

SANYO**SANYO Semiconductors****DATA SHEET**

PNP/NPN Epitaxial Planar Silicon Transistors

2SA1318/2SC3331 — AF Amp Applications**Use**

- . Capable of being used in the low frequency to high frequency range.

Features

- . Large current capacity and wide ASO.

(): 2SA1318

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

			unit
Collector to Base Voltage	V_{CB0}	(-)60	V
Collector to Emitter Voltage	V_{CEO}	(-)50	V
Emitter to Base Voltage	V_{EBO}	(-)6	V
Collector Current	I_C	(-)200	mA
Collector Current (Pulse)	I_{CP}	(-)400	mA
Collector Dissipation	P_C	500	mW
Junction Temperature	T_J	150	$^{\circ}\text{C}$
Storage Temperature	T_{stg}	-55 to +150	$^{\circ}\text{C}$

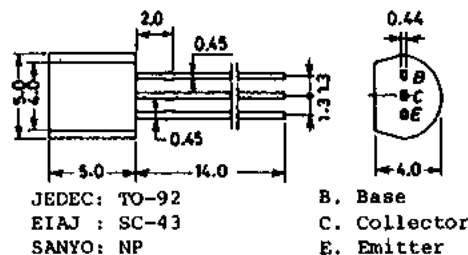
Electrical Characteristics at $T_a=25^{\circ}\text{C}$

			min	typ	max	unit
Collector Cutoff Current	I_{CBO}	$V_{CB}=(-)40\text{V}, I_E=0$		(-)0.1		μA
Emitter Cutoff Current	I_{EBO}	$V_{EB}=(-)5\text{V}, I_C=0$		(-)0.1		μA
DC Current Gain	$h_{FE}(1)$	$V_{CE}=(-)6\text{V}, I_C=(-)1\text{mA}$	100 [*] (100)		800 [*] (560)	
	$h_{FE}(2)$	$V_{CE}=(-)6\text{V}, I_C=(-)0.1\text{mA}$	70			
Gain-Bandwidth Product	f_T	$V_{CE}=(-)6\text{V}, I_C=(-)10\text{mA}$		200		MHz
Output Capacitance	C_{ob}	$V_{CB}=(-)6\text{V}, f=1\text{MHz}$		3.0 (4.5)		pF

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* The 2SA1318/2SC3331 are classified by 1mA h_{FE} as follows:

2SA1318	100	R	200	140	S	280	200	T	400	280	U	560			
2SC3331	100	R	200	140	S	280	200	T	400	280	U	560	400	V	800

**Case Outline 2003A
(unit:mm)**

Specifications and information herein are subject to change without notice.

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			min	typ	max	unit
Collector to Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C=(-)100mA, I_B=(-)10mA$		(-)	0.3	V
Base to Emitter Saturation Voltage	$V_{BE(sat)}$	$I_C=(-)100mA, I_B=(-)10mA$		(-)	1.0	V
Collector to Base Breakdown Voltage	$V_{(BR)CBO}$	$I_C=(-)10\mu A, I_E=0$	(-)	60		V
Collector to Emitter Breakdown Voltage	$V_{(BR)CEO}$	$I_C=(-)1mA, R_{BE}=\infty$	(-)	50		V
Emitter to Base Breakdown Voltage	$V_{(BR)EBO}$	$I_E=(-)10\mu A, I_C=0$	(-)	6		V

