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# 2SD1403



2022

NPN Triple Diffused Planar Silicon Transistor

## Color TV Horizontal Deflection Output Applications

©1270B

**Features:**

- High breakdown voltage and high reliability
- High switching speed
- Capable of being mounted easily due to one-point fixing-type plastic mold package

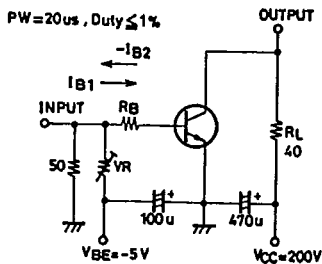
**Absolute Maximum Ratings at Ta=25°C**

			unit
Collector to Base Voltage	V <sub>CB0</sub>	1500	V
Collector to Emitter Voltage	V <sub>CEO</sub>	800	V
Emitter to Base Voltage	V <sub>EBO</sub>	7	V
Collector Current	I <sub>C</sub>	6	A
Peak Collector Current	i <sub>cp</sub>	16	A
Collector Dissipation	P <sub>C</sub>	T <sub>C</sub> =25°C 120	W
Junction Temperature	T <sub>j</sub>	150	°C
Storage Temperature	T <sub>stg</sub>	-55 to +150	°C

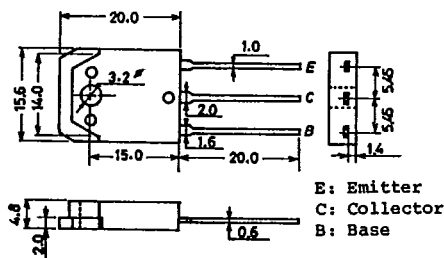
**Electrical Characteristics at Ta=25°C**

			min	typ	max	unit
Collector Cutoff Current	I <sub>CB0</sub>	V <sub>CB</sub> =800V, I <sub>E</sub> =0			10	uA
Emitter Cutoff Current	I <sub>EBO</sub>	V <sub>EB</sub> =5V, I <sub>C</sub> =0			1	mA
DC Current Gain	h <sub>FE</sub>	V <sub>CE</sub> =5V, I <sub>C</sub> =1A	8			
Gain Bandwidth Product	f <sub>T</sub>	V <sub>CE</sub> =10V, I <sub>C</sub> =1A		3		MHz
C-E Saturation Voltage	V <sub>CE(sat)</sub>	I <sub>C</sub> =5A, I <sub>B</sub> =1A			5	V
B-E Saturation Voltage	V <sub>BE(sat)</sub>	I <sub>C</sub> =5A, I <sub>B</sub> =1A			1.5	V
C-B Breakdown Voltage	V(BR) <sub>CBO</sub>	I <sub>C</sub> =5mA, I <sub>E</sub> =0	1500			V
C-E Breakdown Voltage	V(BR) <sub>CEO</sub>	I <sub>C</sub> =100mA, R <sub>BE</sub> =∞	800			V
E-B Breakdown Voltage	V(BR) <sub>EBO</sub>	I <sub>E</sub> =200mA, I <sub>C</sub> =0	7			V
Fall Time	t <sub>f</sub>	I <sub>C</sub> =5A, I <sub>B1</sub> =1A, I <sub>B2</sub> =-2A			0.4	us

**Switching Time Test Circuit**

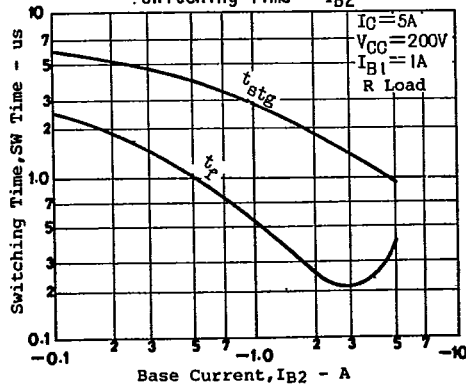
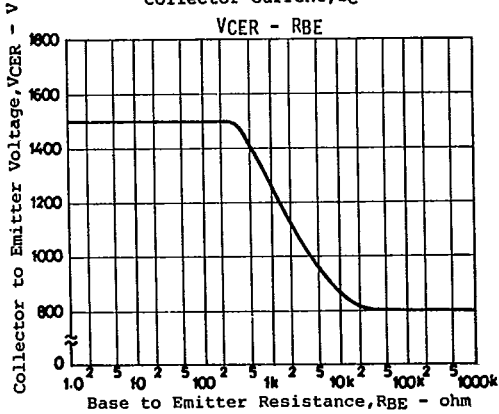
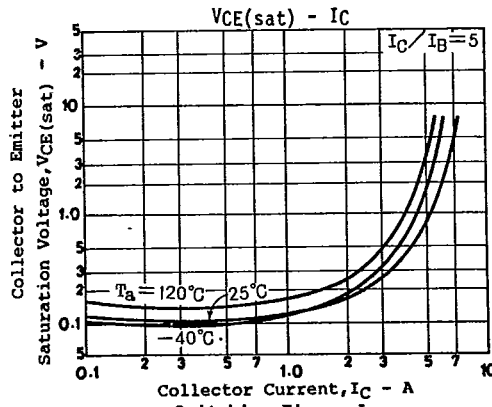
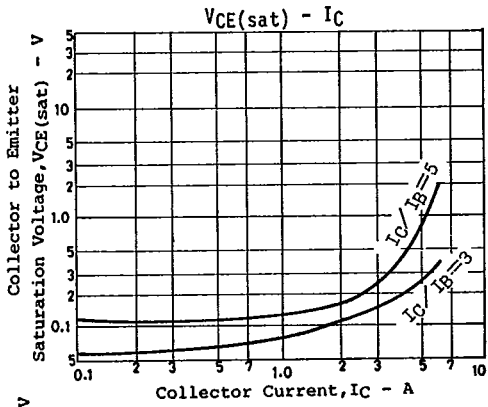
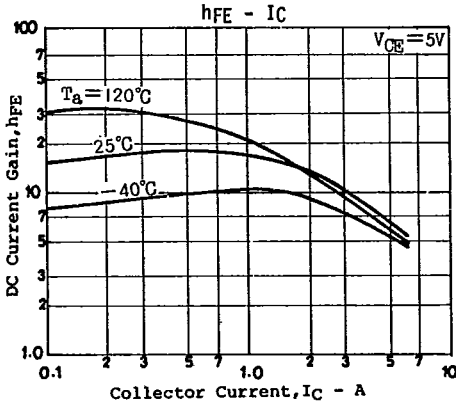
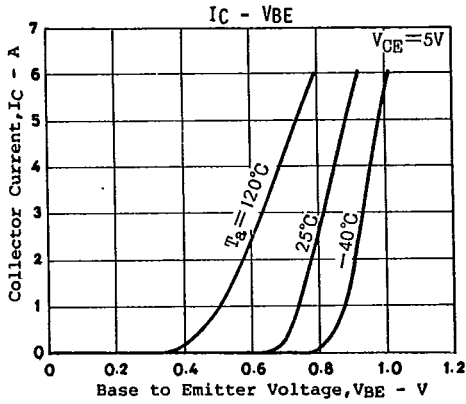
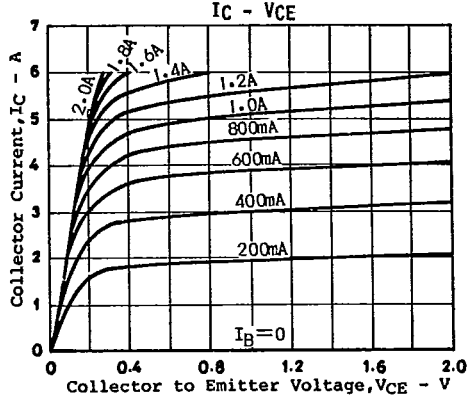
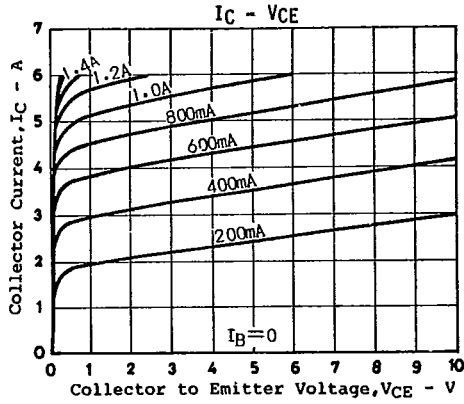


**Case Outline 2022 (unit:mm)**

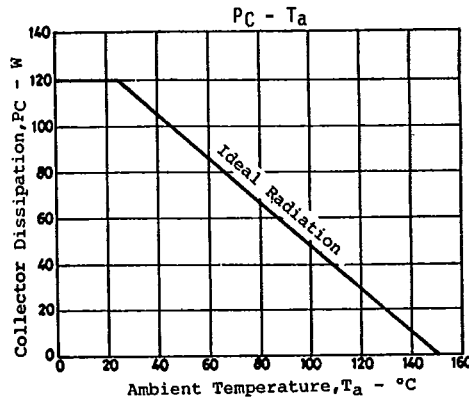
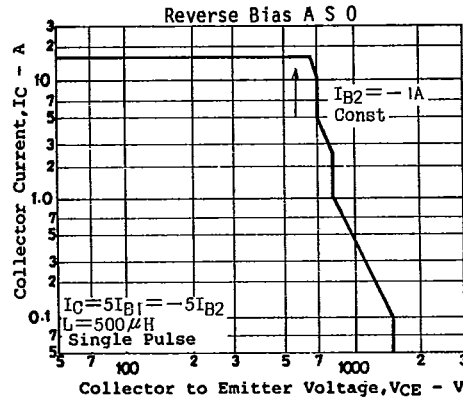
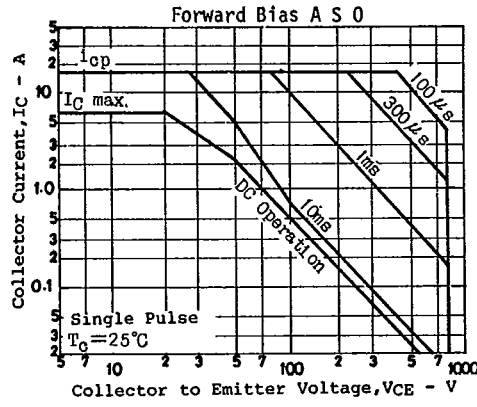


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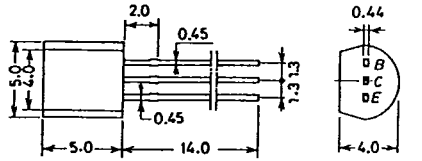
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# CASE OUTLINES AND ATTACHMENTS

- 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

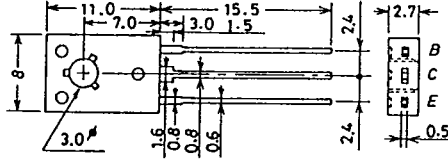


JEDEC: TO-92  
EIAJ: SC-43  
SANYO: NP

B. Base  
C. Collector  
E. Emitter

Case Outline-[2009A]

unit:mm

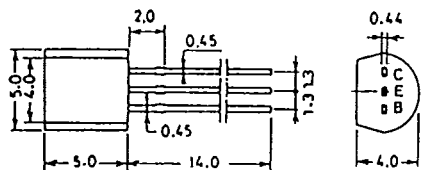


JEDEC: TO-126

B: Base  
C: Collector  
E: Emitter

Case Outline-[2004A]

unit:mm

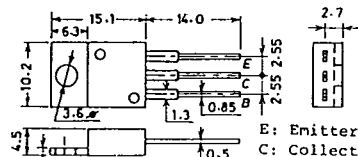


JEDEC: TO-92  
EIAJ: SC-43  
SANYO: NP

C. Collector  
E. Emitter  
B. Base

Case Outline-[2010A]

unit:mm

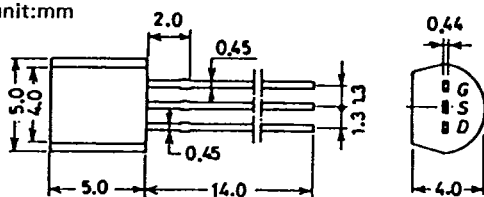


JEDEC: TO-220AB  
EIAJ: SC-46

E: Emitter  
C: Collector  
B: Base

Case Outline-[2005A]

unit:mm

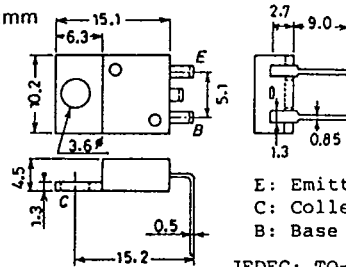


JEDEC: TO-92  
EIAJ: SC-43  
SANYO: NP

G: Gate  
S: Source  
D: Drain

Case Outline-[2012]

unit:mm

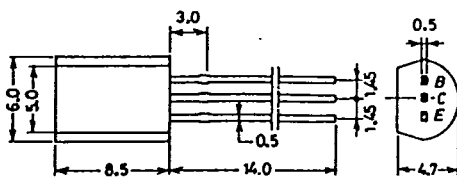


JEDEC: TO-220AA  
EIAJ: SC-45

E: Emitter  
C: Collector  
B: Base

Case Outline-[2006A]

unit:mm

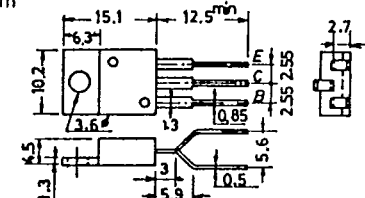


EIAJ: SC-51  
SANYO: MP

B: Base  
C: Collector  
E: Emitter

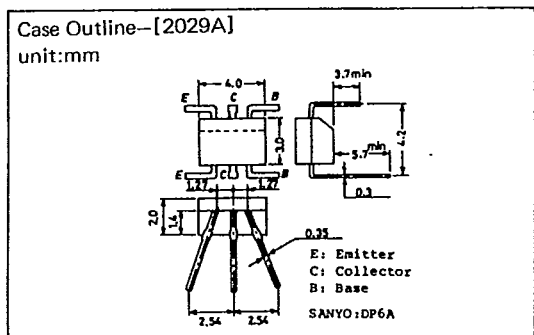
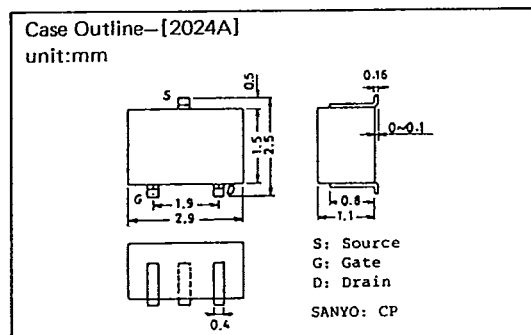
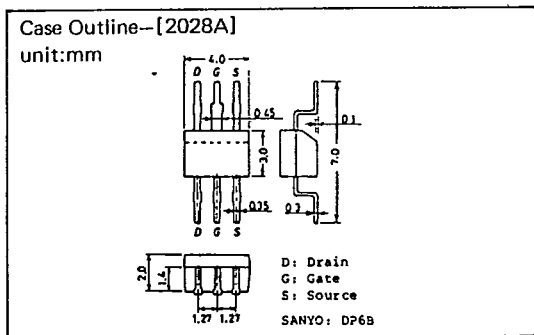
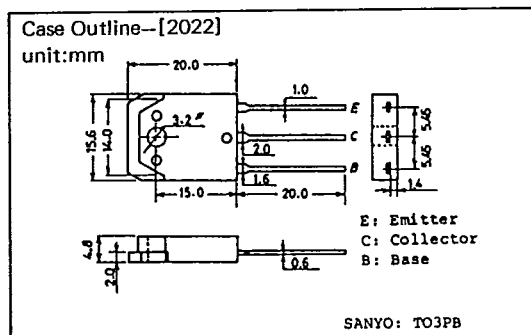
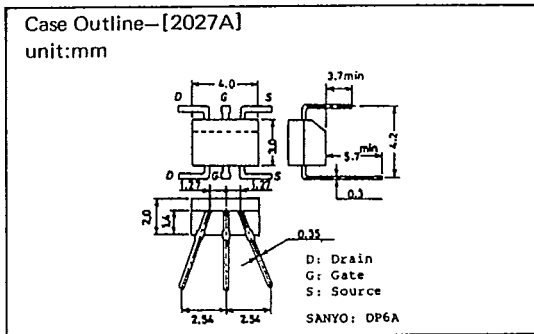
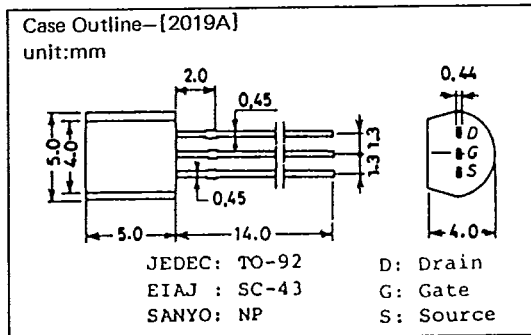
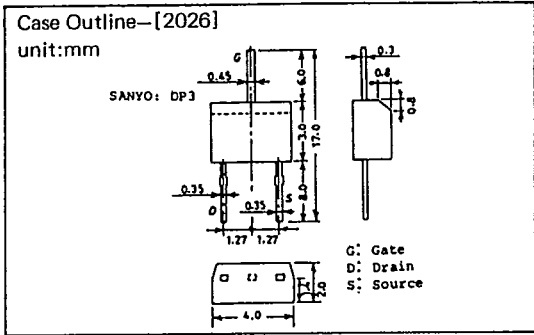
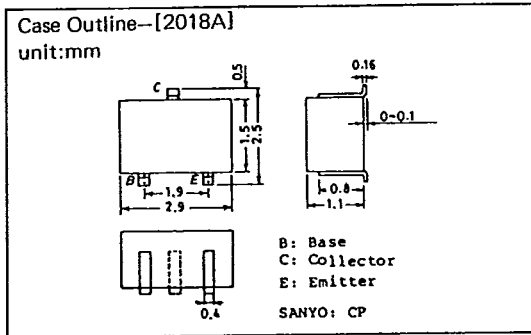
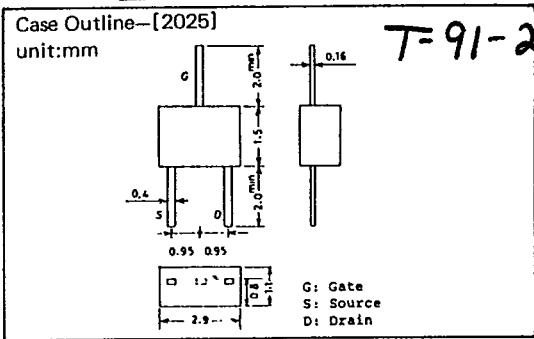
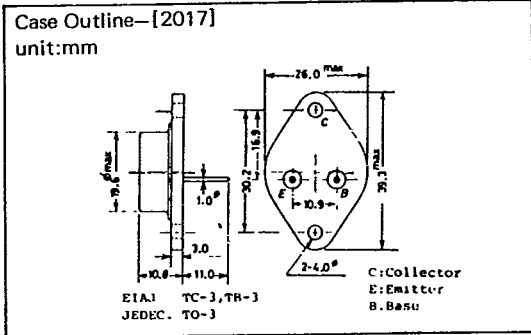
Case Outline-[2013]

unit:mm

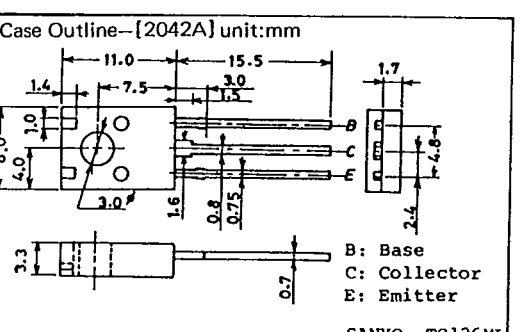
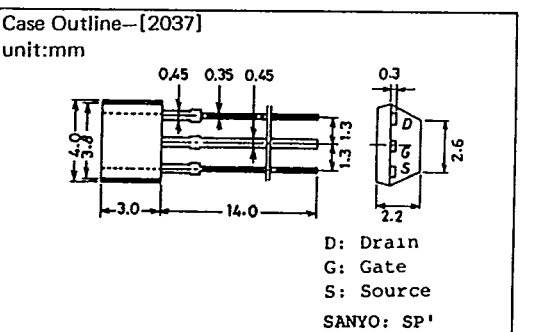
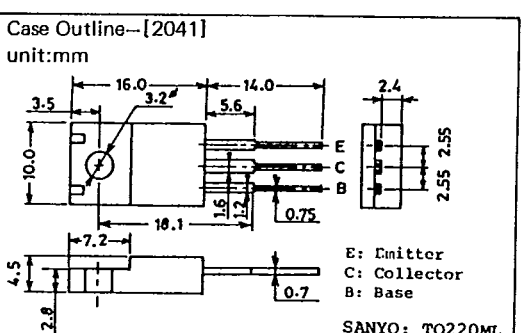
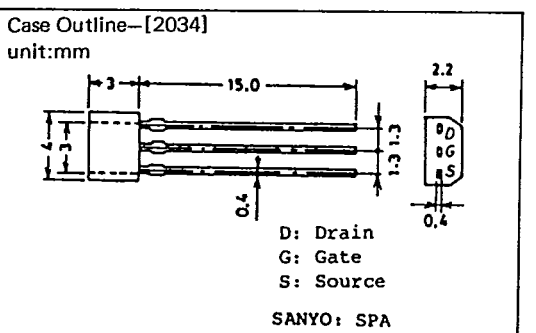
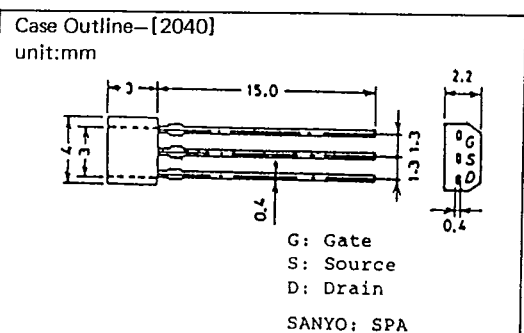
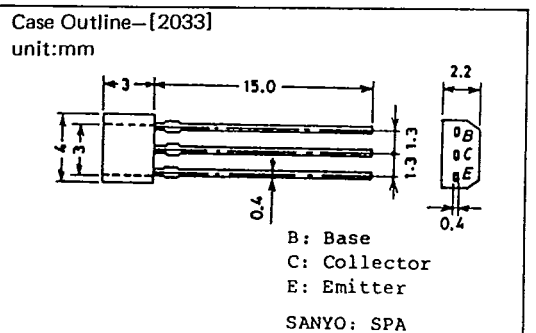
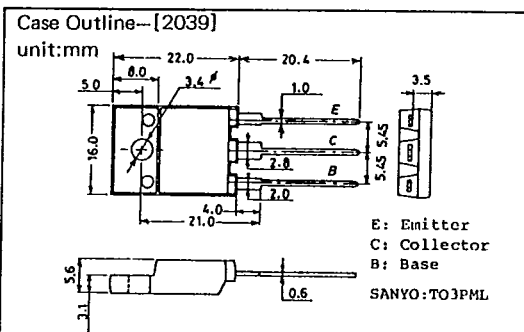
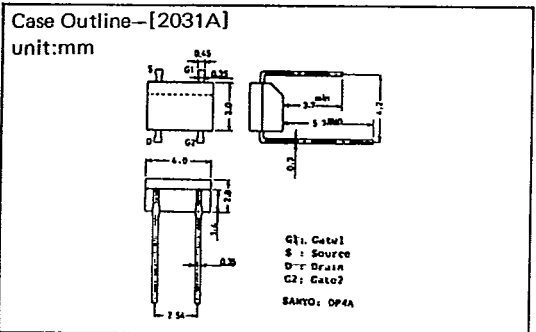
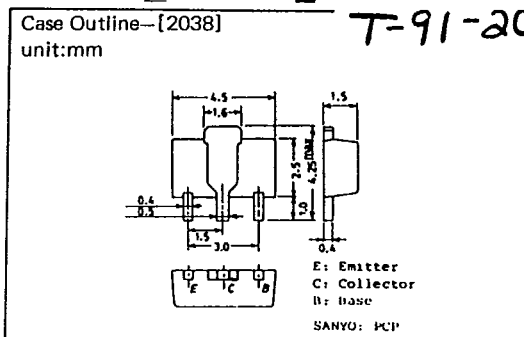
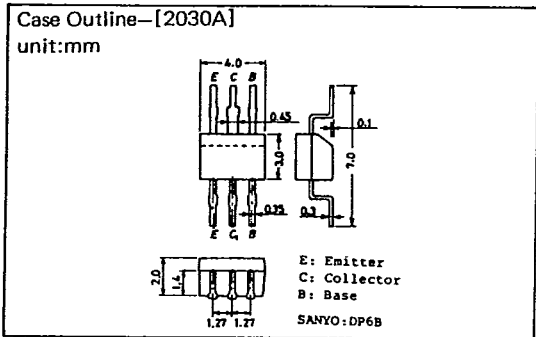


JEDEC TO-220

B: Base  
C: Collector  
E: Emitter



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