

2SC2998



2003A

NPN Epitaxial Planar Silicon Transistor

T-35-13

High Speed Switching Applications

©922B

Features

- . Fast switching speed.
- . High breakdown voltage.

Absolute Maximum Ratings at Ta=25°C

		unit
Collector to Base Voltage	V _{CB0}	60 V
Collector to Emitter Voltage	V _{CE0}	50 V
Emitter to Base Voltage	V _{EB0}	5 V
Collector Current	I _C	150 mA
Peak Collector Current	i _{cp}	400 mA
Collector Dissipation	P _C	500 mW
Junction Temperature	T _J	150 °C
Storage Temperature	T _{stg}	-55 to +150 °C

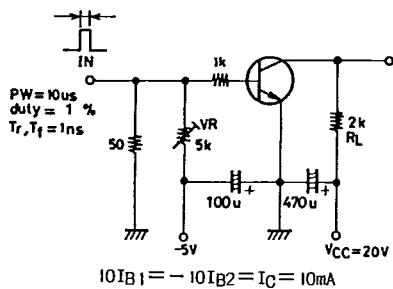
Electrical Characteristics at Ta=25°C

			min	typ	max	unit
Collector Cutoff Current	I _{CB0}	V _{CB} =40V, I _E =0			0.1	uA
Emitter Cutoff Current	I _{EB0}	V _{EB} =4V, I _C =0			0.1	uA
DC Current Gain	h _{FE}	V _{CE} =6V, I _C =1mA	100*		560*	
Gain Bandwidth Product	f _T	V _{CE} =6V, I _C =1mA		100		MHz
Output Capacitance	c _{ob}	V _{CB} =6V, f=1MHz		2.7		pF
C-E Saturation Voltage	V _{CE(sat)}	I _C =10mA, I _B =1mA		0.1	0.4	V
B-E Saturation Voltage	V _{BE(sat)}	I _C =10mA, I _B =1mA		0.75	1.1	V
C-B Breakdown Voltage	V _{(BR)CBO}	I _C =10uA, I _E =0	60			V
C-E Breakdown Voltage	V _{(BR)CEO}	I _C =1mA, R _{BE} =∞	50			V
E-B Breakdown Voltage	V _{(BR)EBO}	I _E =10uA, I _C =0	5			V
Delay Time	t _d	See specified Test Circuit.	40	60		ns
Rise Time	t _r	" "	80	130		ns
Storage Time	t _{stg}	" "	230	450		ns
Fall Time	t _f	" "	160	250		ns

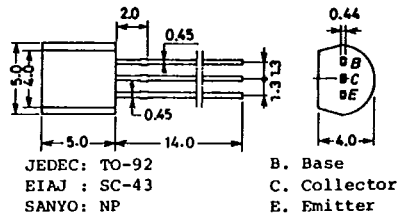
*:The 2SC2998 is classified by h_{FE} at 1mA.

100	E	200	160	F	320	280	G	560
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Switching Time Test Circuit

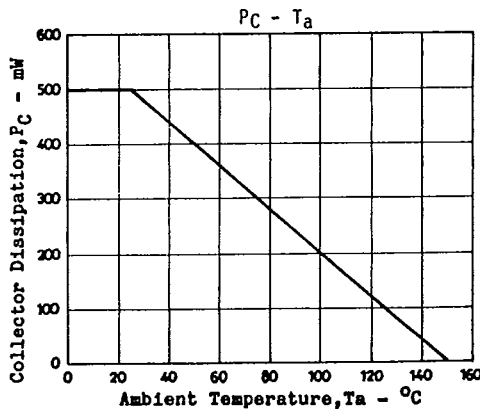
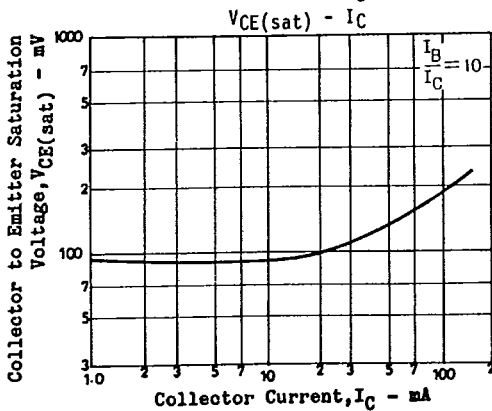
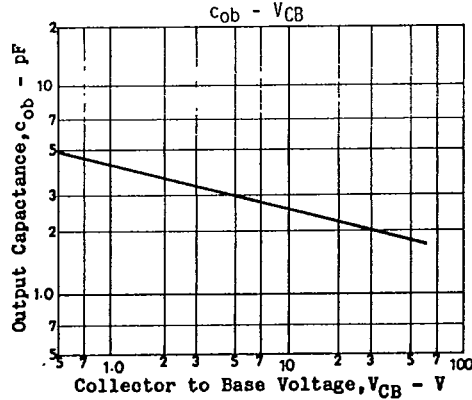
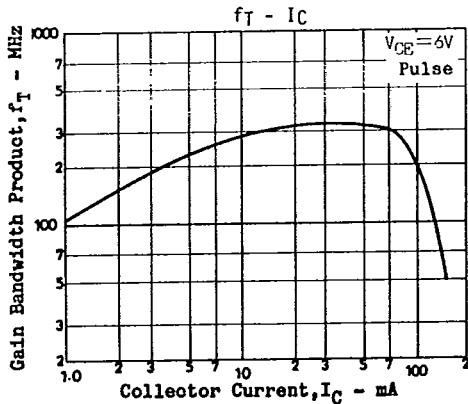
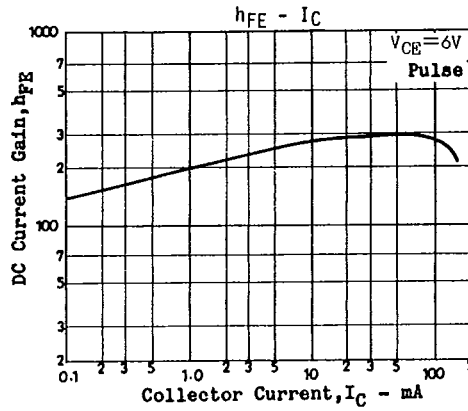
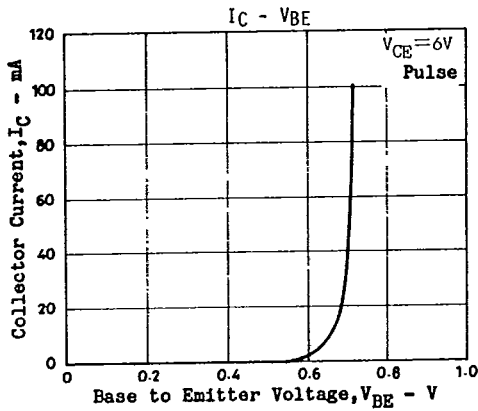
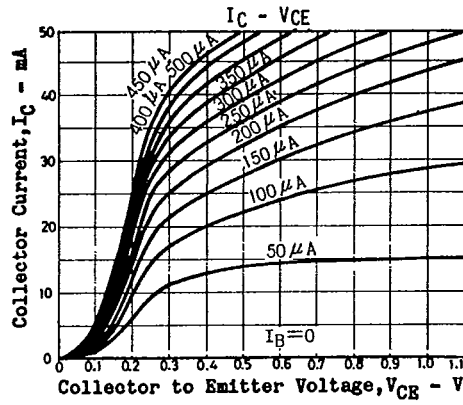
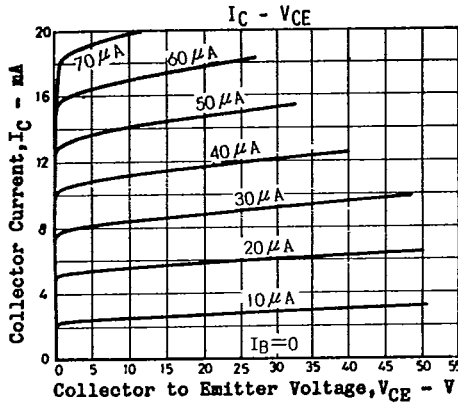


Case Outline 2003A (unit:mm)



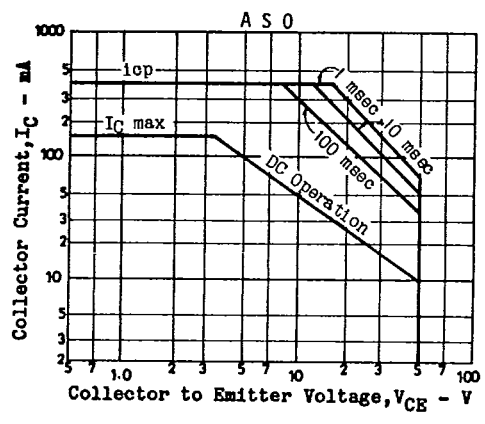
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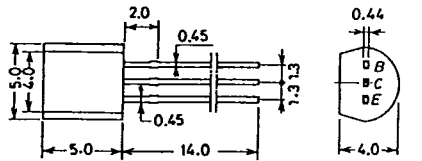
T-91-20

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

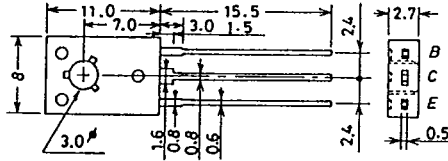


JEDEC: TO-92
EIAJ: SC-43
SANYO: NP

B. Base
C. Collector
E. Emitter

Case Outline-[2009A]

unit:mm

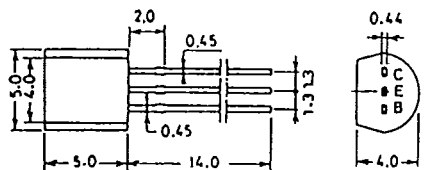


JEDEC: TO-126

B: Base
C: Collector
E: Emitter

Case Outline-[2004A]

unit:mm

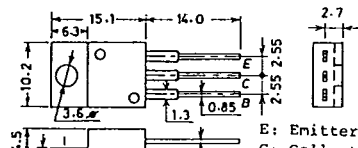


JEDEC: TO-92
EIAJ: SC-43
SANYO: NP

C. Collector
E. Emitter
B. Base

Case Outline-[2010A]

unit:mm

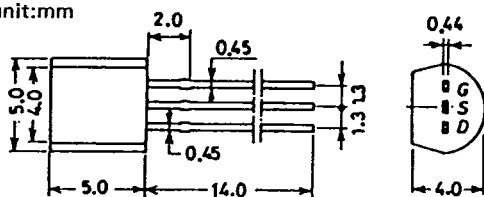


JEDEC: TO-220AB
EIAJ: SC-46

E: Emitter
C: Collector
B: Base

Case Outline-[2005A]

unit:mm

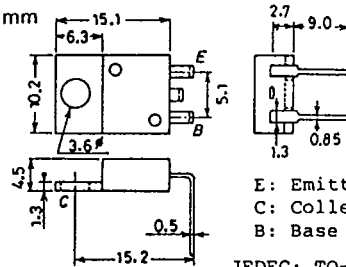


JEDEC: TO-92
EIAJ: SC-43
SANYO: NP

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

Case Outline-[2012]

unit:mm

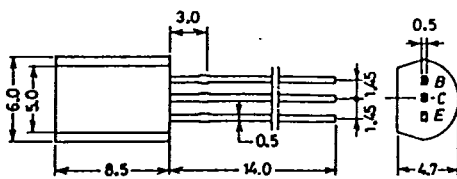


JEDEC: TO-220AA
EIAJ: SC-45

E: Emitter
C: Collector
B: Base

Case Outline-[2006A]

unit:mm

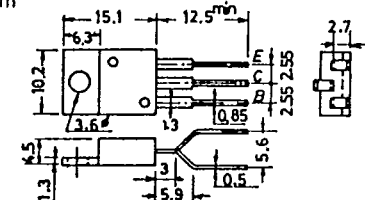


EIAJ: SC-51
SANYO: MP

B: Base
C: Collector
E: Emitter

Case Outline-[2013]

unit:mm



JEDEC TO-220

B: Base
C: Collector
E: Emitter

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