

2SC3189



2010A

NPN Epitaxial Planar Silicon Transistor



CRT Display Horizontal Deflection Output Applications

©1313A

Features

- . High switching speed.
- . Especially suited for high-definition CRT displays.
- . Wide ASO and highly resistant to breakdown.

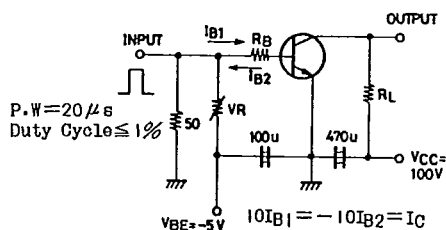
Absolute Maximum Ratings at $T_a=25^\circ\text{C}$

| | | | unit |
|------------------------------|-----------|-------------|------------------|
| Collector to Base Voltage | V_{CBO} | 250 | V |
| Collector to Emitter Voltage | V_{CEO} | 100 | V |
| Emitter to Base Voltage | V_{EBO} | 6 | V |
| Collector Current | I_C | 7.5 | A |
| Peak Collector Current | i_{cp} | 15 | A |
| Base Current | I_B | 4 | A |
| Collector Dissipation | P_C | 50 | W |
| Junction Temperature | T_j | 150 | $^\circ\text{C}$ |
| Storage Temperature | T_{stg} | -55 to +150 | $^\circ\text{C}$ |

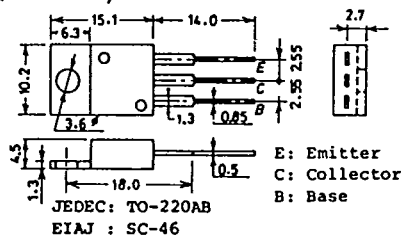
Electrical Characteristics at $T_a=25^\circ\text{C}$

| | | | min | typ | max | unit |
|---|---------------|---|-----|-----|-----|---------------|
| Collector Cutoff Current | I_{CBO} | $V_{CB}=200\text{V}, I_E=0$ | | | 100 | μA |
| Emitter Cutoff Current | I_{EBO} | $V_{EB}=5\text{V}, I_C=0$ | | | 100 | μA |
| DC Current Gain | h_{FE} | $V_{CE}=5\text{V}, I_C=5\text{A}$ | 15 | | 75 | |
| Gain Bandwidth Product | f_T | $V_{CE}=10\text{V}, I_C=0.5\text{A}$ | 10 | 40 | | MHz |
| Collector to Emitter Saturation Voltage | $V_{CE(sat)}$ | $I_C=5\text{A}, I_B=0.5\text{A}$ | | | 1.2 | V |
| Base to Emitter Saturation Voltage | $V_{BE(sat)}$ | $I_C=5\text{A}, I_B=0.5\text{A}$ | | | 1.2 | V |
| Collector to Base Breakdown Voltage | $V_{(BR)CBO}$ | $I_C=1\text{mA}, I_E=0$ | 250 | | | V |
| Collector to Emitter Breakdown Voltage | $V_{(BR)CEO}$ | $I_C=1\text{mA}, R_{BE}=\infty$ | 100 | | | V |
| Emitter to Base Breakdown Voltage | $V_{(BR)EBO}$ | $I_E=1\text{mA}, I_C=0$ | 6 | | | V |
| Fall Time | t_f | $I_C=5\text{A}, I_{B1}=-I_{B2}=0.5\text{A}$ | | | 0.5 | μs |

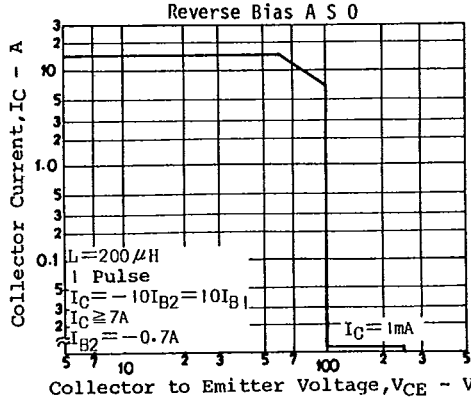
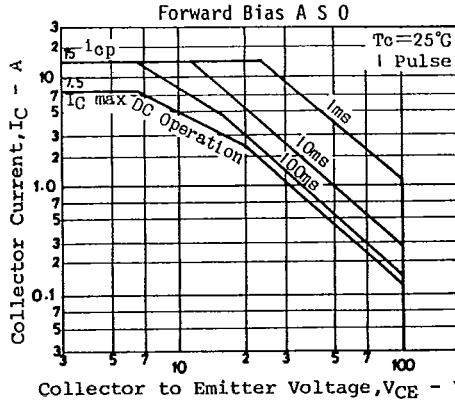
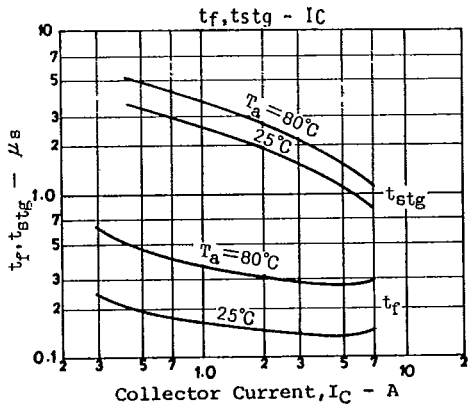
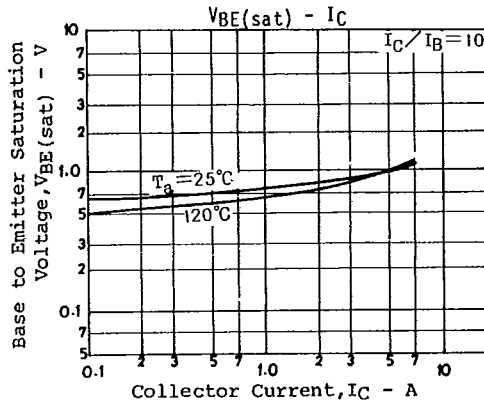
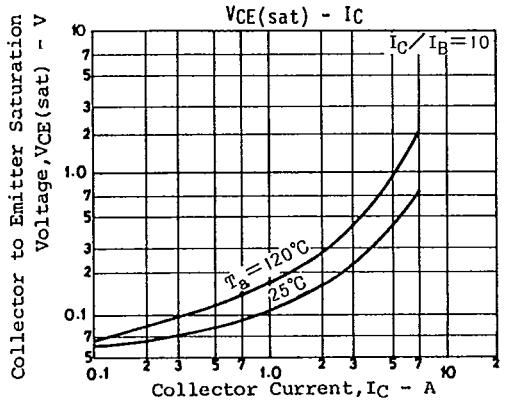
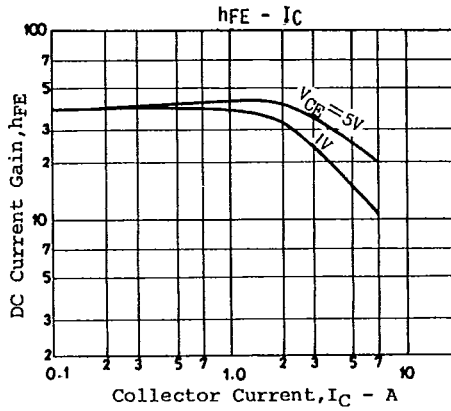
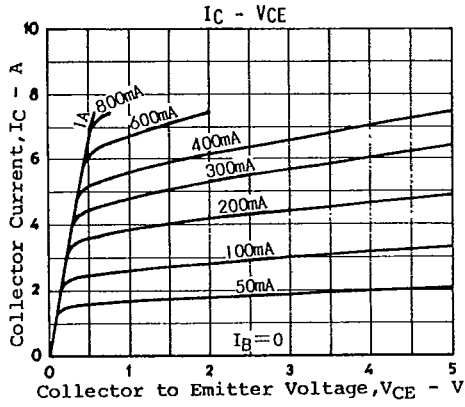
Switching Time Test Circuit



Case Outline 2010A (unit:mm)



E: Emitter
C: Collector
B: Base



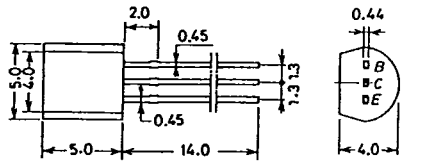
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CASE OUTLINES AND ATTACHMENTS

- 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

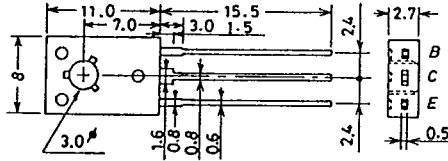


JEDEC: TO-92
EIAJ: SC-43
SANYO: NP

B. Base
C. Collector
E. Emitter

Case Outline-[2009A]

unit:mm

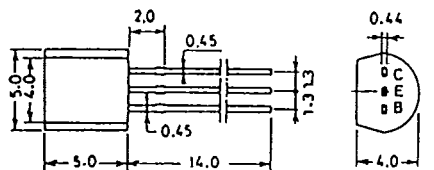


JEDEC: TO-126

B: Base
C: Collector
E: Emitter

Case Outline-[2004A]

unit:mm

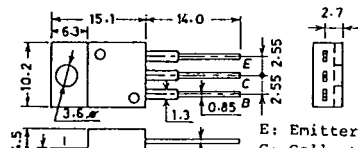


JEDEC: TO-92
EIAJ: SC-43
SANYO: NP

C. Collector
E. Emitter
B. Base

Case Outline-[2010A]

unit:mm

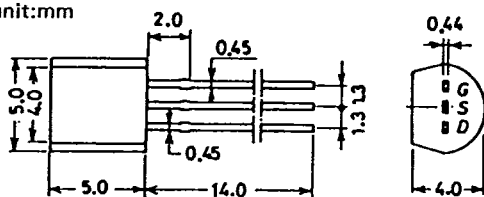


JEDEC: TO-220AB
EIAJ: SC-46

E: Emitter
C: Collector
B: Base

Case Outline-[2005A]

unit:mm

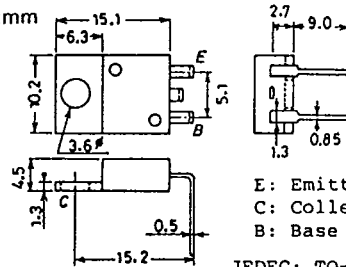


JEDEC: TO-92
EIAJ: SC-43
SANYO: NP

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

Case Outline-[2012]

unit:mm

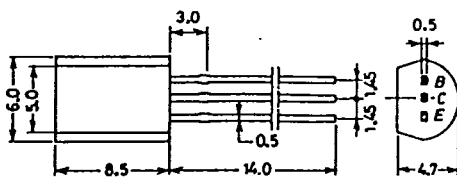


JEDEC: TO-220AA
EIAJ: SC-45

E: Emitter
C: Collector
B: Base

Case Outline-[2006A]

unit:mm

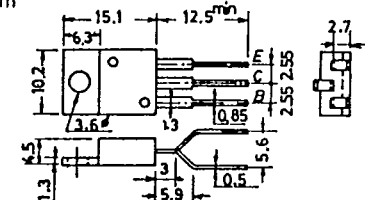


EIAJ: SC-51
SANYO: MP

B: Base
C: Collector
E: Emitter

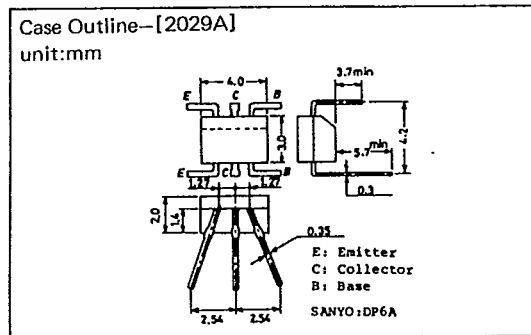
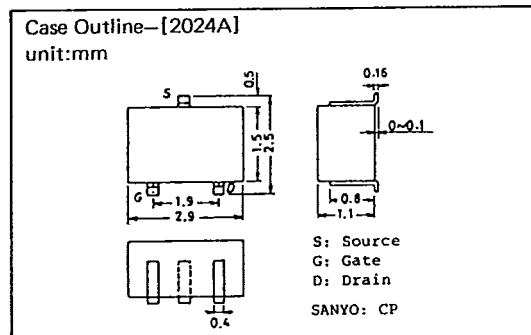
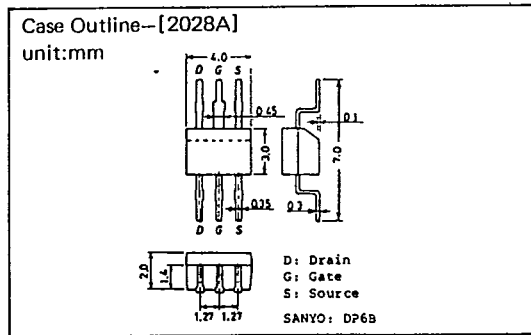
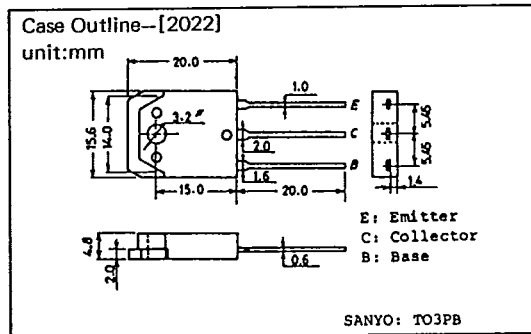
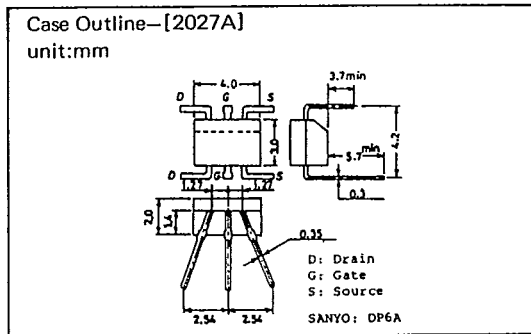
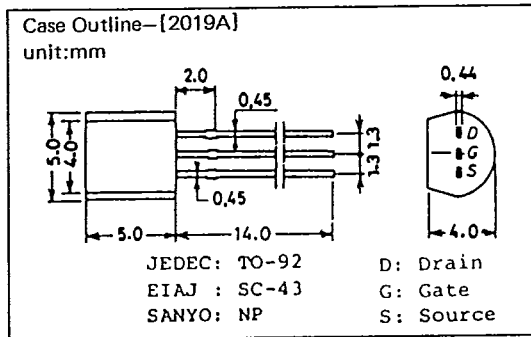
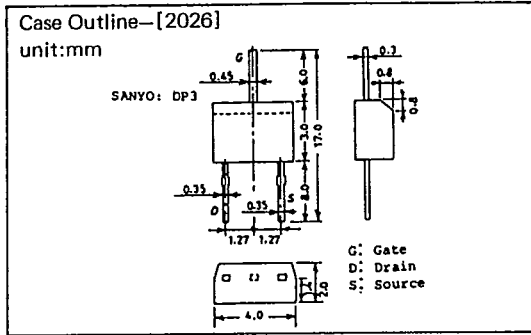
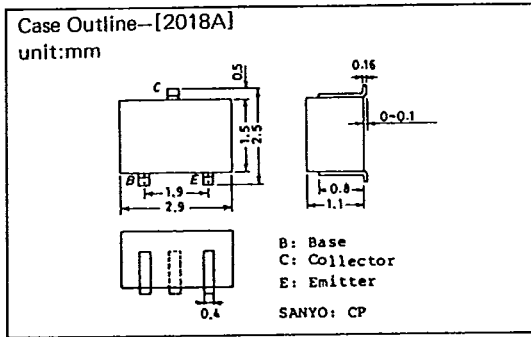
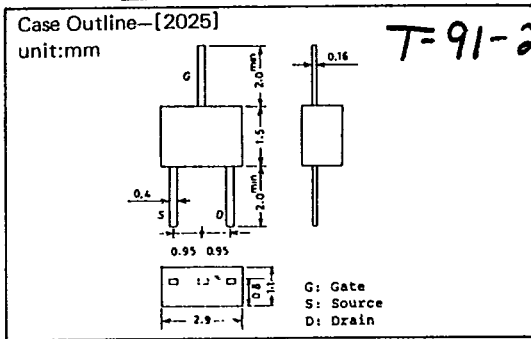
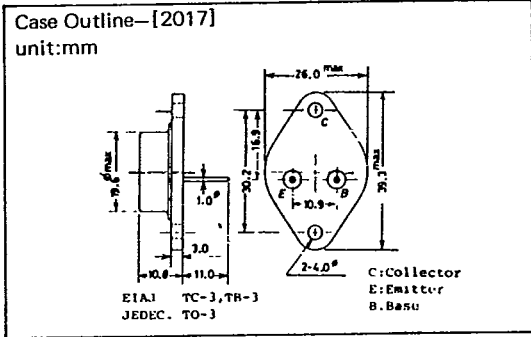
Case Outline-[2013]

unit:mm

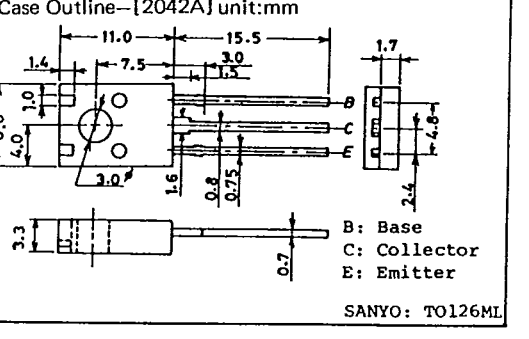
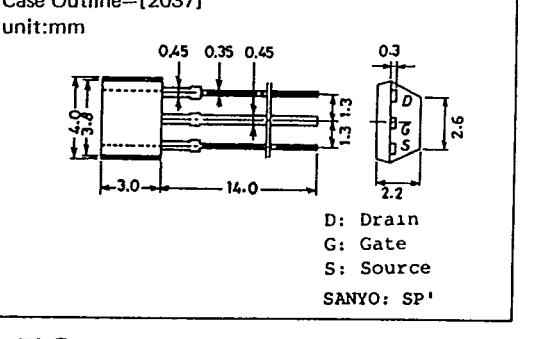
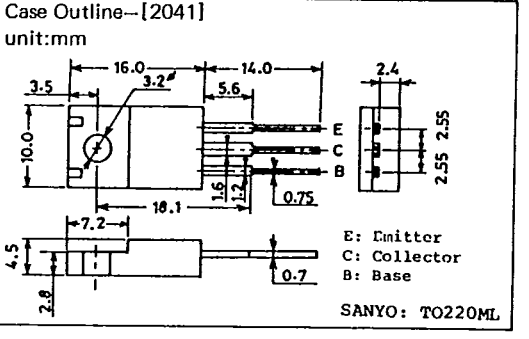
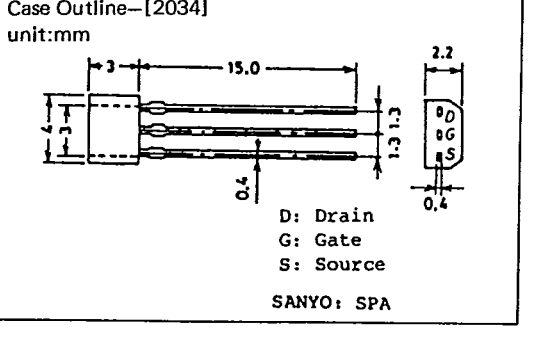
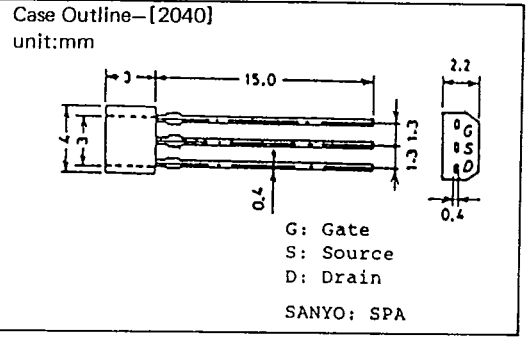
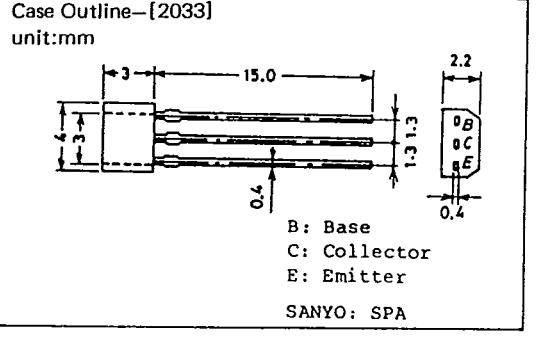
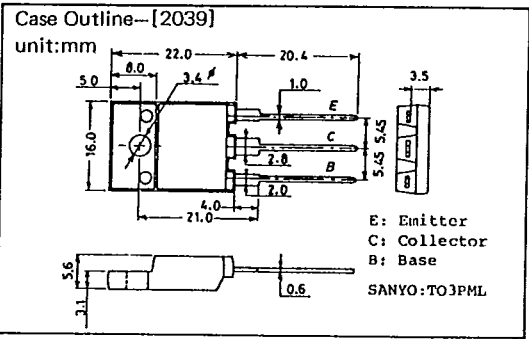
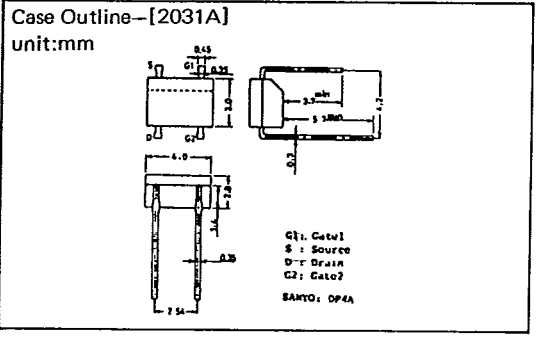
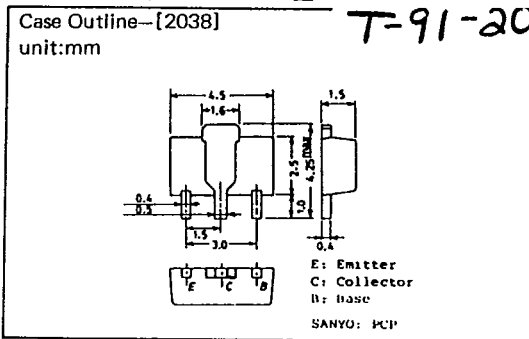
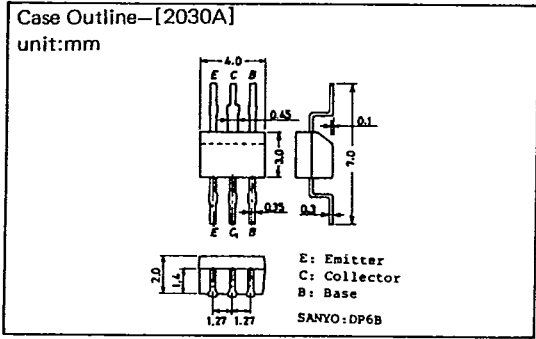


JEDEC TO-220

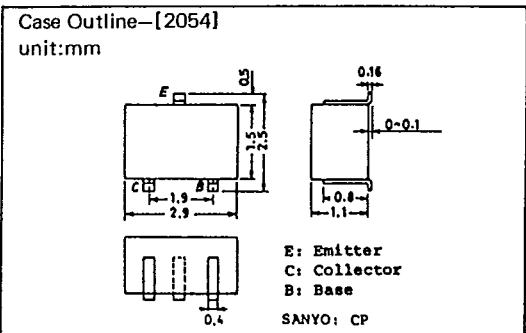
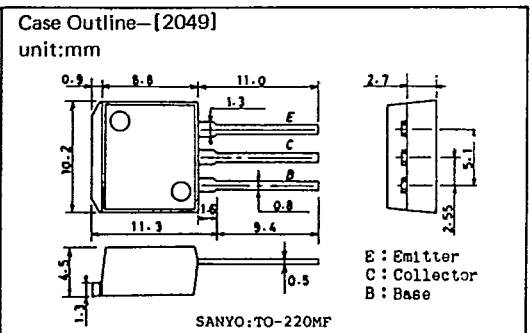
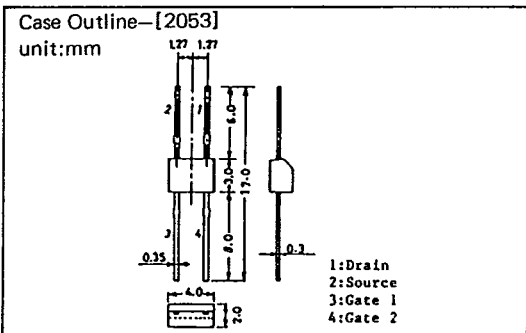
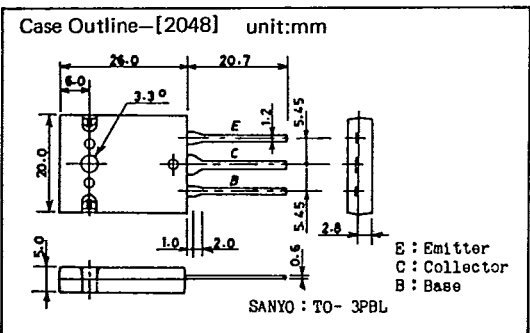
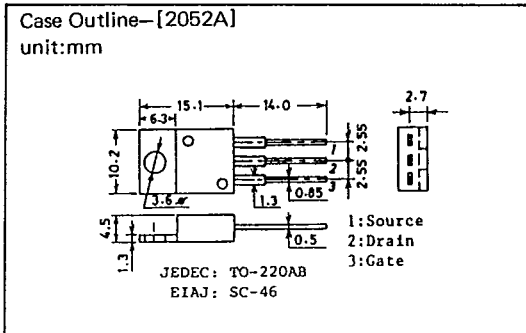
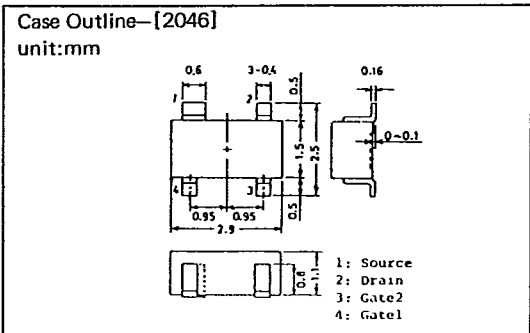
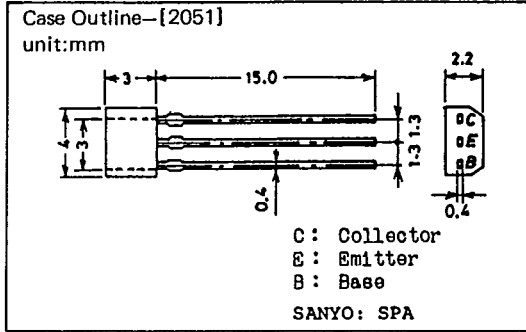
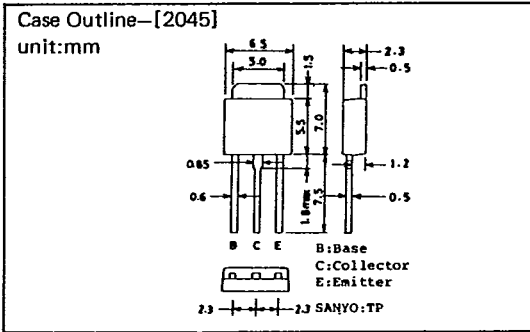
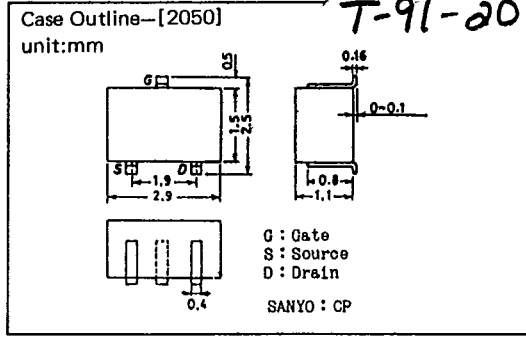
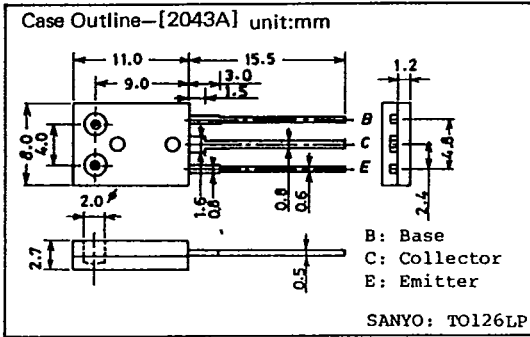
B: Base
C: Collector
E: Emitter

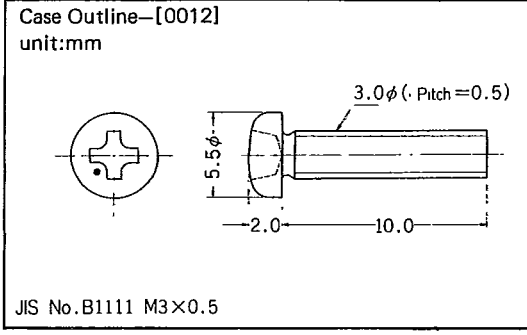
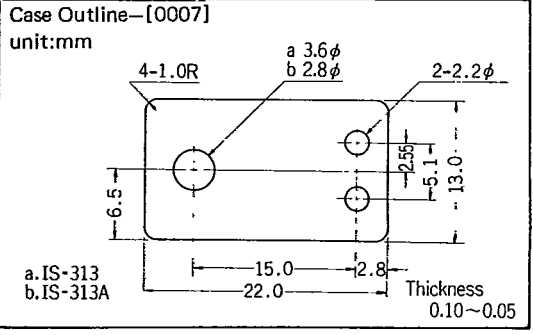
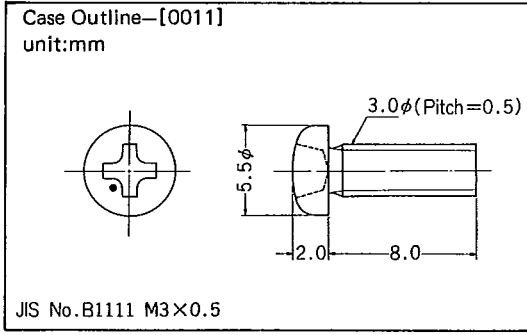
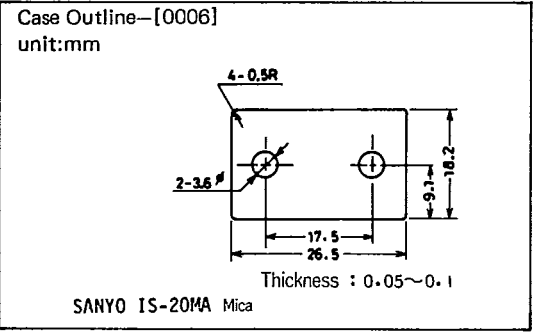
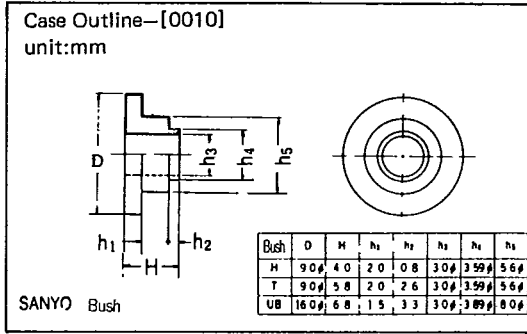
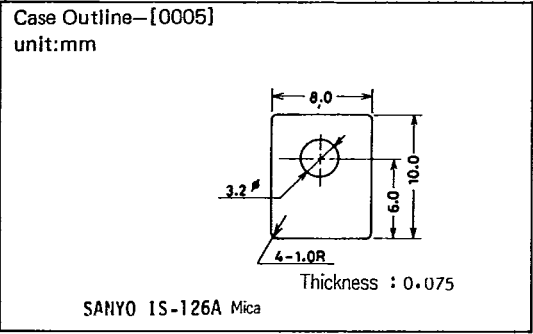
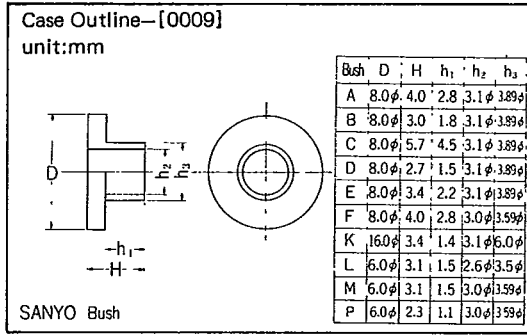
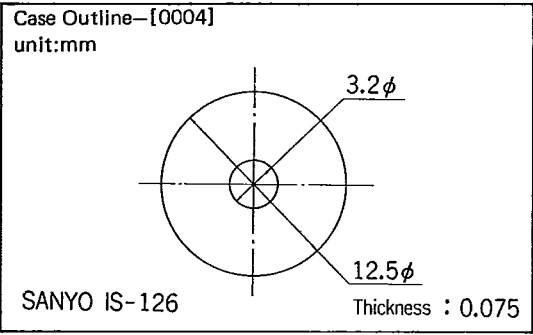
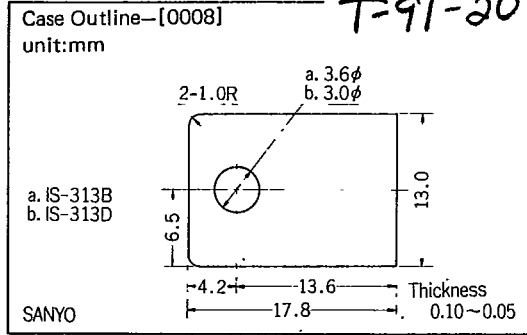
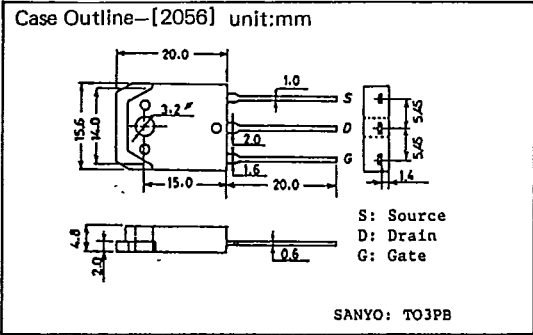


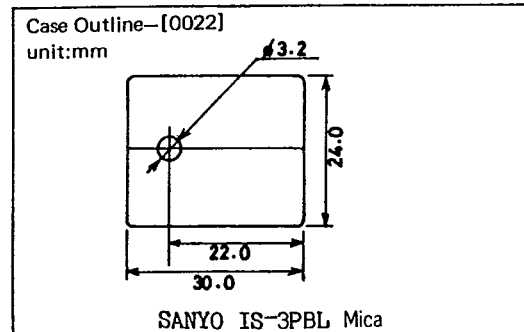
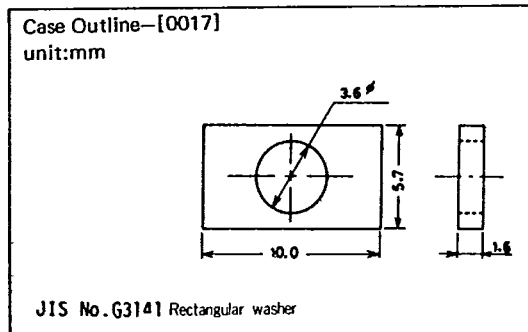
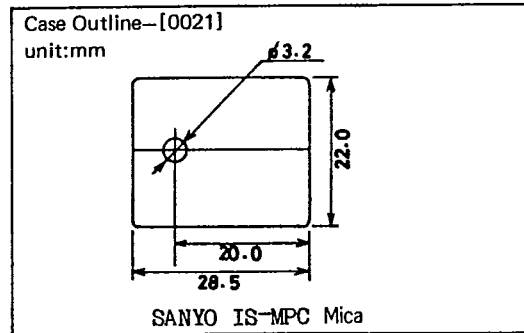
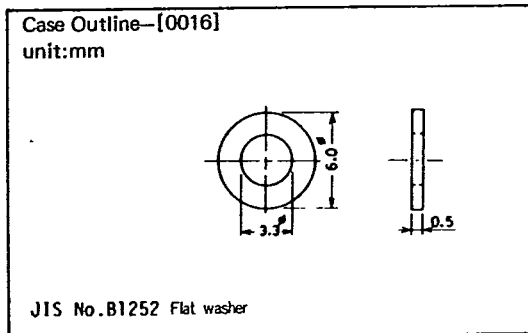
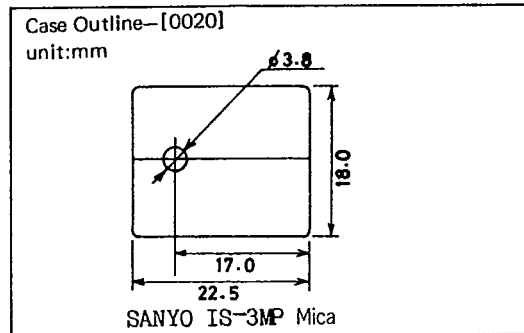
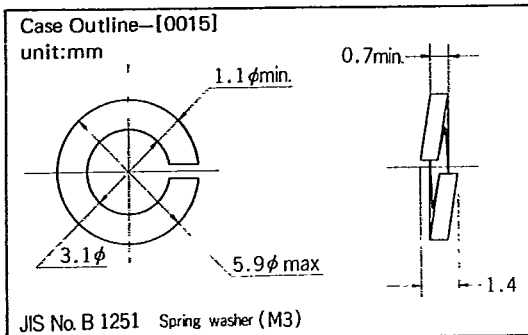
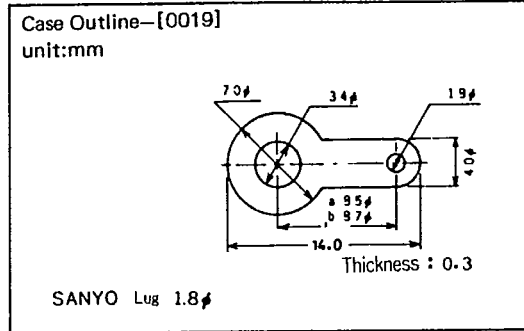
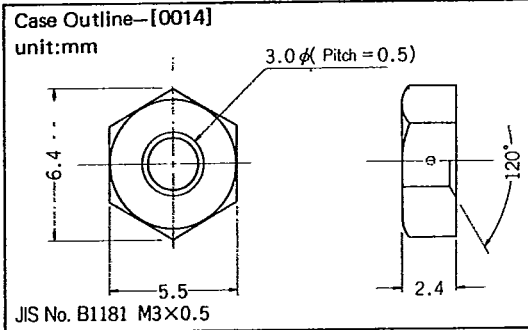
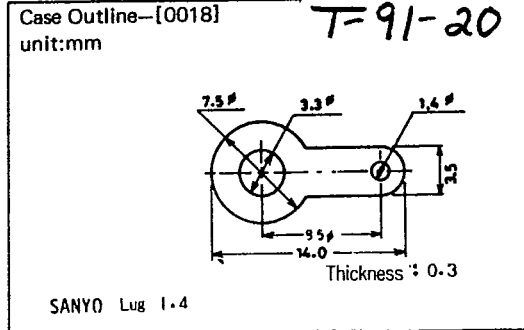
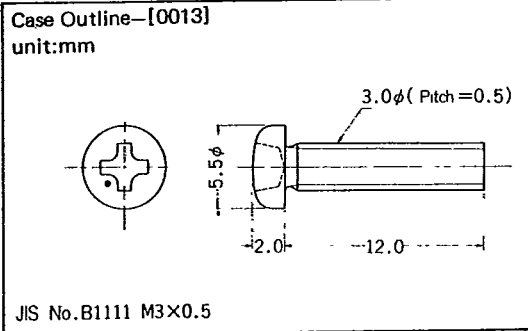
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