

No.3025

2SA1705/2SC4485

PNP/NPN Epitaxial Planar Silicon Transistors

Low-Frequency Power Amp Applications

Applications

- Voltage regulators, relay drivers, lamp drivers.

Features

- Adoption of FBET process.
- Fast switching speed.

(): 2SA1705

Absolute Maximum Ratings at Ta=25°C

			unit
Collector to Base Voltage	V_{CBO}	(-)60	V
Collector to Emitter Voltage	V_{CEO}	(-)50	V
Emitter to Base Voltage	V_{EBO}	(-)5	V
Collector Current	I_C	(-)1	A
Collector Current(Pulse)	I_{CP}	(-)2	A
Collector Dissipation	P_C	0.9	W
Junction Temperature	T_j	150	°C
Storage Temperature	T_{stg}	-55 to +150	°C

Electrical Characteristics at Ta=25°C

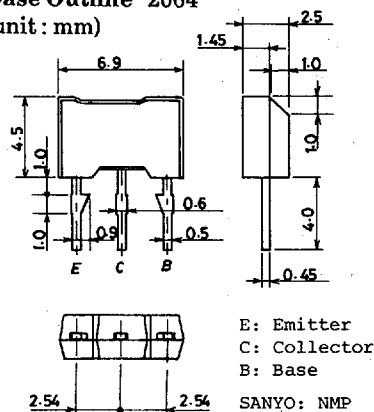
			min	typ	max	unit
Collector Cutoff Current	I_{CBO}	$V_{CB}=(-)50V, I_E=0$			(-)100	nA
Emitter Cutoff Current	I_{EBO}	$V_{EB}=(-)4V, I_C=0$			(-)100	nA
DC Current Gain	$h_{FE}(1)$	$V_{CE}=(-)2V, I_C=(-)100mA$	100※		400※	
	$h_{FE}(2)$	$V_{CE}=(-)2V, I_C=(-)1A$	30			
Gain-Bandwidth Product	f_T	$V_{CE}=(-)10V, I_C=(-)50mA$		150		MHz
C-E Saturation Voltage	$V_{CE(sat)}$	$I_C=(-)500mA, I_E=(-)50mA$	(-180)120	(-500)300		mV
B-E Saturation Voltage	$V_{BE(sat)}$	$I_C=(-)500mA, I_E=(-)50mA$	(-)0.9	(-)1.2		V
Output Capacitance	c_{ob}	$V_{CB}=(-)10V, f=1MHz$	(12)8.5			pF

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※ : The 2SA1705/2SC4485 are classified by 100mA h_{FE} as follows :

100 R 200	140 S 280	200 T 400
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Case Outline 2064
(unit: mm)



Specifications and information herein are subject to change without notice.

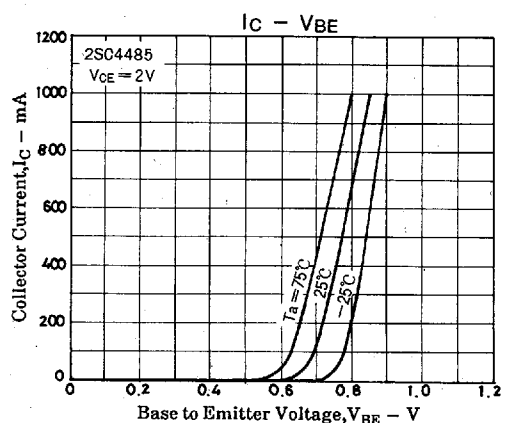
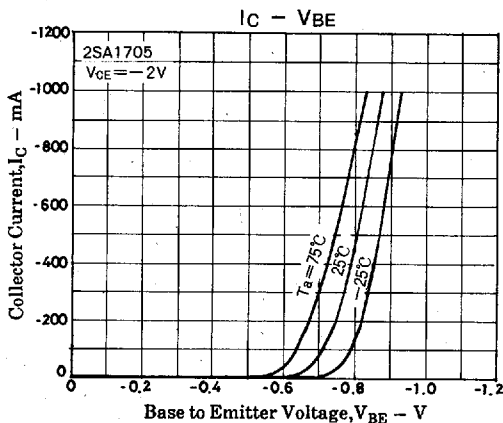
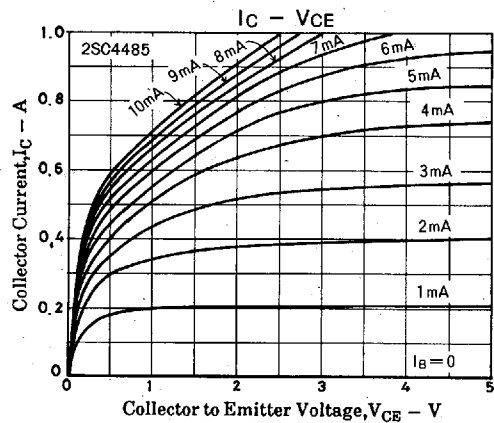
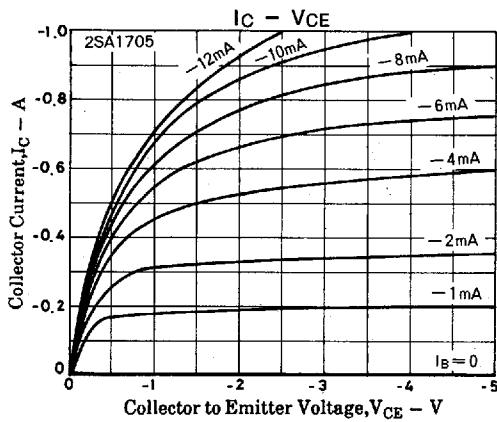
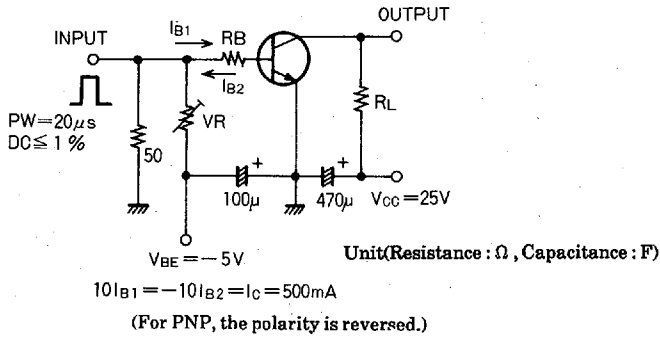
SANYO Electric Co., Ltd. Semiconductor Business Headquarters

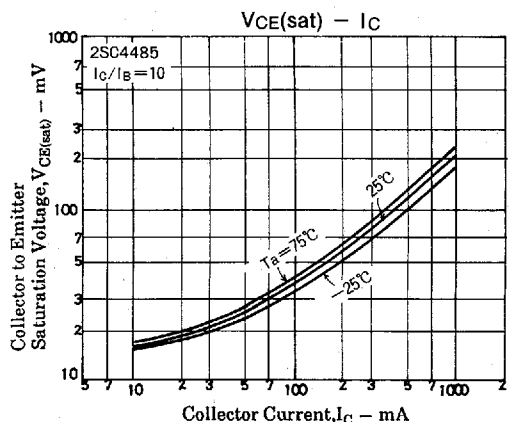
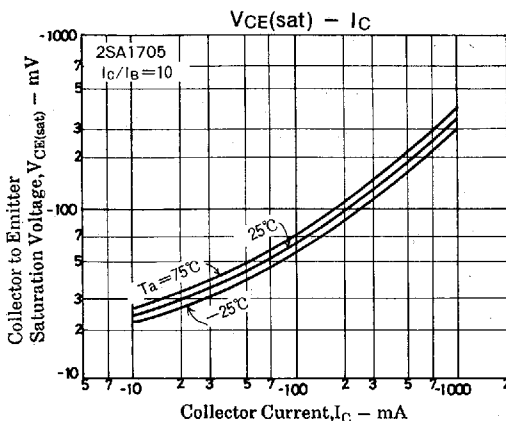
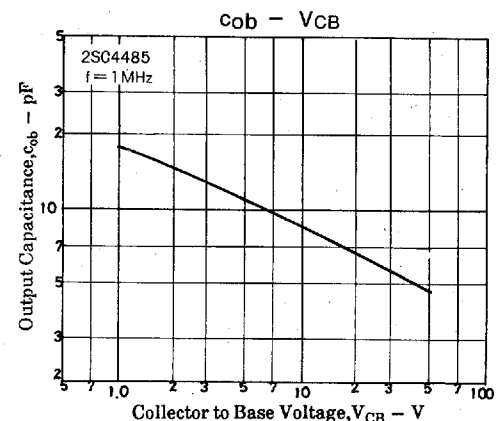
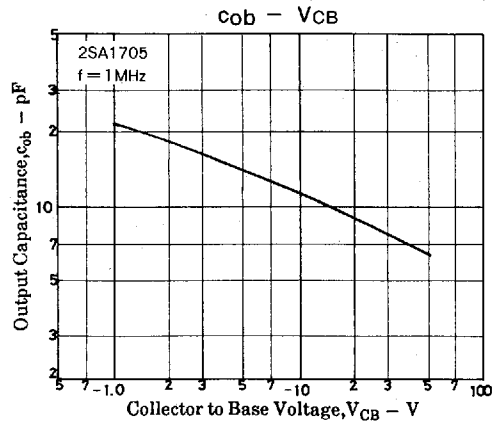
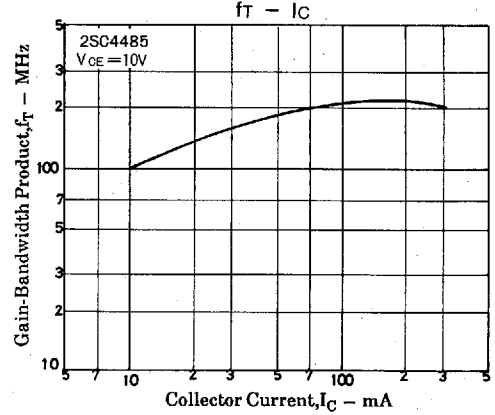
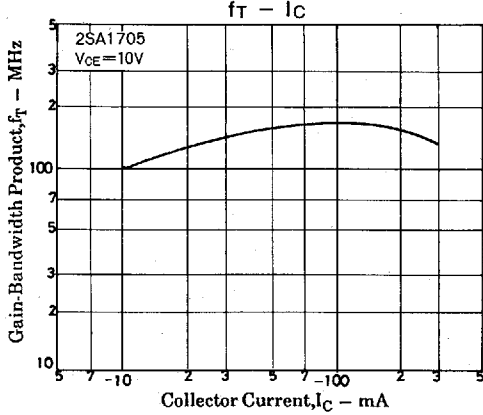
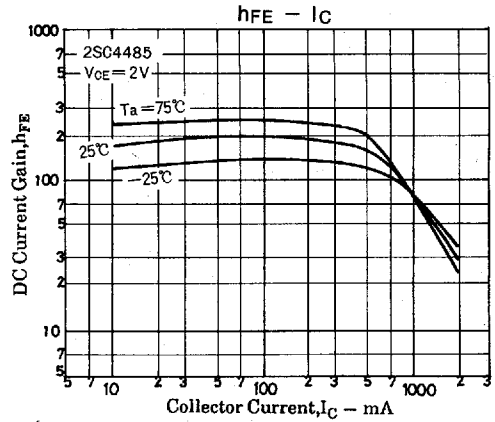
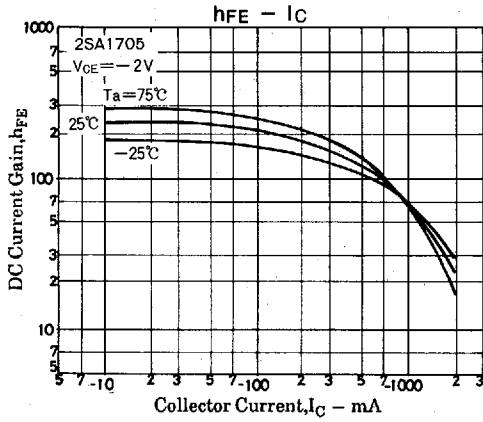
TOKYO OFFICE Tokyo Bldg., 1-10, 1 Chome, Ueno, Taito-ku, TOKYO 110, JAPAN

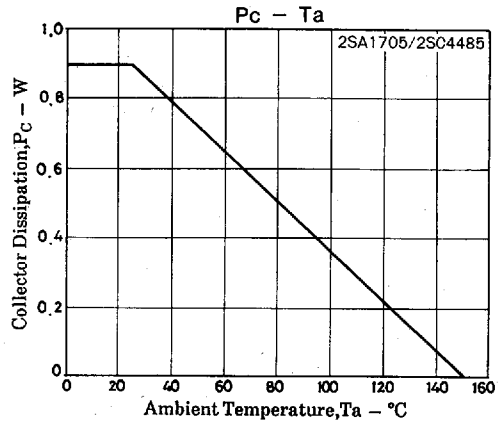
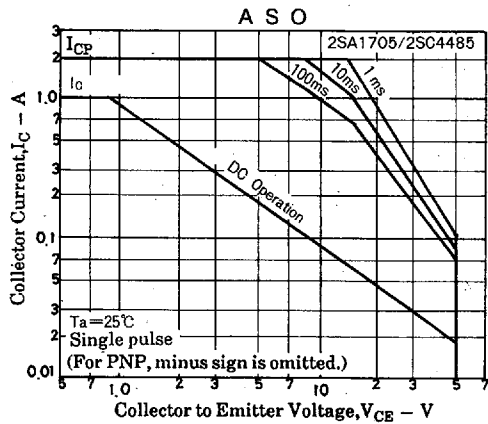
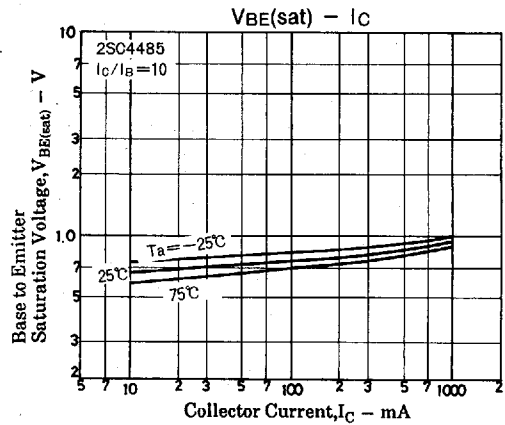
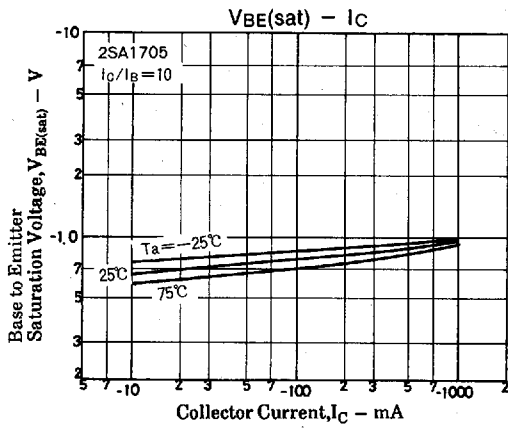
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		min	typ	max	unit
C-B Breakdown Voltage	$V_{(BR)CBO}$ $I_C = (-)10\mu A, I_E = 0$	$(-)60$			V
C-E Breakdown Voltage	$V_{(BR)CEO}$ $I_C = (-)1mA, R_{BE} = \infty$	$(-)50$			V
E-B Breakdown Voltage	$V_{(BR)EBO}$ $I_E = (-)10\mu A, I_C = 0$	$(-)5$			V
Turn-ON Time	t_{on} See specified Test Circuit.		40		ns
Storage Time	t_{stg}		(300)350		ns
Fall Time	t_f		30		ns

Switching Time Test Circuit



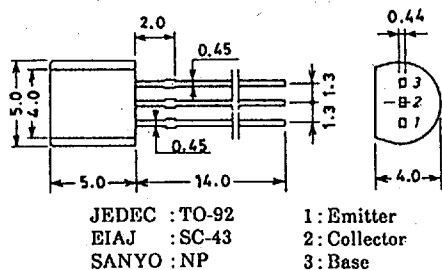




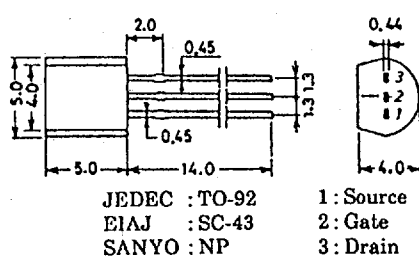
CASE OUTLINES OF LEAD FORMED SMALL SIGNAL TRANSISTORS

- All of Sanyo lead formed small signal 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.

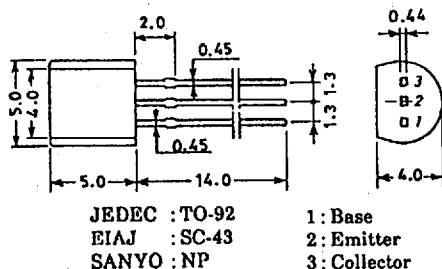
Case Outline 2003A/2003B (unit : mm)



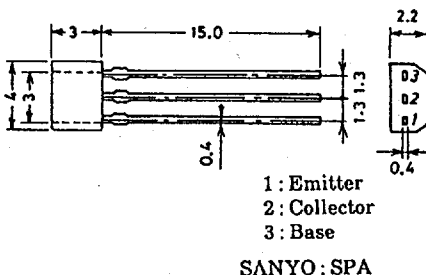
Case Outline 2019A/2019B (unit : mm)



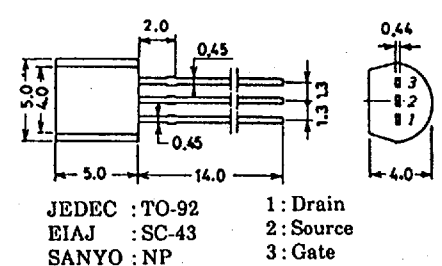
Case Outline 2004A (unit : mm)



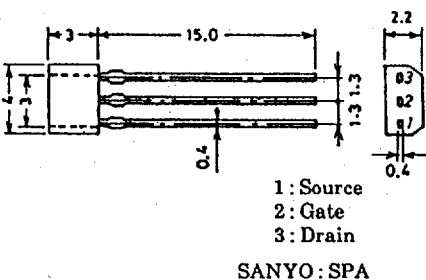
Case Outline 2033 (unit : mm)



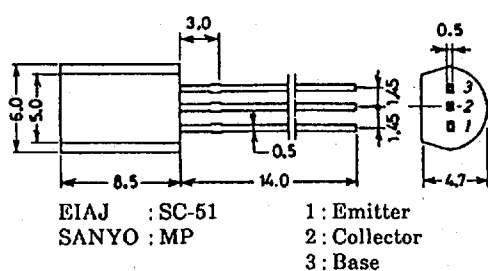
Case Outline 2005A (unit : mm)



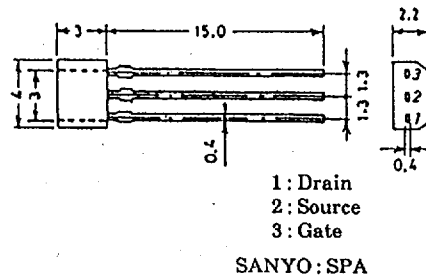
Case Outline 2034/2034A (unit : mm)



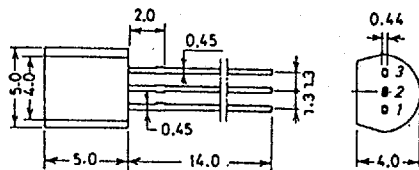
Case Outline 2006A (unit : mm)



Case Outline 2040 (unit : mm)



Case Outline 2061 (unit : mm)



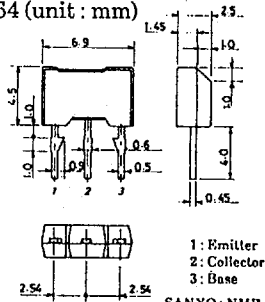
JEDEC : TO-92

EIAJ : SC-43

SANYO : NP

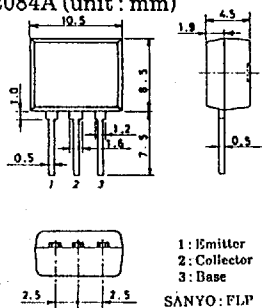
- 1: Emitter
- 2: Base
- 3: Collector

Case Outline 2064 (unit : mm)



- 1: Emitter
 - 2: Collector
 - 3: Base
- SANYO : NMP

Case Outline 2084A (unit : mm)



- 1: Emitter
 - 2: Collector
 - 3: Base
- SANYO : FLP