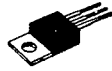


T-33-11

2SD823



2010A

NPN Epitaxial Planar Silicon Transistor

B/W TV Horizontal Output Applications

©542C

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

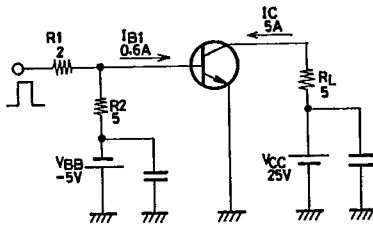
			unit
Collector to Base Voltage	V_{CBO}	200	V
Collector to Emitter Voltage	V_{CEO}	90	V
Emitter to Base Voltage	V_{EBO}	7	V
Collector Current	I_C	6	A
Peak Collector Current	i_{cp}	10	A
Collector Dissipation	P_C	40	W
Junction Temperature	T_j	150	$^\circ\text{C}$
Storage Temperature	T_{stg}	-55 to +150	$^\circ\text{C}$

$T_C=25^\circ\text{C}$

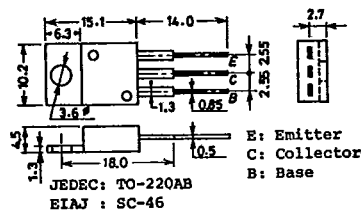
Electrical Characteristics at $T_a=25^\circ\text{C}$

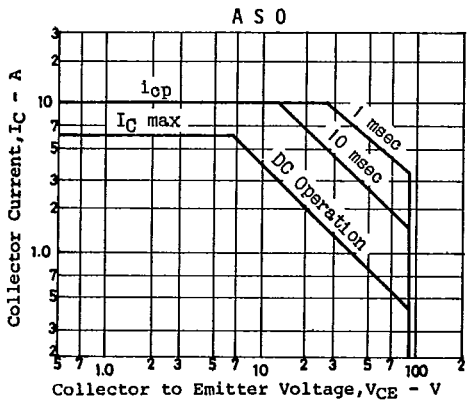
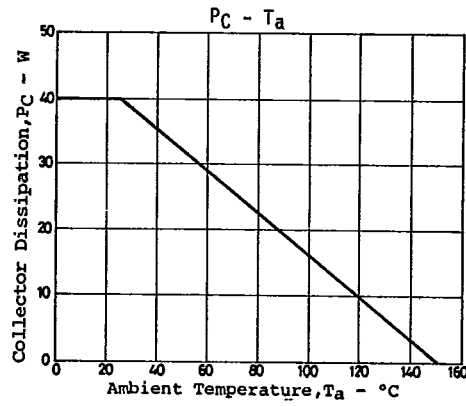
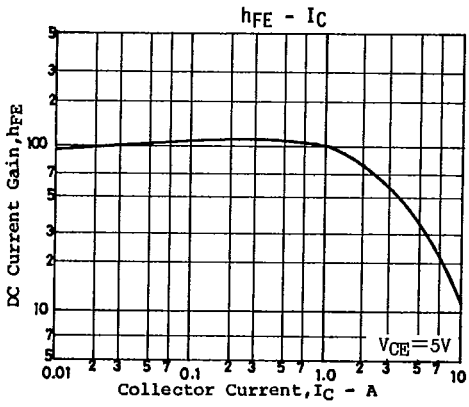
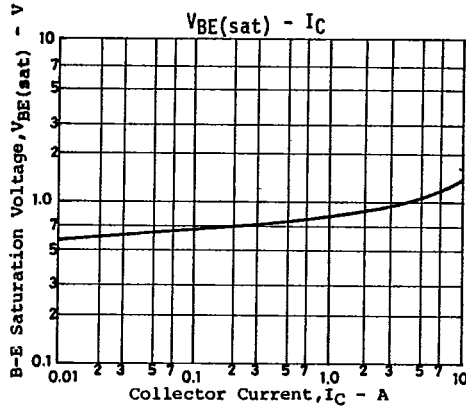
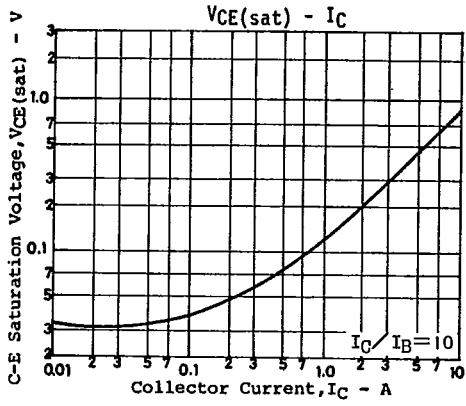
			min	typ	max	unit
Collector Cutoff Current	I_{CBO}	$V_{CB}=40V, I_E=0$			0.1	mA
Emitter Cutoff Current	I_{EBO}	$V_{EB}=4V, I_C=0$			0.1	mA
Collector to Base Voltage	V_{CBO}	$I_C=5mA, I_E=0$	200			V
Collector to Emitter Voltage	V_{CEO}	$I_C=5mA, I_B=0$	90			V
Emitter to Base Voltage	V_{EBO}	$I_E=5mA, I_C=0$	7			V
DC Current Gain	h_{FE}	$V_{CE}=5V, I_C=3V$	20			
Gain Bandwidth Product	f_T	$V_{CE}=5V, I_C=1A$		15		MHz
C-E Saturation Voltage	$V_{CE(sat)}$	$I_C=5A, I_B=0.5A$			1.5	V
B-E Saturation Voltage	$V_{BE(sat)}$	$I_C=5A, I_B=0.5A$			1.5	V
Fall Time	t_f	$I_C=5A, I_{B1}=0.6A$			1.0	us

t_f Test Circuit



Case Outline 2010A (unit:mm)





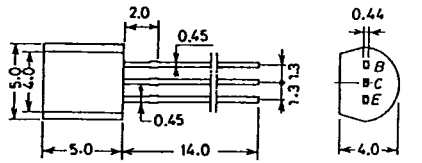
T-91-20

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

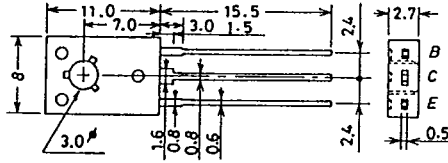


JEDEC: TO-92
EIAJ: SC-43
SANYO: NP

B. Base
C. Collector
E. Emitter

Case Outline-[2009A]

unit:mm

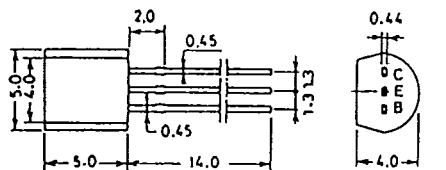


JEDEC: TO-126

B: Base
C: Collector
E: Emitter

Case Outline-[2004A]

unit:mm

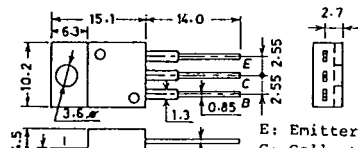


JEDEC: TO-92
EIAJ: SC-43
SANYO: NP

C. Collector
E. Emitter
B. Base

Case Outline-[2010A]

unit:mm

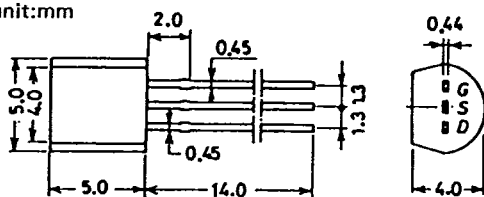


JEDEC: TO-220AB
EIAJ: SC-46

E: Emitter
C: Collector
B: Base

Case Outline-[2005A]

unit:mm

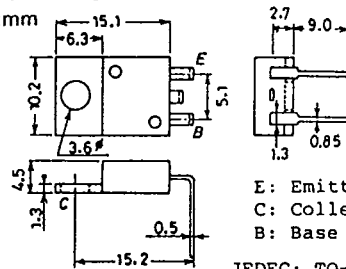


JEDEC: TO-92
EIAJ: SC-43
SANYO: NP

G: Gate
S: Source
D: Drain
B: Base
C: Collector

Case Outline-[2012]

unit:mm

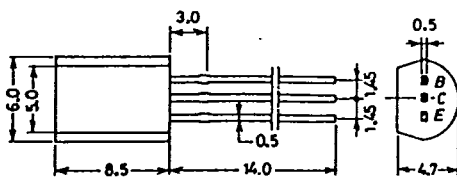


JEDEC: TO-220AA
EIAJ: SC-45

E: Emitter
C: Collector
B: Base

Case Outline-[2006A]

unit:mm

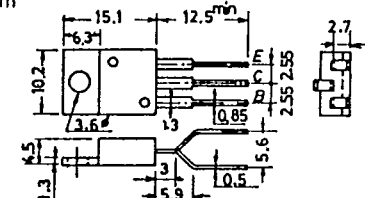


EIAJ: SC-51
SANYO: MP

B: Base
C: Collector
E: Emitter

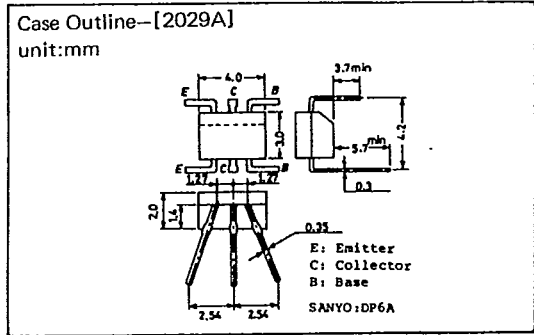
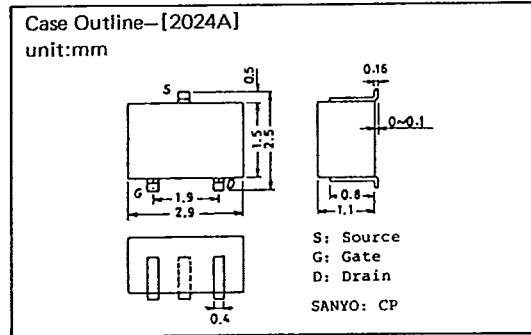
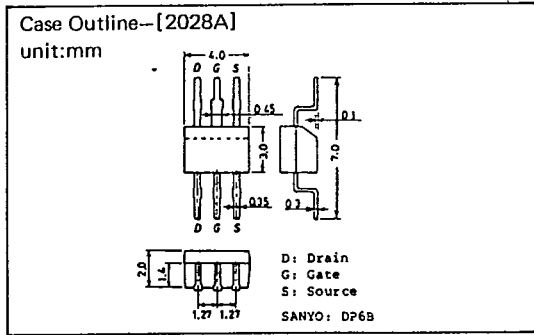
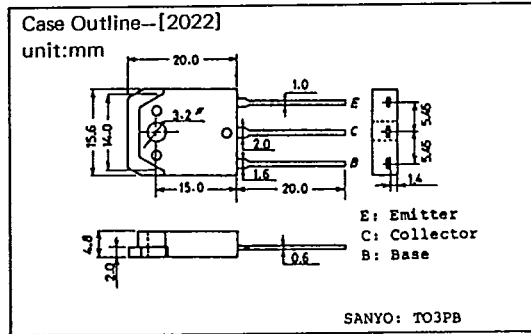
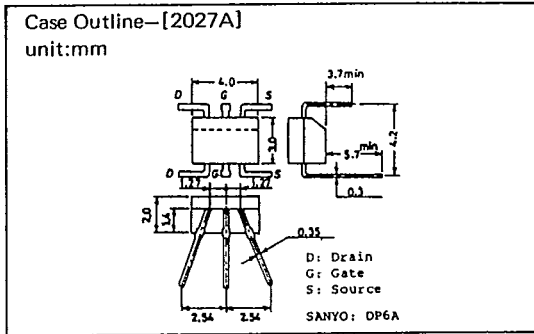
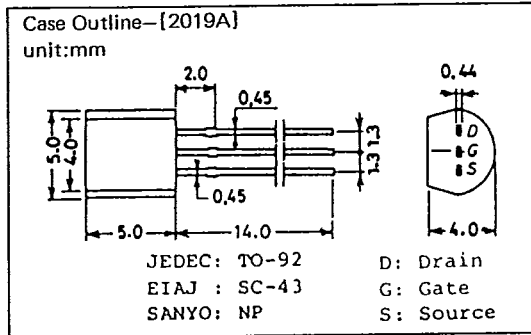
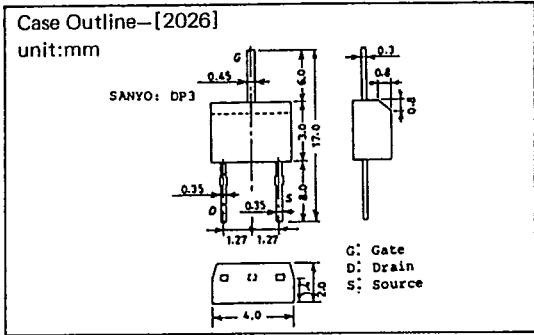
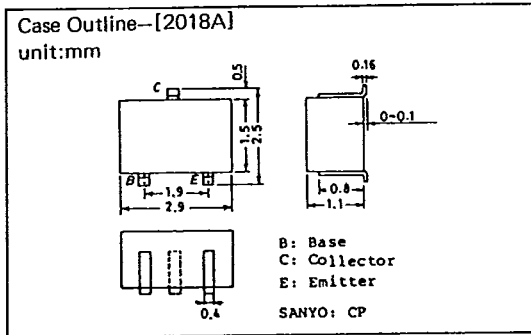
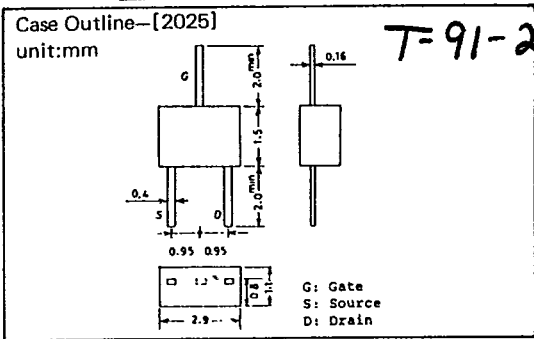
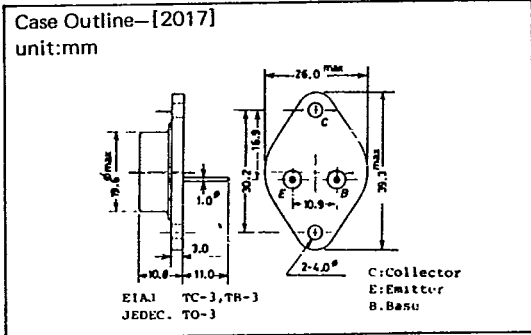
Case Outline-[2013]

unit:mm

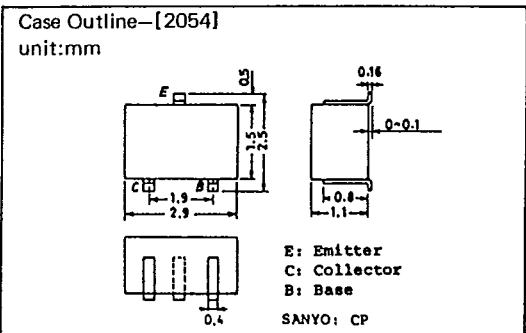
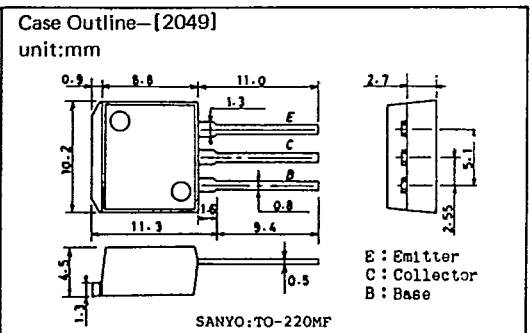
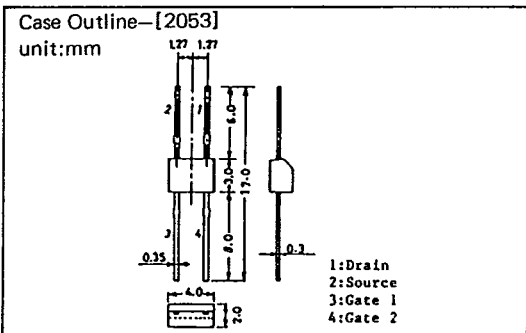
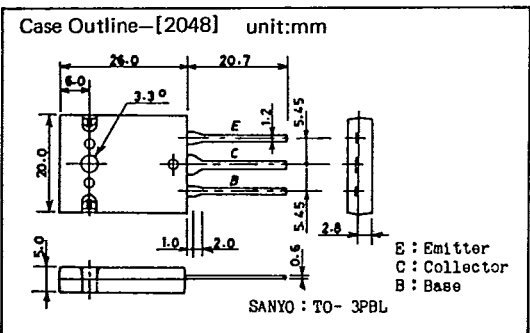
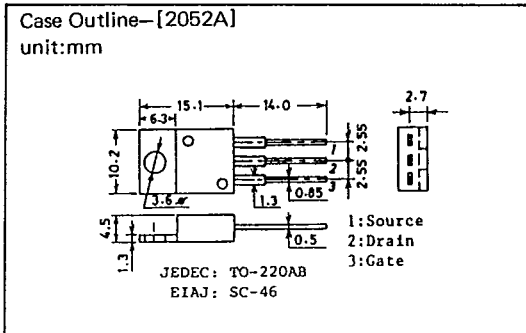
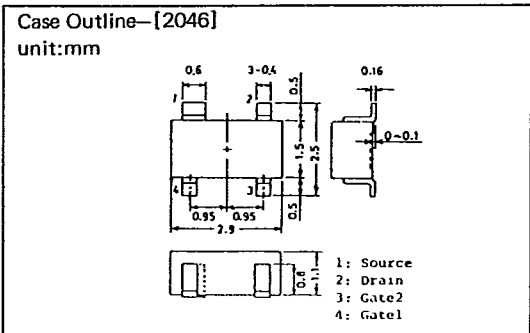
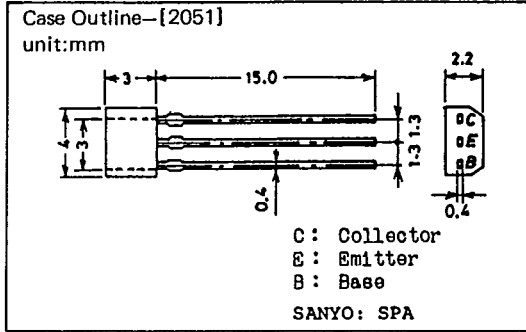
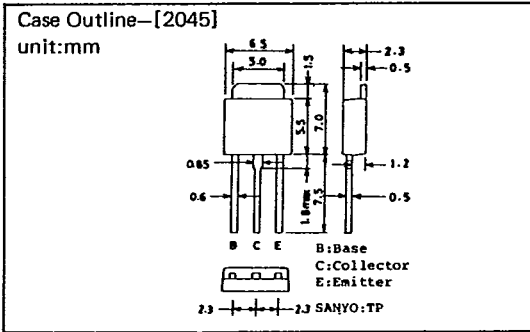
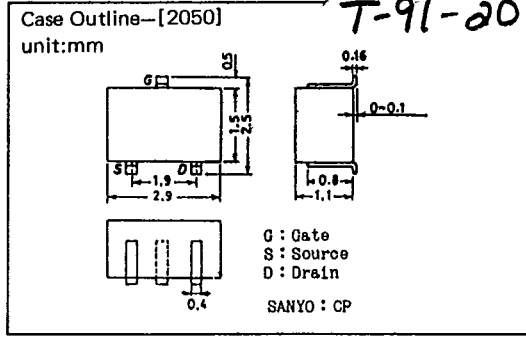
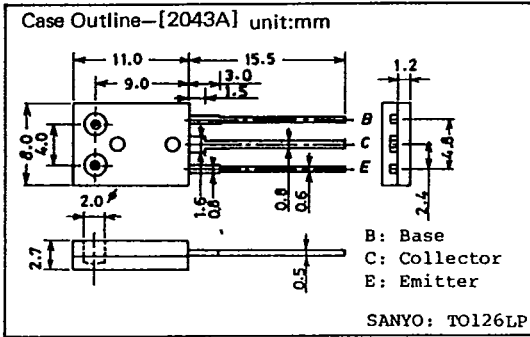


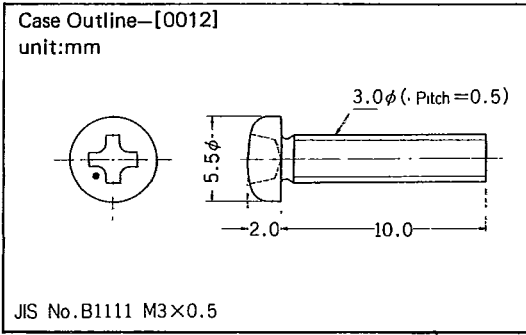
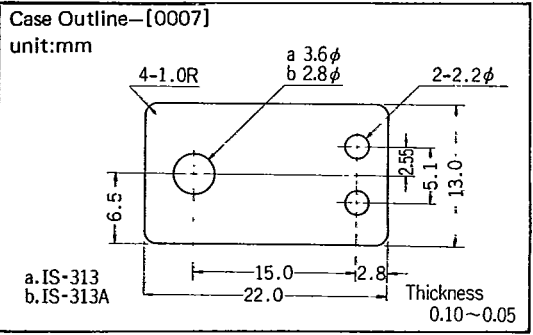
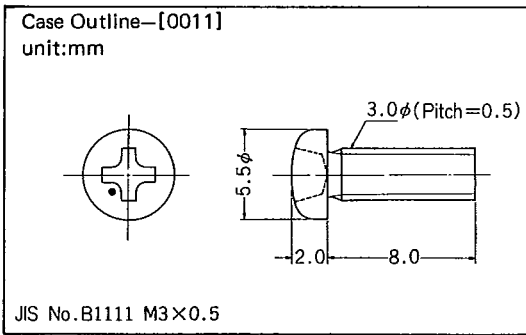
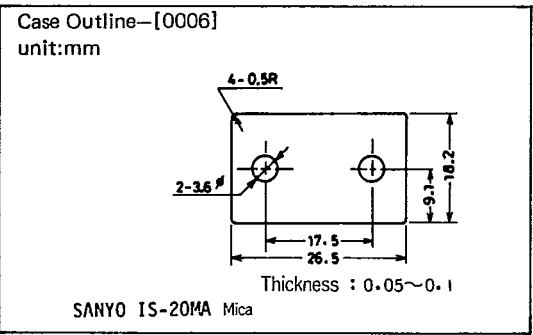
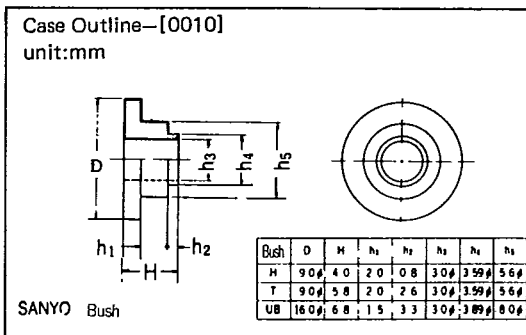
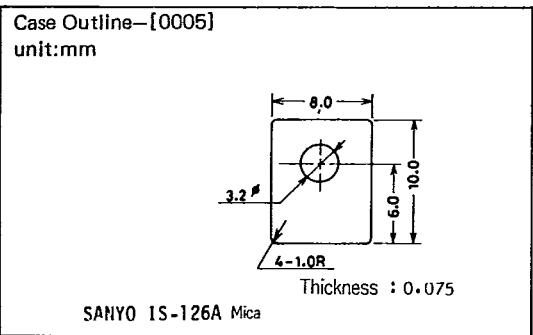
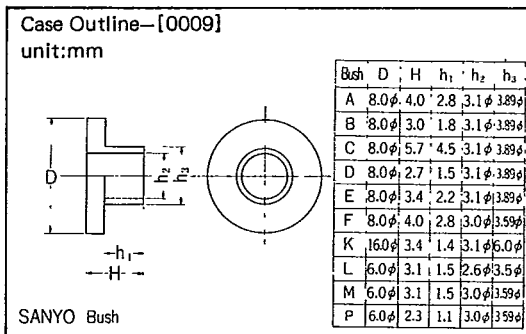
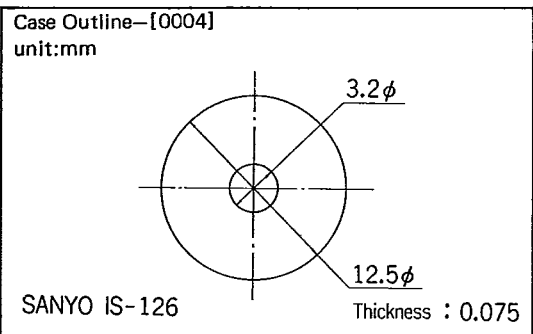
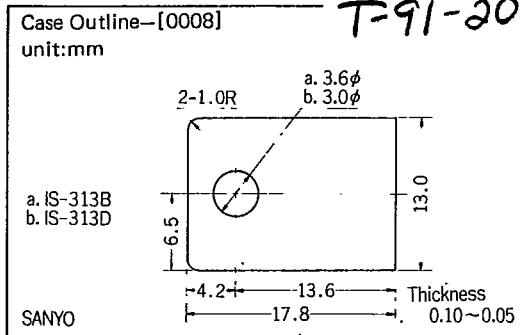
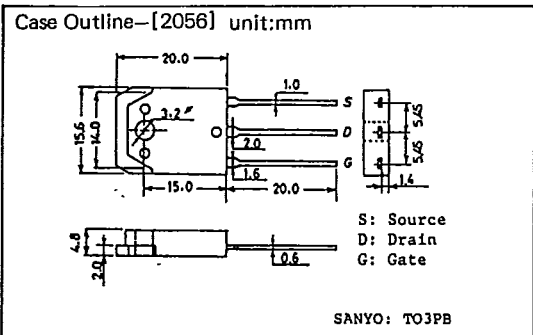
JEDEC TO-220

B: Base
C: Collector
E: Emitter

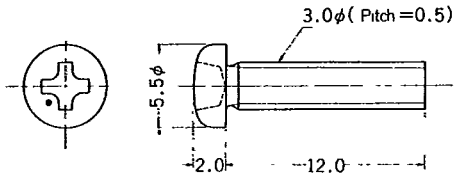


T-91-20



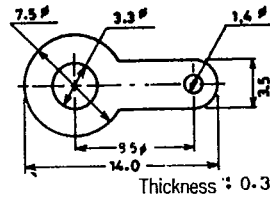


Case Outline-[0013]
unit:mm



JIS No. B1111 M3×0.5

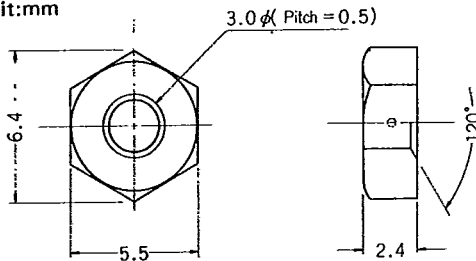
Case Outline-[0018]
unit:mm



SANYO Lug 1.4

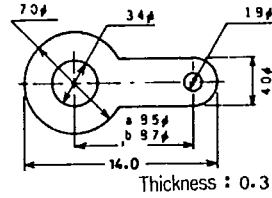
T-91-20

Case Outline-[0014]
unit:mm



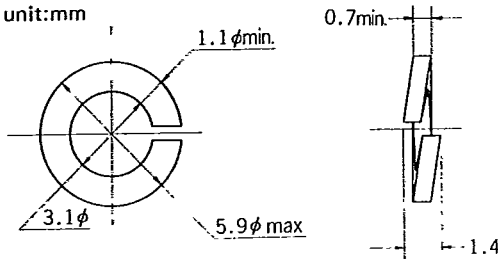
JIS No. B1181 M3×0.5

Case Outline-[0019]
unit:mm



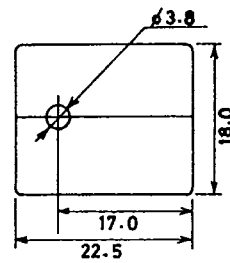
SANYO Lug 1.8φ

Case Outline-[0015]
unit:mm



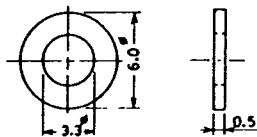
JIS No. B 1251 Spring washer (M3)

Case Outline-[0020]
unit:mm



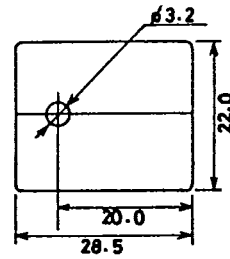
SANYO IS-3MP Mica

Case Outline-[0016]
unit:mm



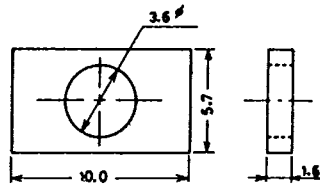
JIS No. B1252 Flat washer

Case Outline-[0021]
unit:mm



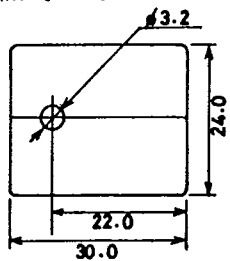
SANYO IS-MPC Mica

Case Outline-[0017]
unit:mm



JIS No. G3141 Rectangular washer

Case Outline-[0022]
unit:mm



SANYO IS-3PBL Mica