

2SB560/2SD438

PNP/NPN Epitaxial Planar Silicon Transistors

Low-Frequency Power Amp Applications

The 2SB560/2SD438 are epitaxial planar transistors for complementary push-pull pair having high reverse voltage and low saturation voltage, and suitable universal AF power amplifier use.

():2SB560

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

Absolute Maximum Ratings at Ta=25°C			unit
Collector to Base Voltage	V _{CBO}	(-)100	V
Collector to Emitter Voltage	V _{CEO}	(-)80	V
Emitter to Base Voltage	V _{EBO}	(-)5	V
Collector Current	I _C	(-)0.7	A
Collector Current(Pulse)	I _{CP}	(-)1.0	A
Collector Dissipation	P _C	900	mW
Junction Temperature	T _J	150	°C
Storage Temperature	T _{stg}	-55 to +150	°C

Electrical Characteristics at Ta=25°C

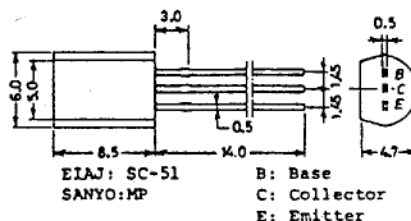
Electrical Characteristics at Ta=25°C			min	typ	max	unit
Collector Cutoff Current	I_{CBO}	$V_{CB}=(-)20V, I_E=0$			(-) 1.0	μA
Emitter Cutoff Current	I_{EBO}	$V_{EB}=(-)4V, I_C=0$			(-) 1.0	μA
DC Current Gain	$h_{FE}(1)$	$V_{CE}=(-)5V, I_C=(-)50mA$	60*		560*	
	$h_{FE}(2)$	$V_{CE}=(-)5V, I_C=(-)0.5A$	30			
Gain-Bandwidth Product	f_T	$V_{CE}=(-)10V, I_C=(-)50mA$		100		MHz
Output Capacitance	C_{ob}	$V_{CB}=(-)10V, f=1MHz$		(15)		pF
				10		pF
C-B Breakdown Voltage	$V_{(BR)CBO}$	$I_C=10\mu A$	(-) 100			V
C-E Breakdown Voltage	$V_{(BR)CEO}$	$I_C=1mA, R_{BE}=\infty$	(-) 80			V
E-B Breakdown Voltage	$V_{(BR)EBO}$	$I_E=(-)10\mu A, I_C=0$	(-) 5			V
C-E Saturation Voltage	$V_{CE(sat)}$	$I_C=(-)500mA, I_B=(-)50mA$		(-) 0.3	(-) 0.8	V
				0.2	0.6	V
B-E Saturation Voltage	$V_{BE(sat)}$	$I_C=(-)500mA, I_B=(-)50mA$	(-) 0.85	(-) 1.2		V

* The 2SB560/2SD438 are classified by 50mA h_{FE} as follows.

60	D	120	100	E	200	160	F	320	280	G	560
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Case Outline 2006A

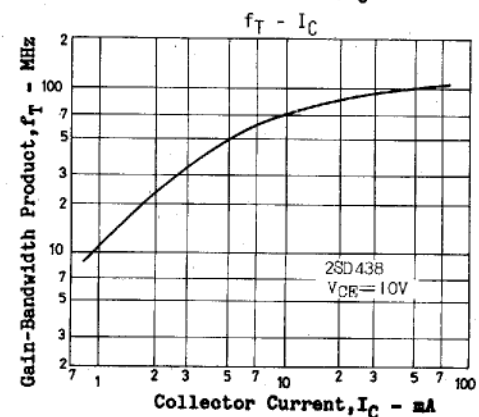
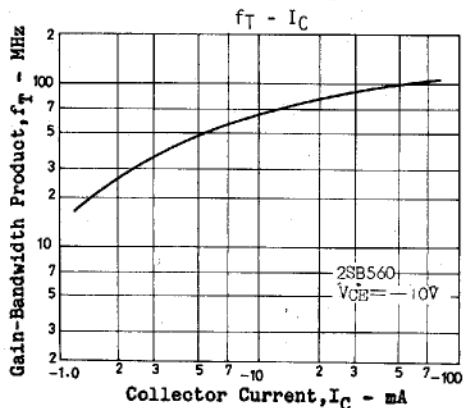
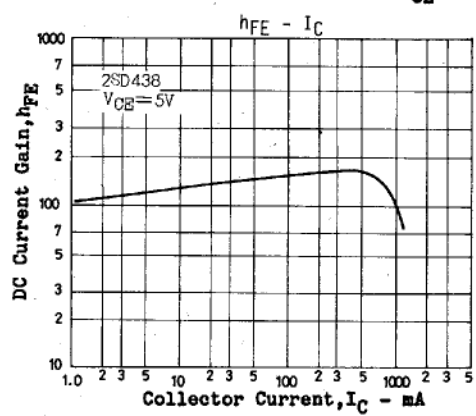
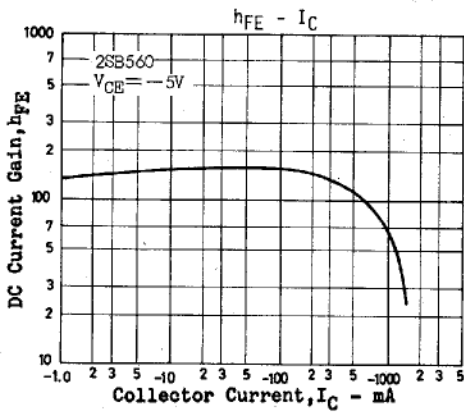
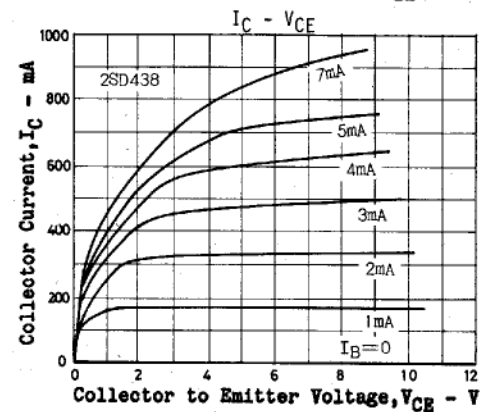
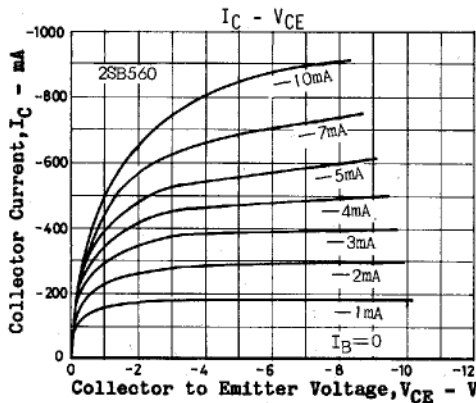
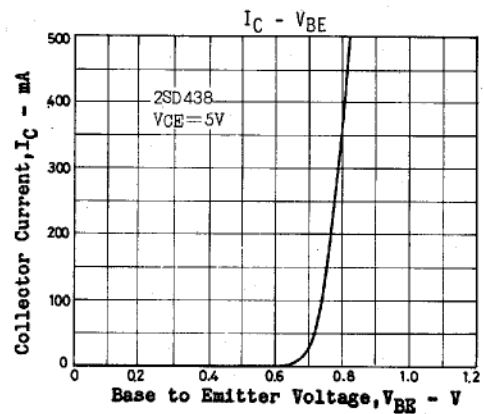
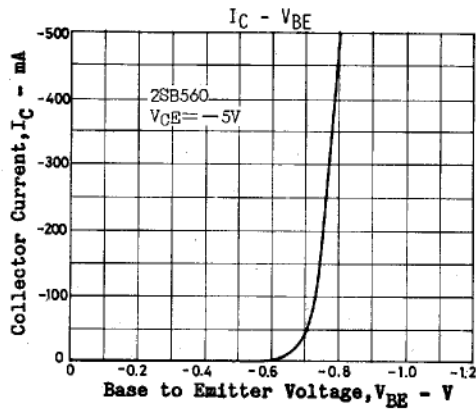
(unit:mm)

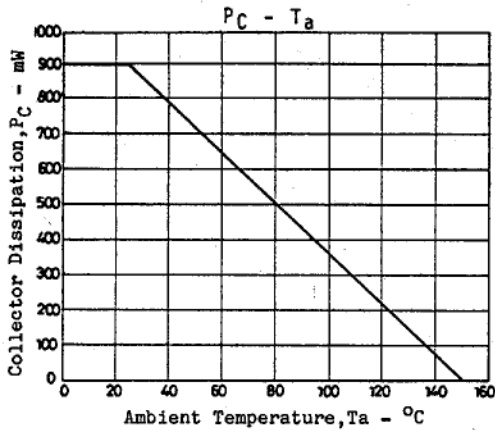
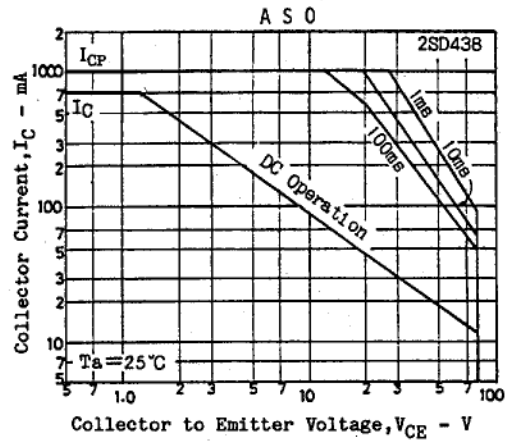
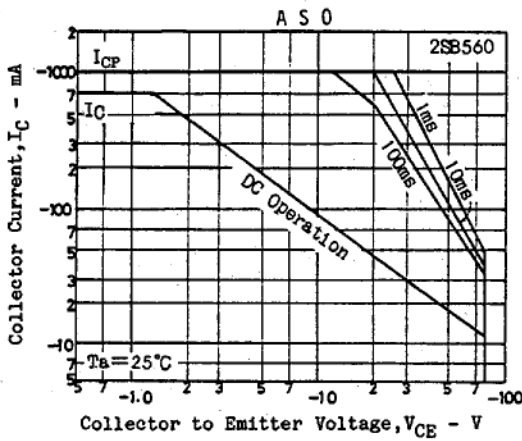
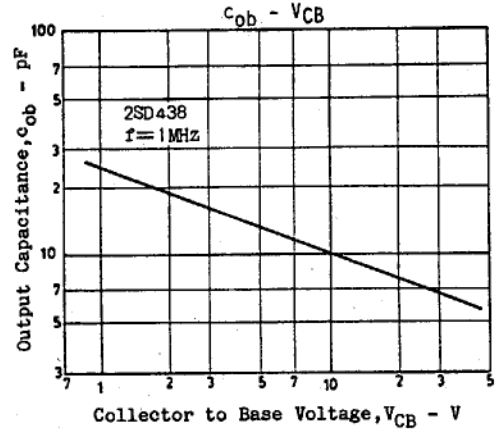
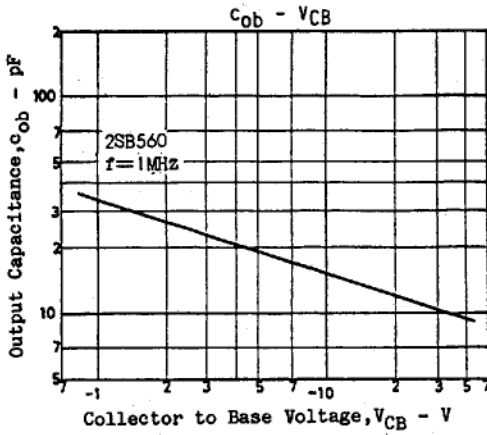


Specifications and information herein are subject to change without notice.

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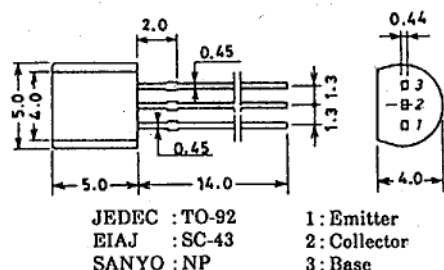




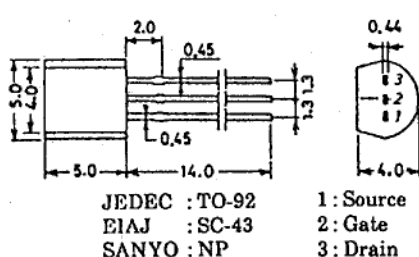
CASE OUTLINES OF LEAD FORMED SMALL SIGNAL TRANSISTORS

- 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.

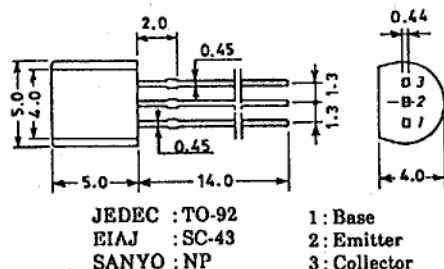
Case Outline 2003A/2003B (unit : mm)



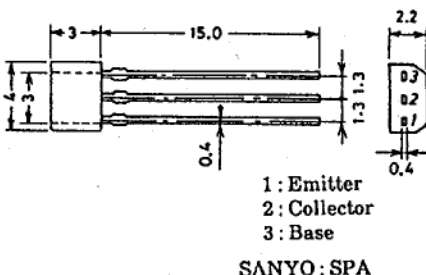
Case Outline 2019A/2019B (unit : mm)



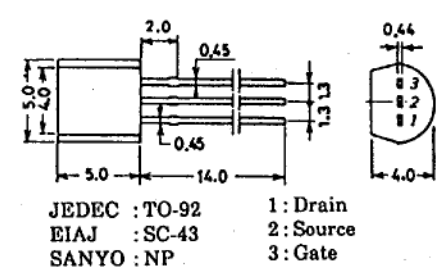
Case Outline 2004A (unit : mm)



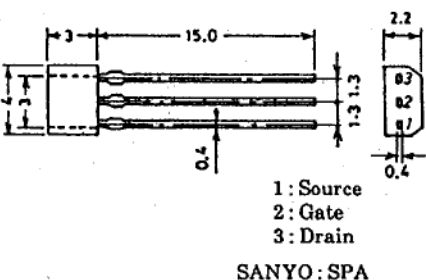
Case Outline 2033 (unit : mm)



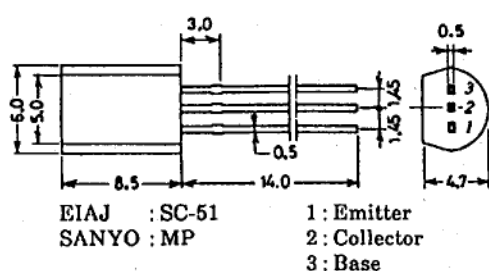
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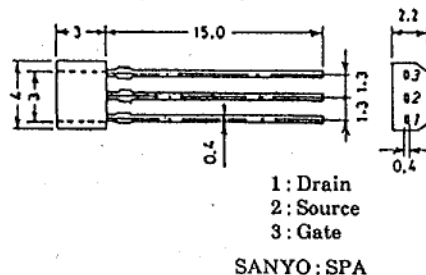
Case Outline 2034/2034A (unit : mm)



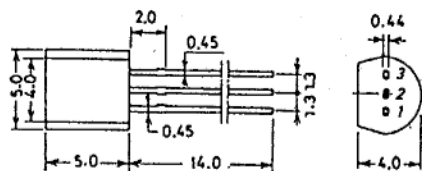
Case Outline 2006A (unit : mm)



Case Outline 2040 (unit : mm)



Case Outline 2061 (unit : mm)



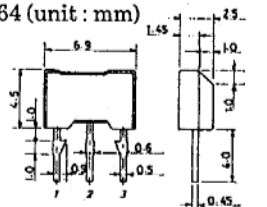
JEDEC : TO-92

EIAJ : SC-43

SANYO : NP

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

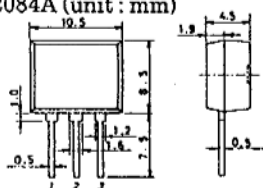
Case Outline 2064 (unit : mm)



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

SANYO : NMP

Case Outline 2084A (unit : mm)



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

SANYO : FLIP