

2SD1912

2010A

NPN Epitaxial Planar
Silicon Transistor

T-33-09

Low Frequency Power Amp Applications

©2336

Features

- . Wide ASO (adoption of MBIT process)
- . Low saturation voltage
- . High reliability

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

			unit
Collector to Base Voltage	V_{CB0}	60	V
Collector to Emitter Voltage	V_{CE0}	60	V
Emitter to Base Voltage	V_{EB0}	6	V
Collector Current	I_C	3	A
Peak Collector Current	i_{cp}	8	A
Collector Dissipation	P_C	1.75	W
	$T_c=25^\circ\text{C}$	30	W
Junction Temperature	T_J	150	$^\circ\text{C}$
Storage Temperature	T_{stg}	-55 to +150	$^\circ\text{C}$

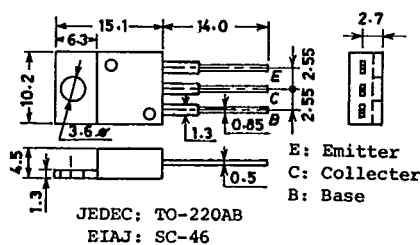
Electrical Characteristics at $T_a=25^\circ\text{C}$

			min	typ	max	unit
Collector Cutoff Current	I_{CB0}	$V_{CB}=40\text{V}, I_E=0$			100	μA
Emitter Cutoff Current	I_{EB0}	$V_{EB}=4\text{V}, I_C=0$			100	μA
DC Current Gain	$h_{FE}(1)$	$V_{CE}=5\text{V}, I_C=0.5\text{A}$	70*		280*	
	$h_{FE}(2)$	$V_{CE}=5\text{V}, I_C=3\text{A}$	20			
Gain-Bandwidth Product	f_T	$V_{CE}=5\text{V}, I_C=0.5\text{A}$		100		MHz
Output Capacitance	c_{ob}	$V_{CB}=10\text{V}, f=1\text{MHz}$		40		pF
C-E Saturation Voltage	$V_{CE(sat)}$	$I_C=2\text{A}, I_B=0.2\text{A}$		0.4	1	V
Base to Emitter Voltage	V_{BE}	$V_{CE}=5\text{V}, I_C=0.5\text{A}$		0.8	1	V
C-B Breakdown Voltage	$V_{(BR)CB0}$	$I_C=1\text{mA}, I_E=0$	60			V
C-E Breakdown Voltage	$V_{(BR)CE0}$	$I_C=5\text{mA}, R_{BE}=\infty$	60			V
E-B Breakdown Voltage	$V_{(BR)EB0}$	$I_E=1\text{mA}, I_C=0$	6			V

*: The 2SD1912 is classified by 0.5A h_{FE} as follows:

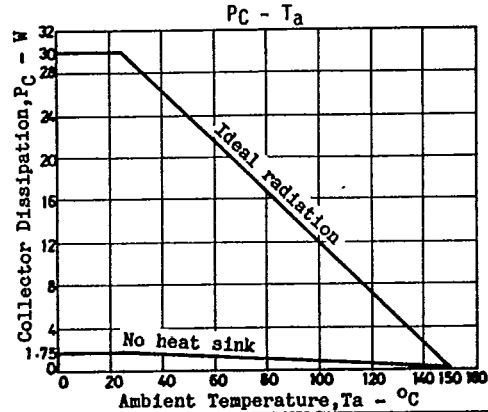
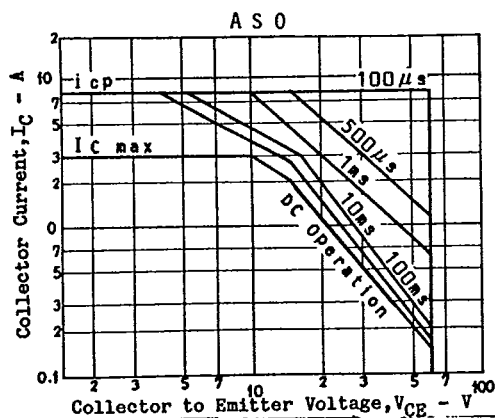
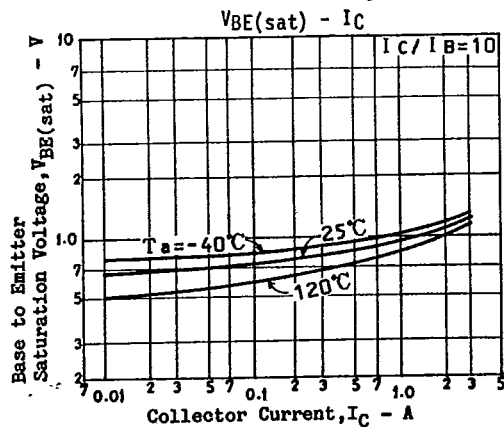
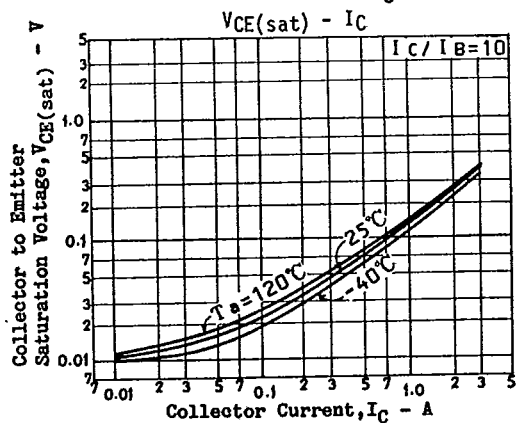
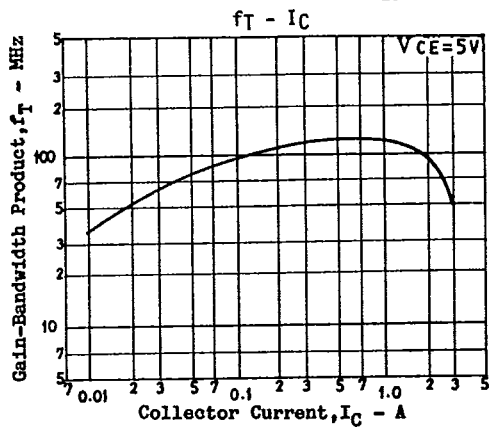
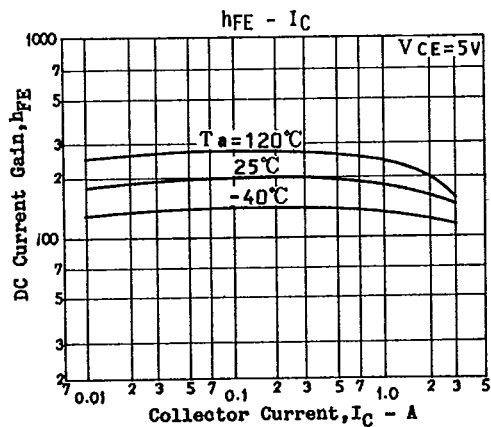
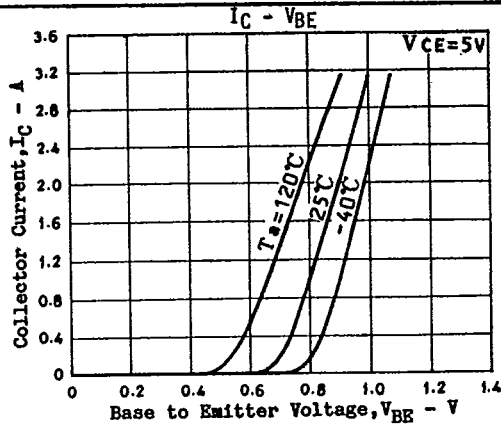
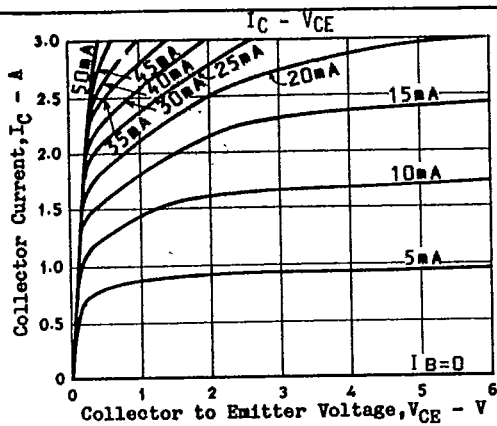
70	Q	140	100	R	200	140	S	280
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Case Outline 2010A
(unit:mm)



2SD1912

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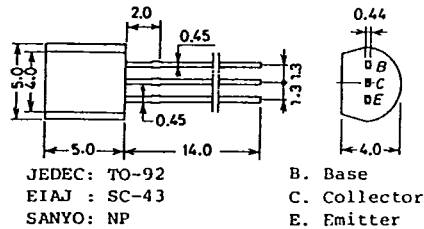
T-91-20

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.

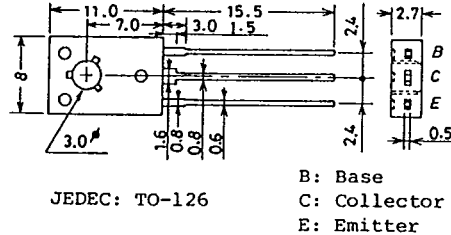
Case Outline—[2003A]

unit:mm



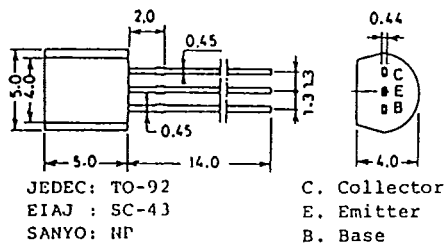
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unit:mm



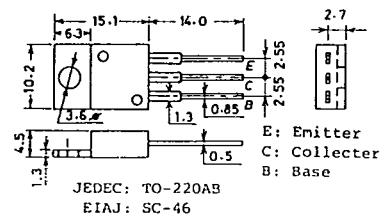
Case Outline—[2004A]

unit:mm



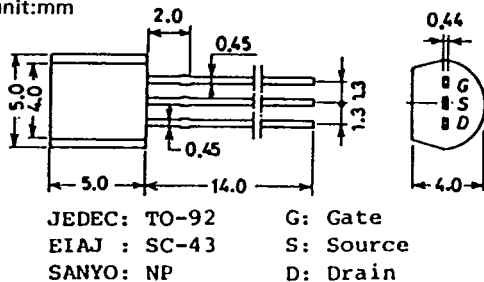
Case Outline—[2010A]

unit:mm



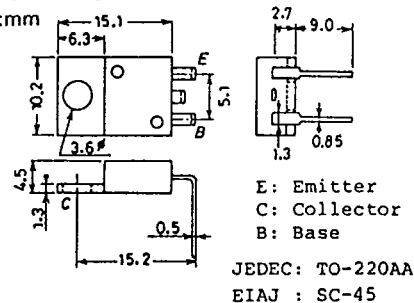
Case Outline—[2005A]

unit:mm



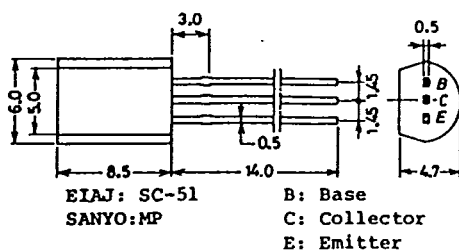
Case Outline—[2012]

unit:mm



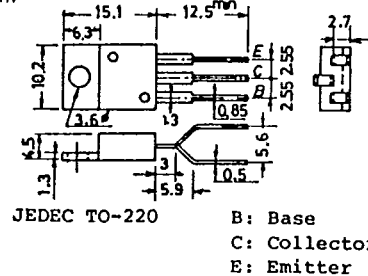
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unit:mm

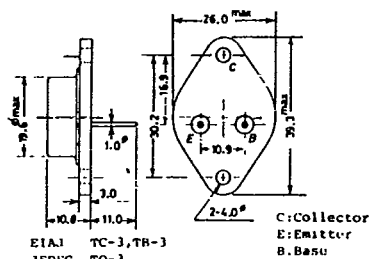


Case Outline—[2013]

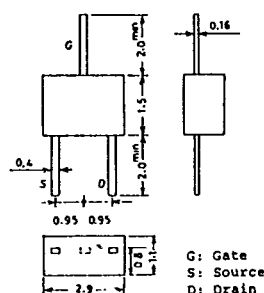
unit:mm



unit:mm

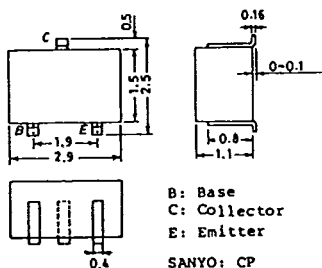


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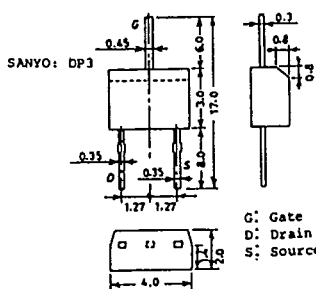


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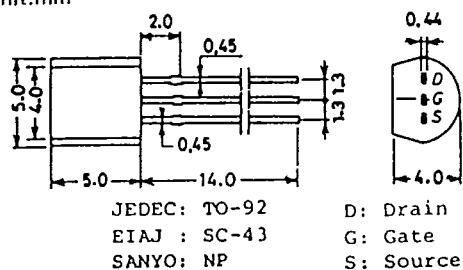
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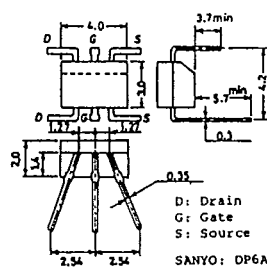
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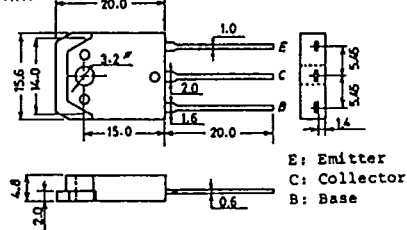
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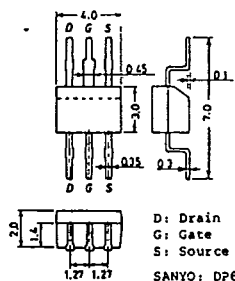
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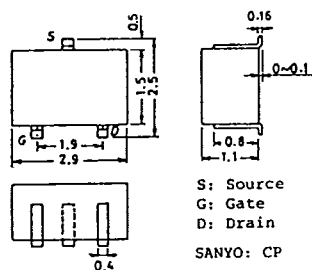
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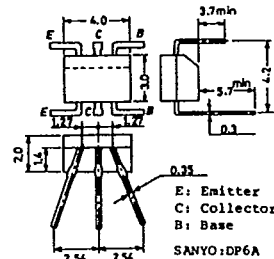
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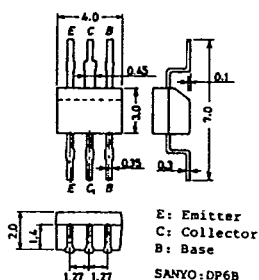
unit:mm



unit:mm

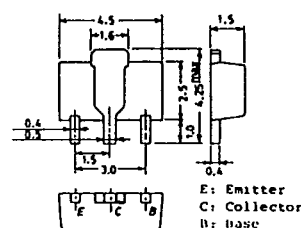


unit:mm



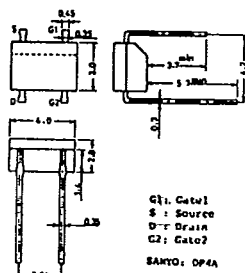
E: Emitter
C: Collector
B: Base
SANYO: DP6B

unit:mm



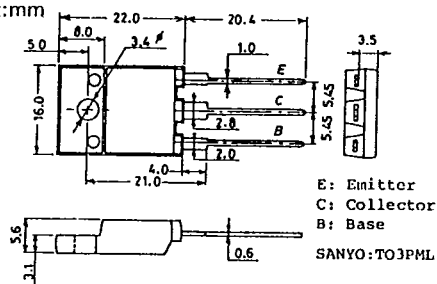
E: Emitter
C: Collector
B: Base

unit:mm



G1: Catw1
\$: Source
D-r Drain
G2: Gate2
SANYO: OP4A

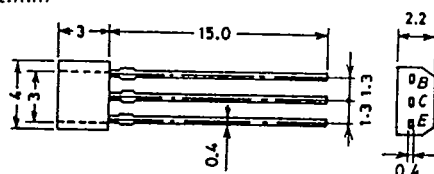
unit:mm



E: Emitter
C: Collector
B: Base

SANYO:TO3PML

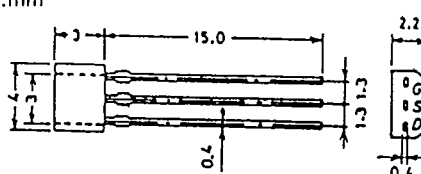
unit:mm



B: Base
C: Collector
E: Emitter

SANYO: SPA

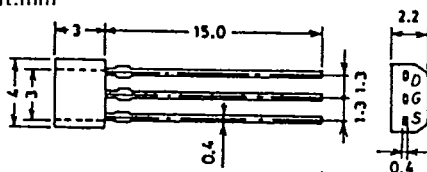
unit:mm



G: Gate
S: Source
D: Drain

SANYO: SPA

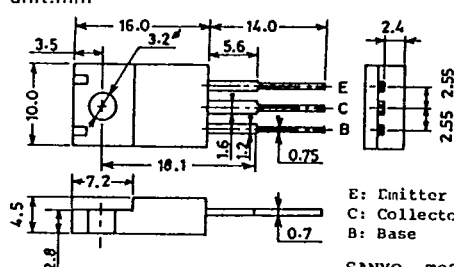
unit:mm



D: Drain
G: Gate
S: Source

SANYO: SPA

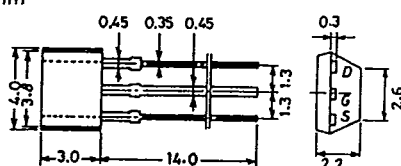
unit:mm



E: Emitter
C: Collector
B: Base

SANYO: TO220ML

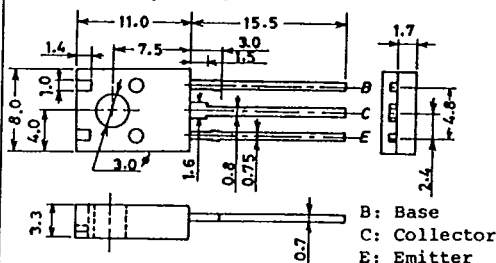
unit:mm



D: Drain
G: Gate
S: Source

SANYO: SP'

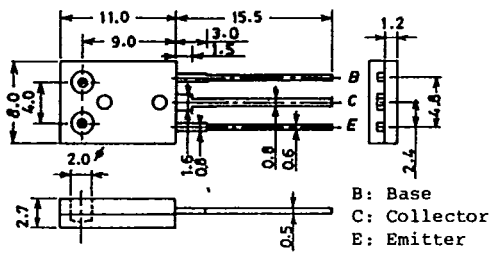
11.0



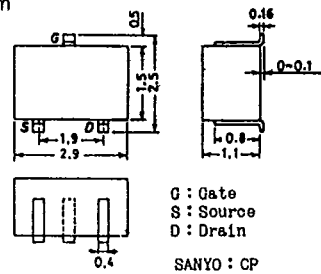
B: Base
C: Collector
E: Emitter

SANYO: TO126ML

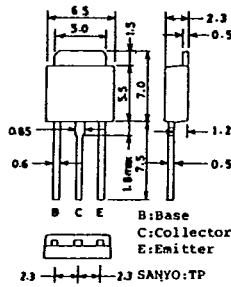
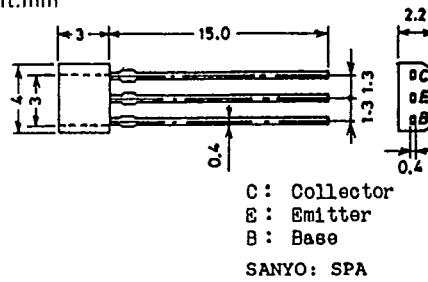
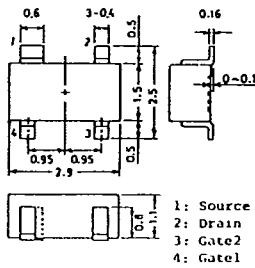
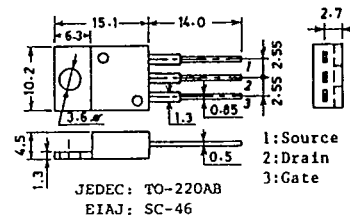
Case Outline—[2043A] unit:mm



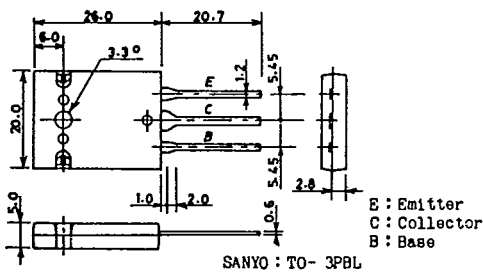
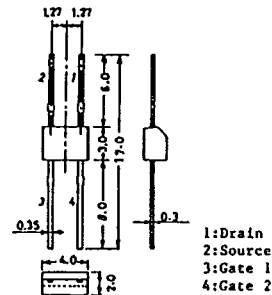
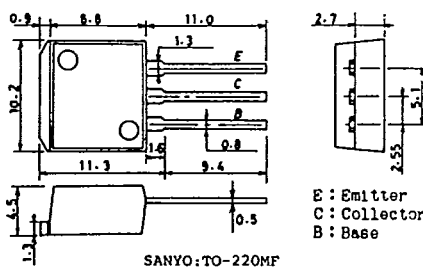
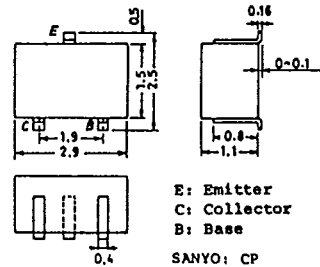
SANYO: TO126LP

Case Outline—[2050]
unit:mm

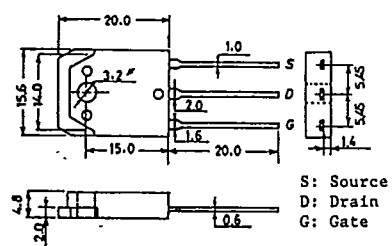
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Case Outline—[2045]
unit:mmCase Outline—[2051]
unit:mmCase Outline—[2046]
unit:mmCase Outline—[2052A]
unit:mm

Case Outline—[2048] unit:mm

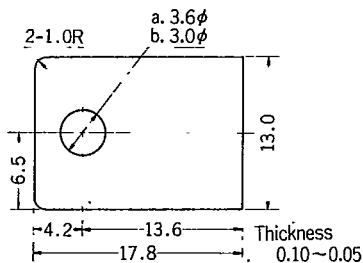
Case Outline—[2053]
unit:mmCase Outline—[2049]
unit:mmCase Outline—[2054]
unit:mm

Case Outline—[2056] unit:mm



SANYO: TO3PB

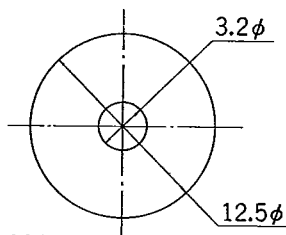
Case Outline—[0008] unit:mm

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

SANYO

Case Outline—[0004] unit:mm

unit:mm

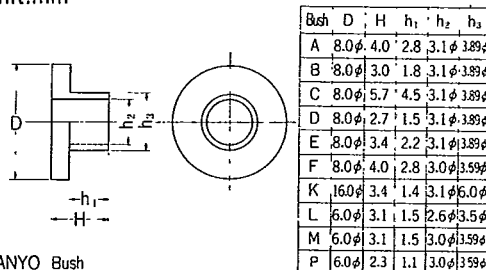


SANYO IS-126

Thickness : 0.075

Case Outline—[0009] unit:mm

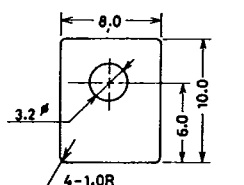
unit:mm



SANYO Bush

Case Outline—[0005] unit:mm

unit:mm

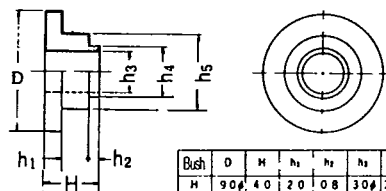


Thickness : 0.075

SANYO IS-126A Mica

Case Outline—[0010] unit:mm

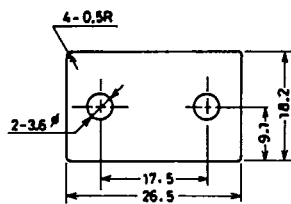
unit:mm



SANYO Bush

Case Outline—[0006] unit:mm

unit:mm

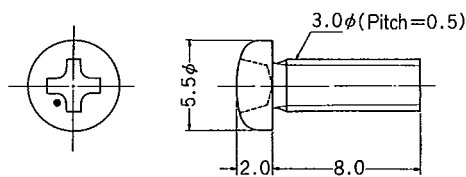


Thickness : 0.05~0.1

SANYO IS-20MA Mica

Case Outline—[0011] unit:mm

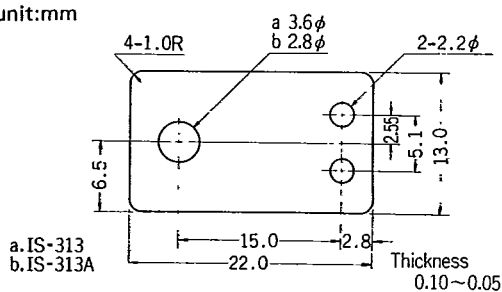
unit:mm



JIS No. B1111 M3×0.5

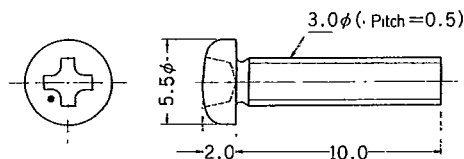
Case Outline—[0007] unit:mm

unit:mm

Thickness
0.10~0.05

Case Outline—[0012] unit:mm

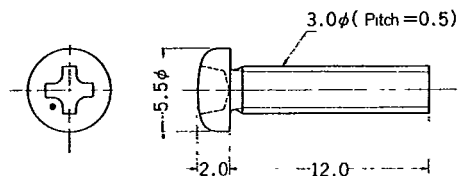
unit:mm



JIS No. B1111 M3×0.5

Case Outline—[0013]

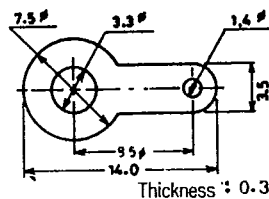
unit:mm



JIS No. B1111 M3×0.5

Case Outline—[0018]

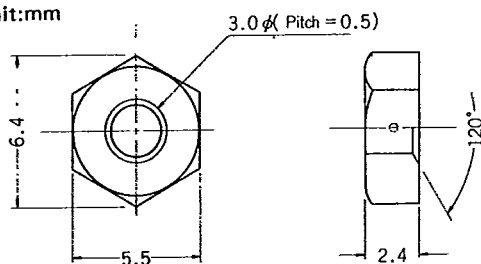
unit:mm



SANYO Lug 1.4

Case Outline—[0014]

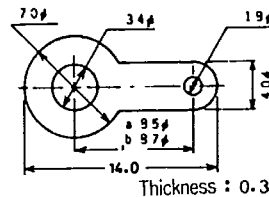
unit:mm



JIS No. B1181 M3×0.5

Case Outline—[0019]

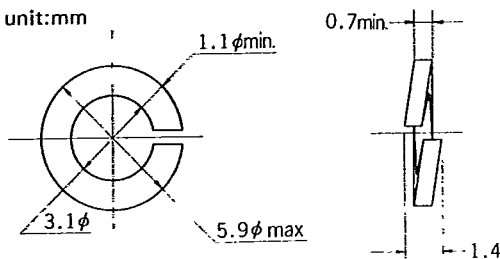
unit:mm



SANYO Lug 1.8φ

Case Outline—[0015]

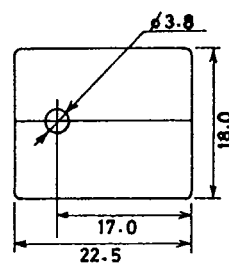
unit:mm



JIS No. B 1251 Spring washer (M3)

Case Outline—[0020]

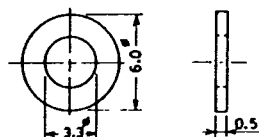
unit:mm



SANYO IS-3MP Mica

Case Outline—[0016]

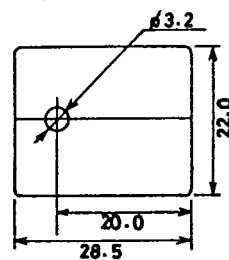
unit:mm



JIS No. B1252 Flat washer

Case Outline—[0021]

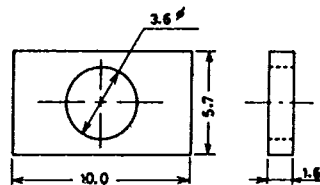
unit:mm



SANYO IS-MPC Mica

Case Outline—[0017]

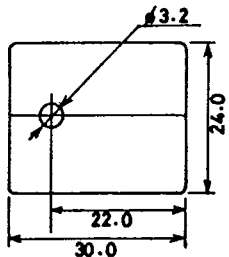
unit:mm



JIS No. G3141 Rectangular washer

Case Outline—[0022]

unit:mm



SANYO IS-3PBL Mica