

2SC2840

2033

NPN Epitaxial Planar Silicon Transistor

T-31-15

©796C

High Frequency General-Purpose Amp Applications

Features

- FBET series.
- Compact package enabling compactness of sets.
- High f_T and small c_{re} ($f_T=600\text{MHz}$ typ, $c_{re}=0.5\text{pF}$ typ).

Absolute Maximum Ratings at $T_a=25^\circ\text{C}$

		unit
Collector to Base Voltage	V_{CB0}	25 V
Collector to Emitter Voltage	V_{CE0}	20 V
Emitter to Base Voltage	V_{EB0}	3 V
Collector Current	I_C	30 mA
Collector Dissipation	P_C	150 mW
Junction Temperature	T_J	125 $^\circ\text{C}$
Storage Temperature	T_{stg}	-40 to +125 $^\circ\text{C}$

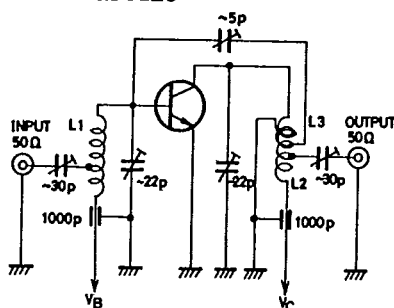
Electrical Characteristics at $T_a=25^\circ\text{C}$

			min	typ	max	unit
Collector Cutoff Current	I_{CB0}	$V_{CB}=10\text{V}, I_E=0$			0.1	μA
Emitter Cutoff Current	I_{EB0}	$V_{EB}=3\text{V}, I_C=0$			0.1	μA
DC Current Gain	h_{FE}	$V_{CE}=6\text{V}, I_C=1\text{mA}$	40*		200*	
Gain-Bandwidth Product	f_T	$V_{CE}=6\text{V}, I_C=4\text{mA}$	360	600		MHz
Reverse Transfer Capacitance	c_{re}	$V_{CB}=6\text{V}, f=1\text{MHz}$		0.5	0.8	pF
C-B Time Constant	r_{bb}, C_C	$V_{CB}=6\text{V}, I_C=1\text{mA}, f=31.9\text{MHz}$			19	ps
Noise Figure	NF	$V_{CE}=6\text{V}, I_C=1\text{mA}, f=100\text{MHz}$		2.8		dB
Power Gain	PG	$V_{CE}=6\text{V}, I_C=1\text{mA}, f=100\text{MHz}$		27		dB

*:The 2SC2840 is classified by $1\text{mA } h_{FE}$ as follows :

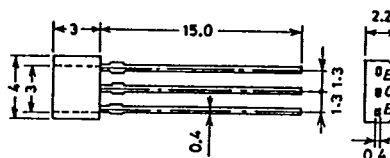
40	C	80	60	D	120	100	E	200
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NF, PC Test Circuit



- L1: 1mm ϕ plated wire, 10mm ϕ 5T, pitch 15mm, tap: 2T from base side.
 L2: 1mm ϕ plated wire, 10mm ϕ 7T, pitch 10mm, tap: 2T from V_C side.
 L3: 1mm ϕ enameled wire, 10mm ϕ 3T, pitch 10mm.

Case Outline 2033 (unit:mm)



B: Base
 C: Collector
 E: Emitter

SANYO: SPA

The 2SC2840 is scheduled to be discontinued soon. Use the 2SC2999, instead of the 2SC2840, in new applications where you are planning to use the 2SC2840.

3127KI/3155MW, TS No.796-1/4

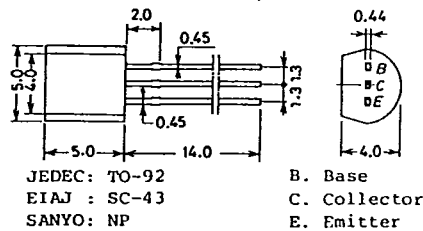
T-91-20

CASE OUTLINES AND ATTACHMENTS

- All of Sanyo Transistor case outlines are illustrated below.
- All dimensions are in mm, and dimensions which are not followed by min. or max. are represented by typical values.
- No marking is indicated.

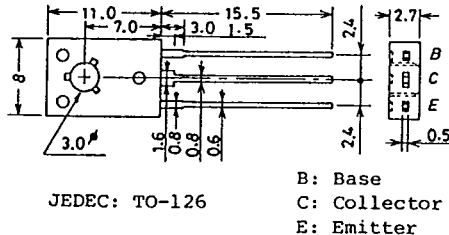
Case Outline—[2003A]

unit:mm



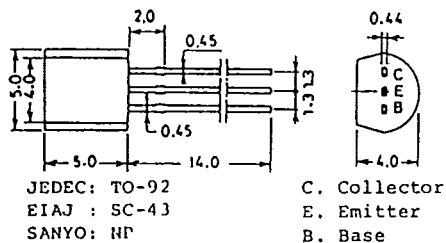
Case Outline—[2009A]

unit:mm



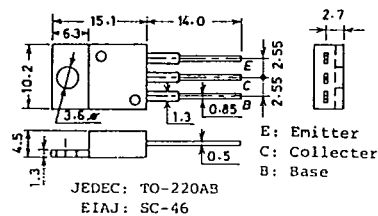
Case Outline—[2004A]

unit:mm



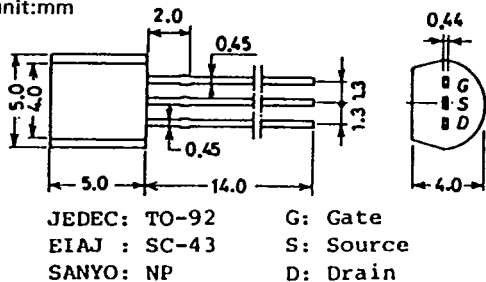
Case Outline—[2010A]

unit:mm



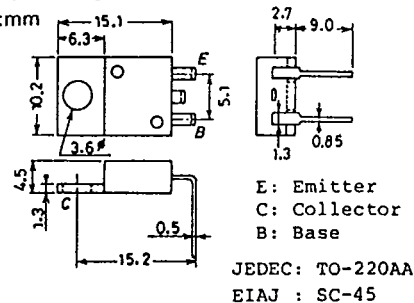
Case Outline—[2005A]

unit:mm



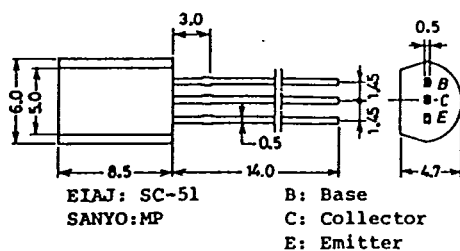
Case Outline—[2012]

unit:mm



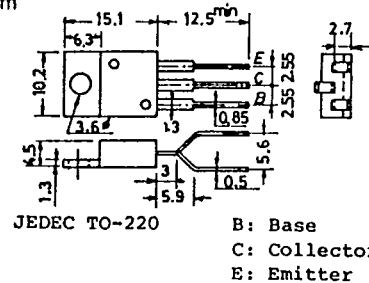
Case Outline—[2006A]

unit:mm

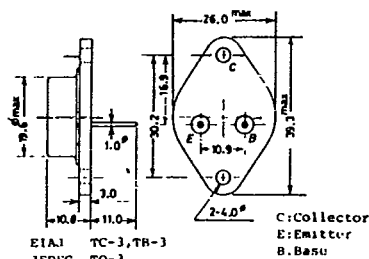


Case Outline—[2013]

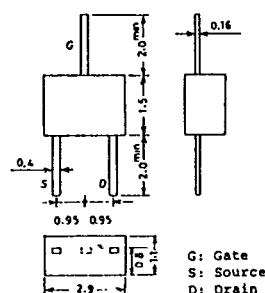
unit:mm



unit:mm

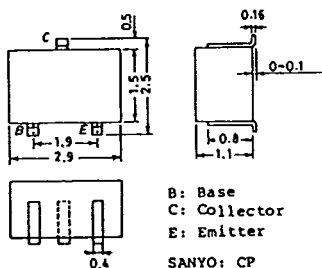


unit:mm

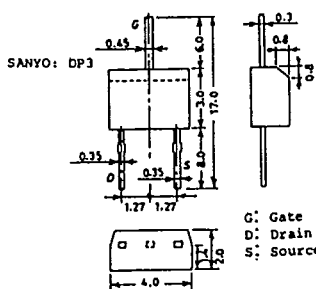


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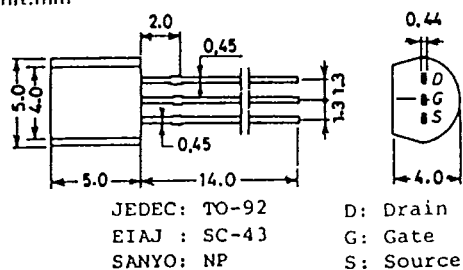
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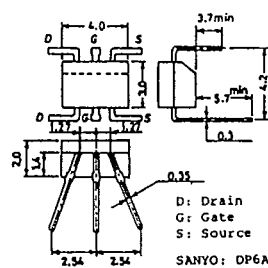
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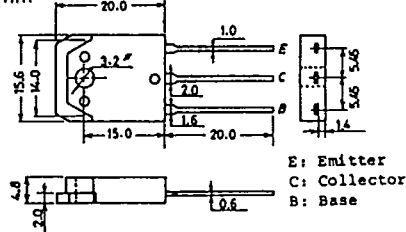
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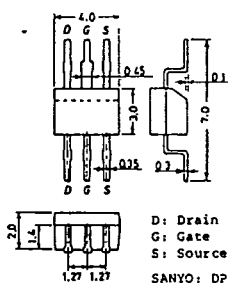
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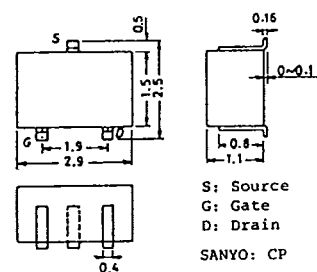
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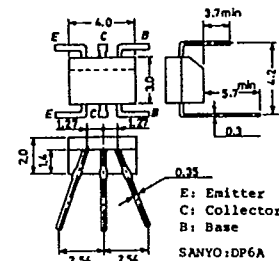
unit:mm



unit:mm

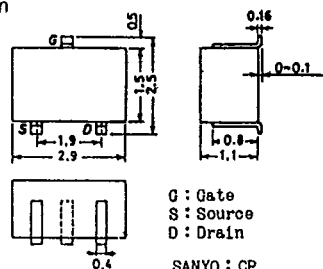


unit:mm



T-91-20

unit:mm

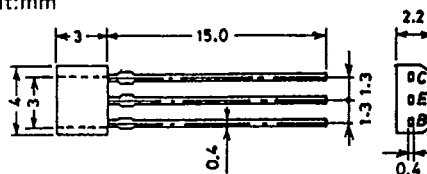


SANYO: TO126LP

G : Gate
S : Source
D : Drain

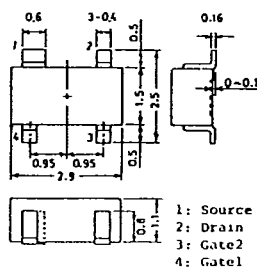
SANYO : CP

unit:mm



C : Collector
E : Emitter
B : Base
SANYO: SPA

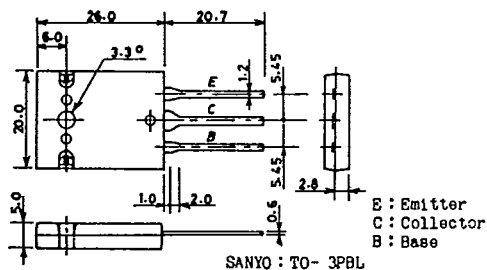
unit:mm



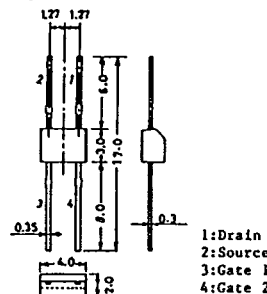
JEDEC: TO-220AB
EIAJ: SC-46

1:Source
2:Drain
3:Gate

unit:mm

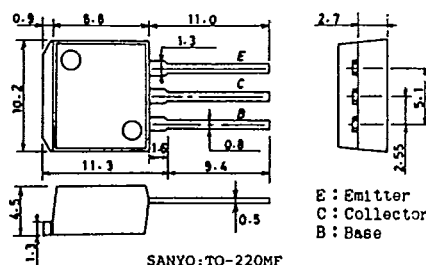


SANYO : TO- 3PBL

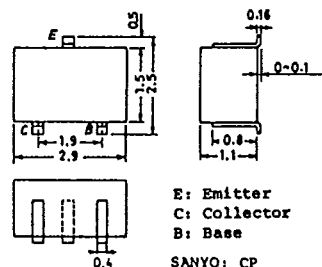


1: Drain
2: Source
3: Gate 1
4: Gate 2

unit:mm



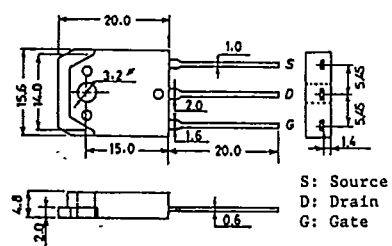
SANYO:TO-220MF



E: Emitter
C: Collector
B: Base

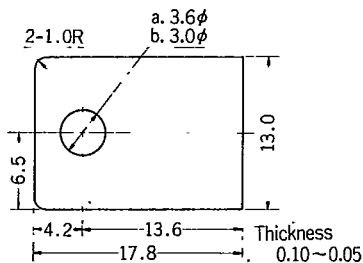
SANYO: CP

Case Outline—[2056] unit:mm



SANYO: TO3PB

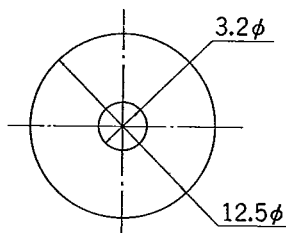
Case Outline—[0008] unit:mm

a. IS-313B
b. IS-313D

SANYO

Case Outline—[0004] unit:mm

unit:mm

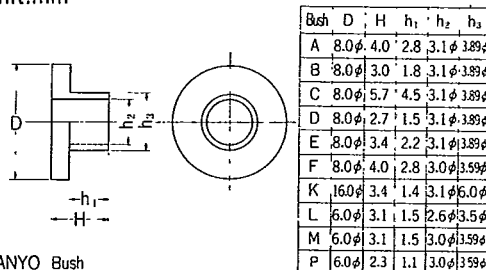


SANYO IS-126

Thickness : 0.075

Case Outline—[0009] unit:mm

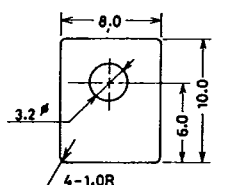
unit:mm



SANYO Bush

Case Outline—[0005] unit:mm

unit:mm

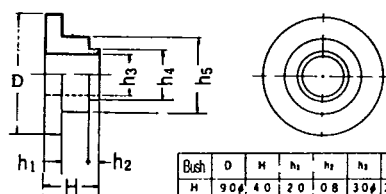


Thickness : 0.075

SANYO IS-126A Mica

Case Outline—[0010] unit:mm

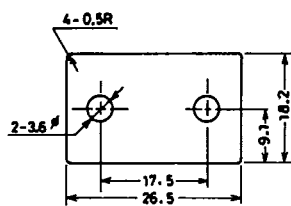
unit:mm



SANYO Bush

Case Outline—[0006] unit:mm

unit:mm

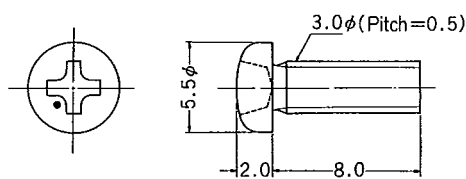


Thickness : 0.05~0.1

SANYO IS-20MA Mica

Case Outline—[0011] unit:mm

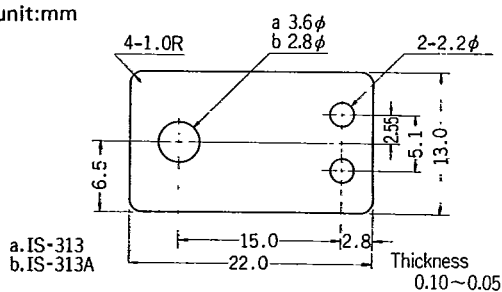
unit:mm



JIS No. B1111 M3×0.5

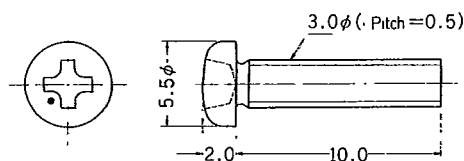
Case Outline—[0007] unit:mm

unit:mm



Case Outline—[0012] unit:mm

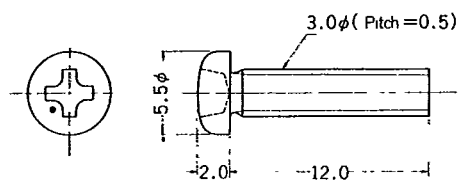
unit:mm



JIS No. B1111 M3×0.5

Case Outline—[0013]

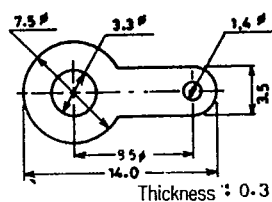
unit:mm



JIS No. B1111 M3×0.5

Case Outline—[0018]

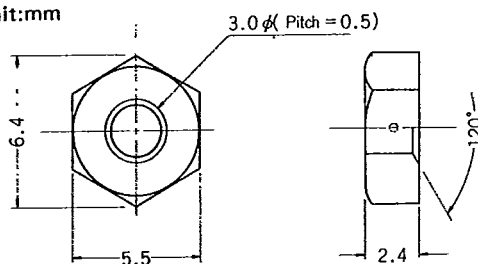
unit:mm



SANYO Lug 1.4

Case Outline—[0014]

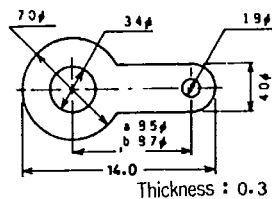
unit:mm



JIS No. B1181 M3×0.5

Case Outline—[0019]

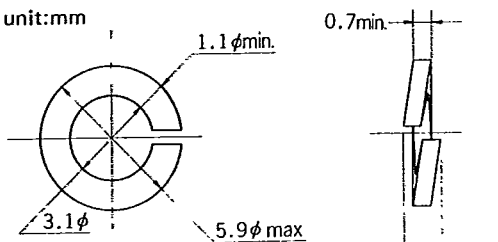
unit:mm



SANYO Lug 1.8φ

Case Outline—[0015]

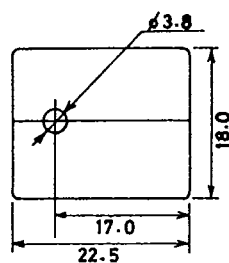
unit:mm



JIS No. B 1251 Spring washer (M3)

Case Outline—[0020]

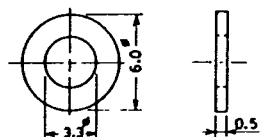
unit:mm



SANYO IS-3MP Mica

Case Outline—[0016]

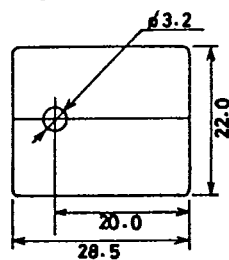
unit:mm



JIS No. B1252 Flat washer

Case Outline—[0021]

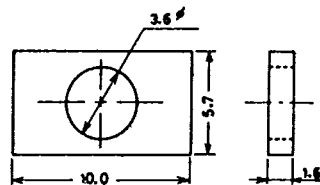
unit:mm



SANYO IS-MPC Mica

Case Outline—[0017]

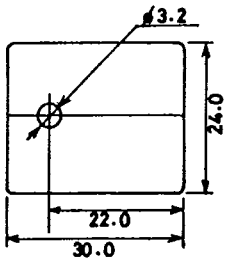
unit:mm



JIS No. G3141 Rectangular washer

Case Outline—[0022]

unit:mm



SANYO IS-3PBL Mica