

2SC2210



2003A

NPN Epitaxial Planar Silicon Transistor

T-31-17

AM RF Amp, Converter Applications

©374F

Features

- . Highly resistant to dielectric breakdown and suited for car use.
- . Good spurious characteristic due to low f_T .
- . Small noise figure.

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

			unit
Collector to Base Voltage	V_{CB0}	30	V
Collector to Emitter Voltage	V_{CE0}	20	V
Emitter to Base Voltage	V_{EBO}	5	V
Collector Current	I_C	30	mA
Collector Dissipation	P_C	250	mW
Junction Temperature	T_J	125	$^\circ\text{C}$
Storage Temperature	Tstg	-55 to +125	$^\circ\text{C}$

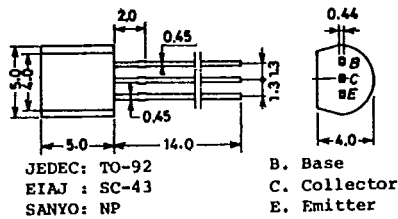
Electrical Characteristics at $T_a=25^\circ\text{C}$

			min	typ	max	unit
Collector Cutoff Current	I_{CBO}	$V_{CB}=10\text{V}, I_E=0$			0.1	μA
Emitter Cutoff Current	I_{EBO}	$V_{EB}=4\text{V}, I_C=0$			0.1	μA
C-B Breakdown Voltage	$V_{(BR)CBO}$	$I_C=10\mu\text{A}, I_E=0$	30			V
C-E Breakdown Voltage	$V_{(BR)CEO}$	$I_C=1\text{mA}, R_{BE}=\infty$	20			V
E-B Breakdown Voltage	$V_{(BR)EBO}$	$I_E=10\mu\text{A}, I_C=0$	5			V
DC Current Gain	h_{FE}	$V_{CE}=6\text{V}, I_C=1\text{mA}$	40*		320*	
Gain Bandwidth Product	f_T	$V_{CE}=6\text{V}, I_C=1\text{mA}$	50	90	170	MHz
Reverse Transfer Capacitance	c_{re}	$V_{CB}=6\text{V}, f=1\text{MHz}$	3.5	4.5		pF
C-B Time Constant	$r_{bb} \cdot C_c$	$V_{CE}=6\text{V}, I_C=1\text{mA}, f=31.9\text{MHz}$	25	50		ps
C-E Saturation Voltage	$V_{CE(sat)}$	$I_C=10\text{mA}, I_B=1\text{mA}$			0.4	V
Noise Figure	NF	$V_{CE}=10\text{V}, I_C=0.5\text{mA}, f=455\text{kHz}, R_g=1\text{kohm}$	2.0			dB

*:The 2SC2210 is classified by 1mA h_{FE} as follows:

40	C	80	60	D	120	100	E	200	160	F	320
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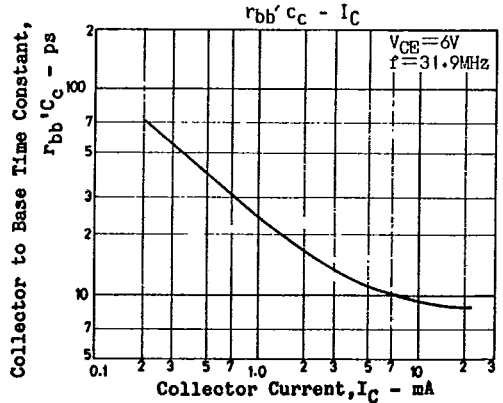
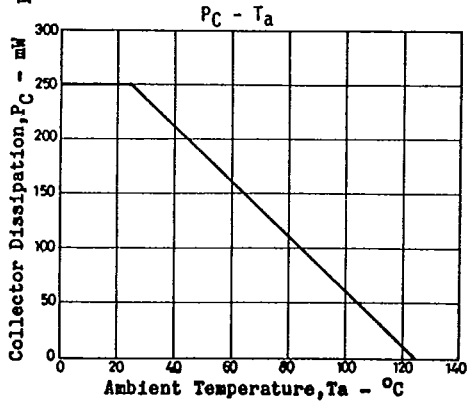
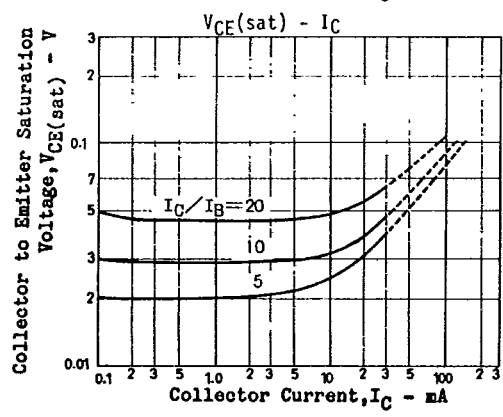
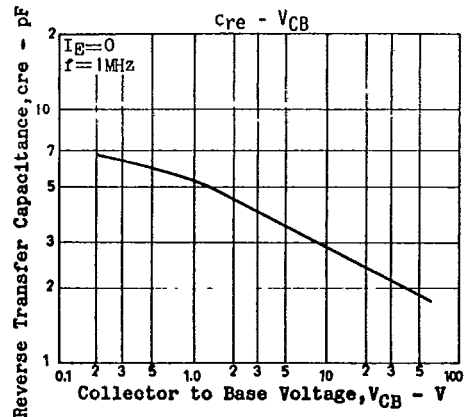
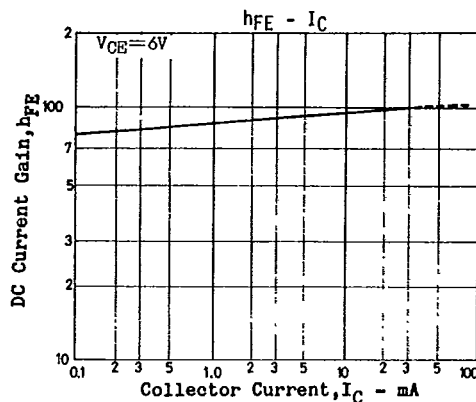
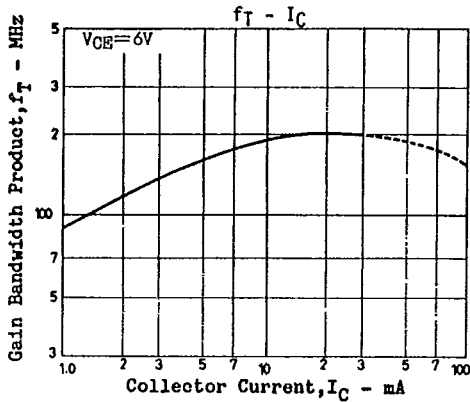
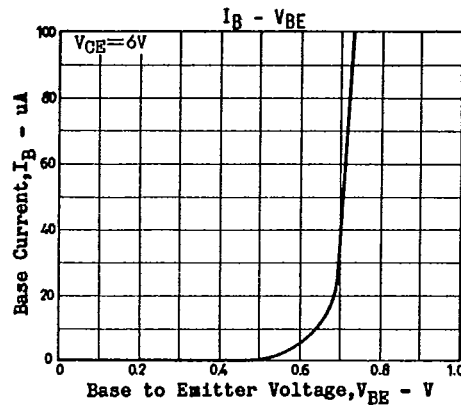
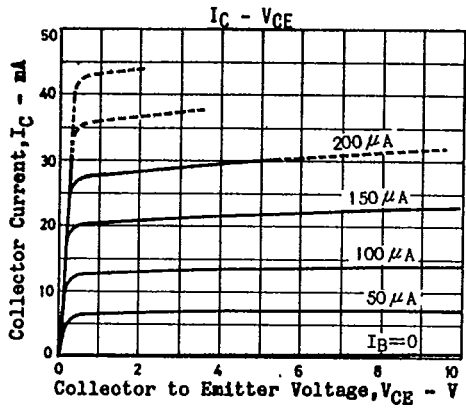
Case Outline 2003A
(unit:mm)



4147KI/3145MW, TS No.374-1/4

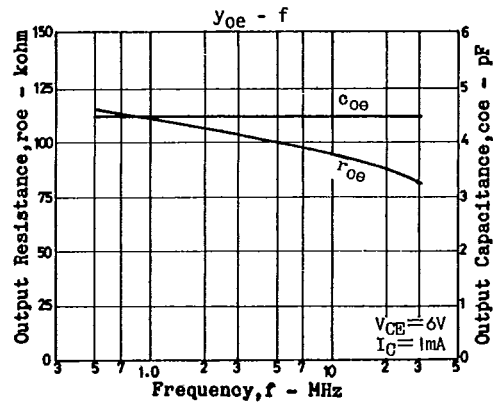
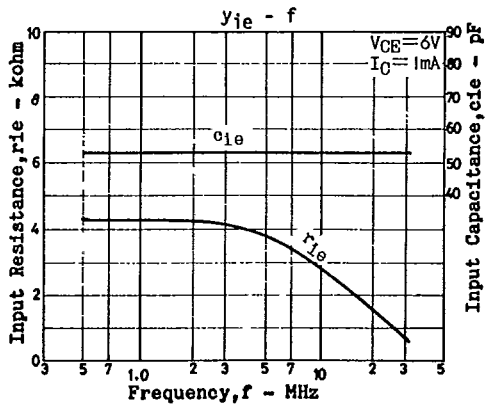
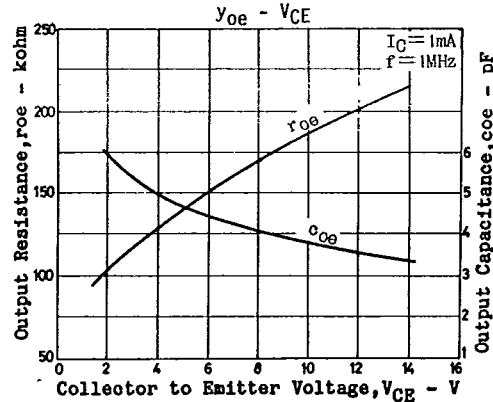
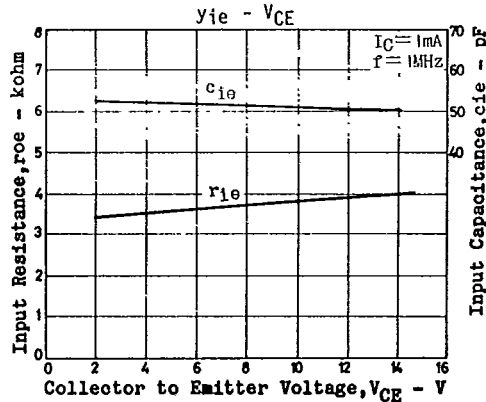
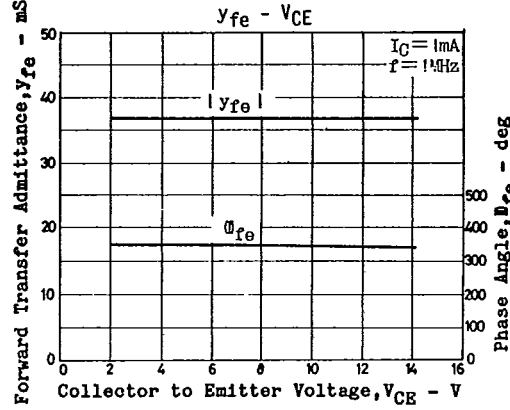
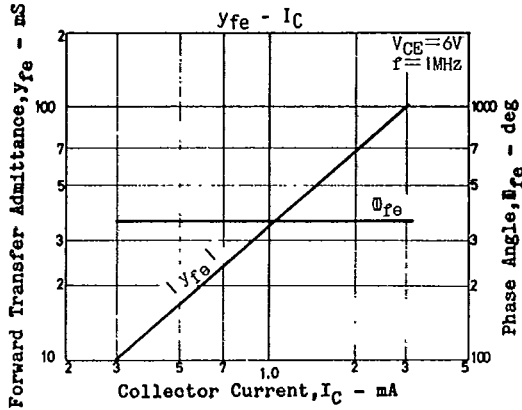
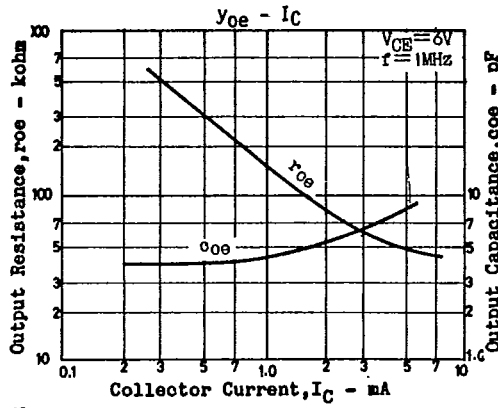
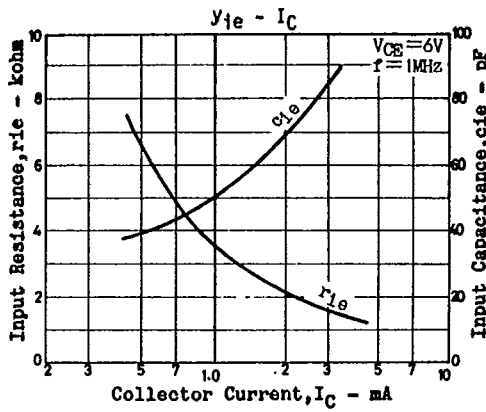
2SC2210

T-31-17



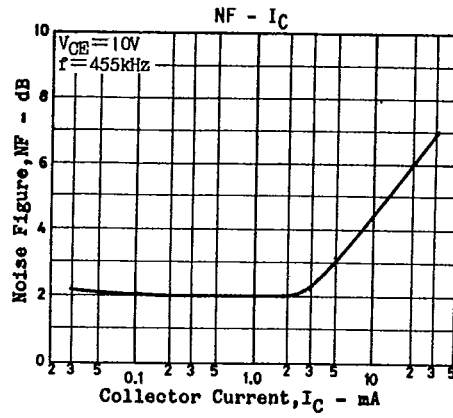
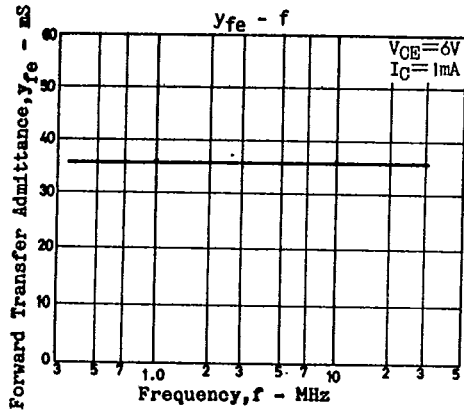
2SC2210

T-31-17



2SC2210

T-31-17



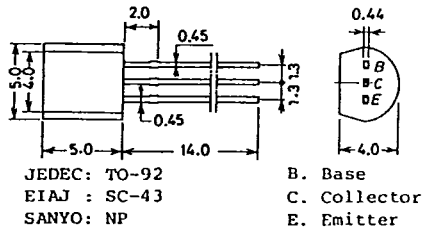
T-91-20

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.

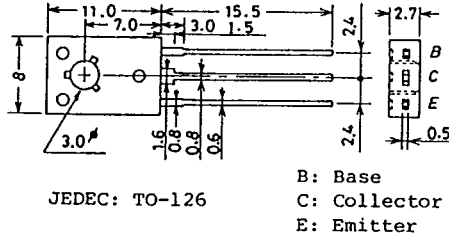
Case Outline-[2003A]

unit:mm



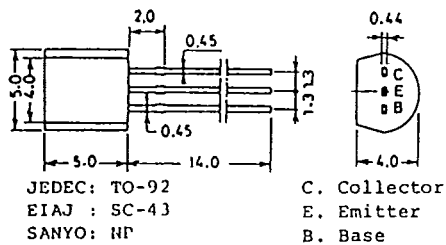
Case Outline-[2009A]

unit:mm



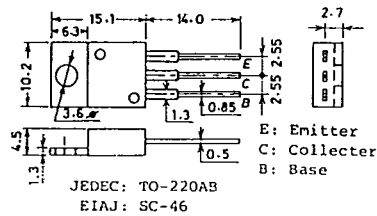
Case Outline-[2004A]

unit:mm



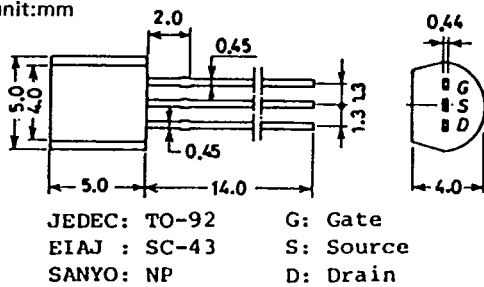
Case Outline-[2010A]

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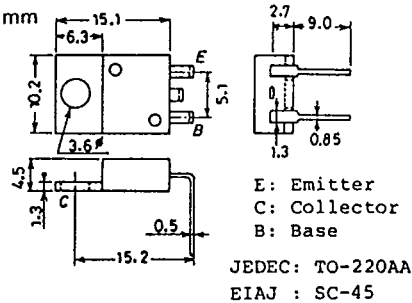
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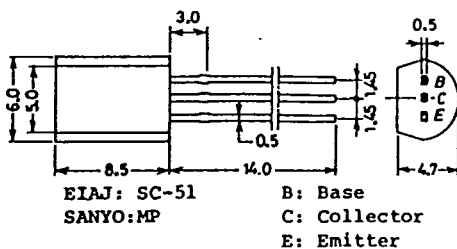
Case Outline-[2012]

unit:mm



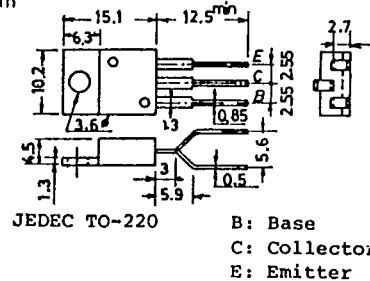
Case Outline-[2006A]

unit:mm

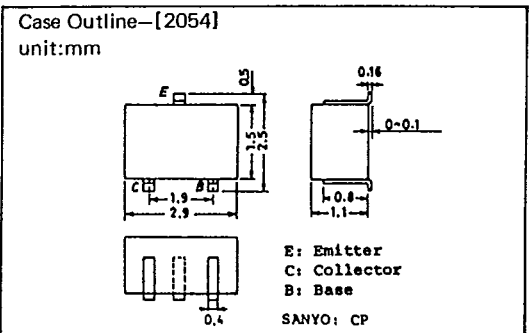
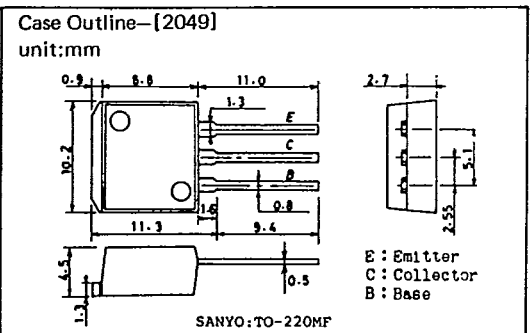
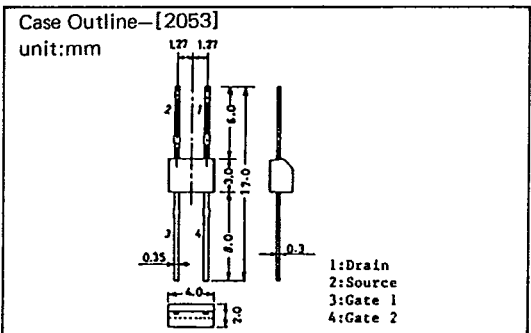
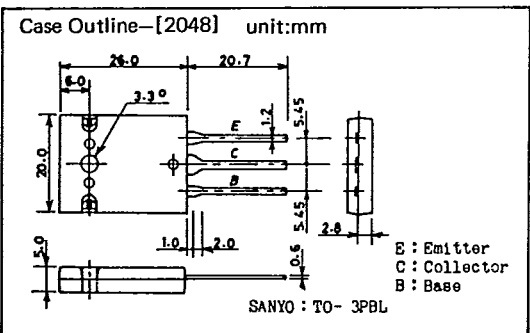
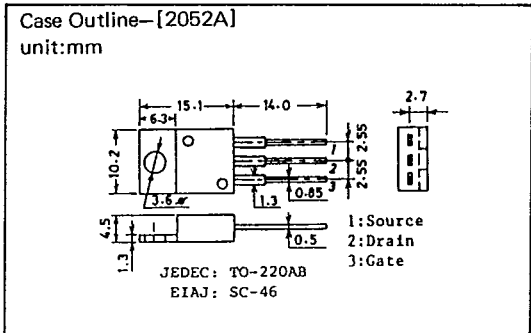
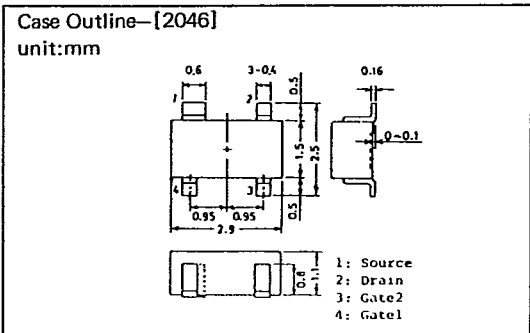
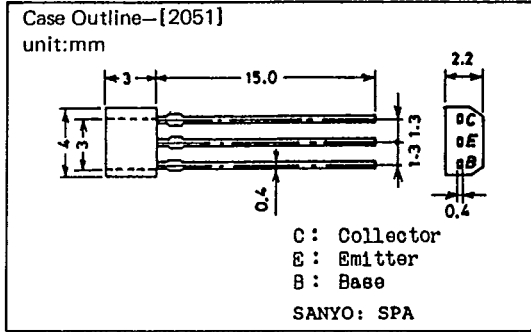
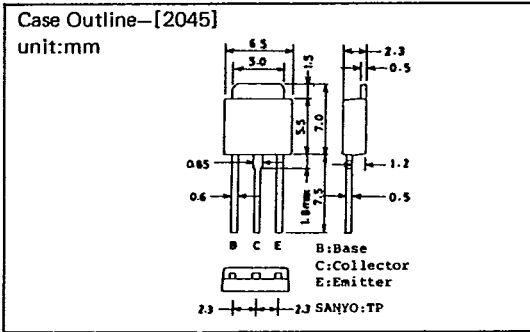
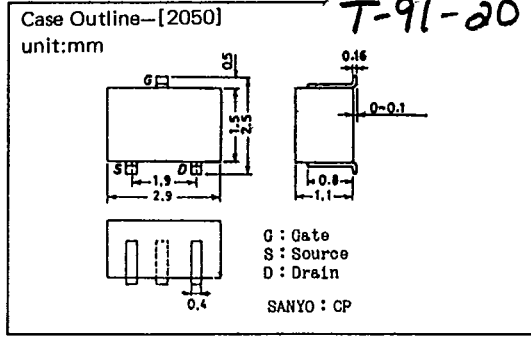
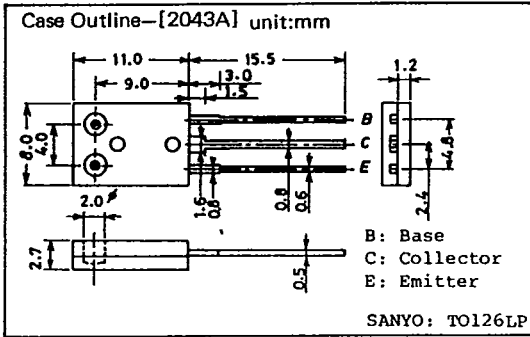


Case Outline-[2013]

unit:mm



T-91-20



T-91-20

