket Code		STS(2)-T-1729-66-065			STS(2)-T-2028-66-065		
Reference Symbol		min	nom	max	min	nom	max
Group 1	L		28.78			28.00	
	W		17.02			20.20	
	A		17.80			14.80	
	A_1		15.70			11.80	
	A_2		10.00			8.60	
	e		0.65			0.65	
	n		66			66	
	A_3		2.80			3.30	
	Øb			0.65			0.65
	n_1	0		2	0		2
	F		1.30			1.30	
	S_L		25.00			25.00	
	S_W		15.00			12.40	
	ØB		1.30			1.30	
	S		0.65			0.65	
Group 2	Lp			29.58			28.80
	Wp			17.82			21.00
	Spl		25.00			25.00	
	Spw		15.00			12.40	
	eE1		10.00			10.67	
	eE2		14.00			15.75	
	ØBp	1.40		1.50	1.40		1.50
	Øbp			0.80			0.80
Group 3	D		22.22			22.22	
	E		10.16			10.16	
	HE		11.76			11.76	

	JEITA STANDARD IC SOCKET OUTLINE DRAWING		DATE 06-XX-XX	SHEET 5 / 5
IC SOCKET NAME STS(2)			JEITA REGISTRATION NO. ED-7715-001	

8. Members of the Committee

This Standard was deliberated by Semiconductor Socket Project Sub-Committee of Technical Standardization Committee on Semiconductor Device Package.

The members are as shown below.

<Technical Standardization Committee on Semiconductor Device Package>

Chairman:	Katsuroh Hiraiwa	Fujitsu Ltd.

<Semiconductor Socket Project Group>

Chief Examiner:	Nobuhiro Katsuma	Matsushita Electric Industrial Co., Ltd
Vice-Chief Examiner:	Kazumasa Sato	Wells-CTI K.K.
	Yuji Wada	Renesas Technology Corporation
Member:	Satoshi Matsumoto	NEC Electronics Corporation
	Yoshiyuki Ohashi	Enplas Corporation
	Tohru Hayashi	SANYO Electric Co., Ltd.
	Takayuki Nagumo	Sumitomo 3M Limited
	Hidefumi Shiro	Toshiba Corporation
	Hideki Sano	Texas Instruments Japan Ltd.
	Hiroyuki Hosogi	Texas Instruments Japan Ltd.
	Fumio Konishi	Molex Japan Co., Ltd.
	Kazuhiro Tashiro	Fujitsu Ltd.
	Katsunori Takahashi	Yamaichi Electronics Co., Ltd.
	Tomoaki Adachi	Unitechno Inc.
	Akihiko Tadaoka	Rohm Co., Ltd.