

SANYO

No.1942A

2SA1391/2SC3382

PNP/NPN Epitaxial Planar Silicon Transistors

Low-Noise AF Amp Applications

Features

- . Adoption of FBET process
- . AF amp
- . Low-noise use

(): 2SA1391

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_{EBO}	(-)6	V
Collector Current	I_C	(-)200	mA
Collector Current(Pulse)	I_{CP}	(-)400	mA
Collector Dissipation	P_C	400	mW
Junction Temperature	T_J	150	°C
Storage Temperature	T_{stg}	-55 to +150	°C

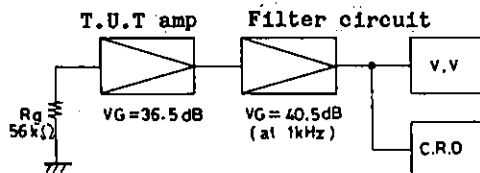
Electrical Characteristics at Ta=25°C

			min	typ	max	unit
Collector Cutoff Current	I_{CBO}	$V_{CB}=(-)40V, I_E=0$		(-)0.1		μA
Emitter Cutoff Current	I_{EBO}	$V_{EB}=(-)5V, I_C=0$		(-)0.1		μA
DC Current Gain	$h_{FE}(1)$	$V_{CE}=(-)6V, I_C=(-)1mA$	100*		560*	
	$h_{FE}(2)$	$V_{CE}=(-)6V, I_C=(-)0.1mA$	70			
Gain-Bandwidth Product	f_T	$V_{CE}=(-)6V, I_C=(-)10mA$		250		MHz
				(200)		MHz
C-E Saturation Voltage	$V_{CE}(sat)$	$I_C=(-)100mA, I_B=(-)10mA$		(-)0.3		V
B-E Saturation Voltage	$V_{BE}(sat)$	$I_C=(-)100mA, I_B=(-)10mA$		(-)1.0		V
Output Capacitance	c_{ob}	$V_{CB}=(-)6V, f=1MHz$		2.7		pF
				(3.7)		pF
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	$V_{(BR)EBO}$	$I_E=(-)10\mu A, I_C=0$		(-)6		V
Noise Level	$V_{NO(ave)}$	$V_{CC}=(-)30V, I_C=(-)1mA, R_g=56k\Omega, V_G=77dB/1kHz$			40	mV
					(35)	mV
Noise Peak Level	$V_{NO(peak)}$	$V_{CC}=(-)30V, I_C=(-)1mA, R_g=56k\Omega, V_G=77dB/1kHz$			280	mV
					(200)	mV

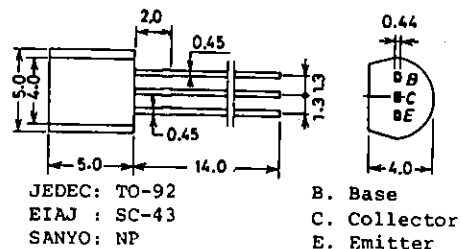
*: The 2SA1391/2SC3382 are classified by 1mA h_{FE} as follows:

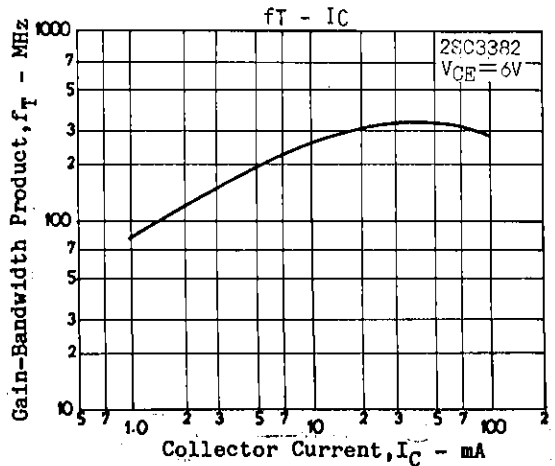
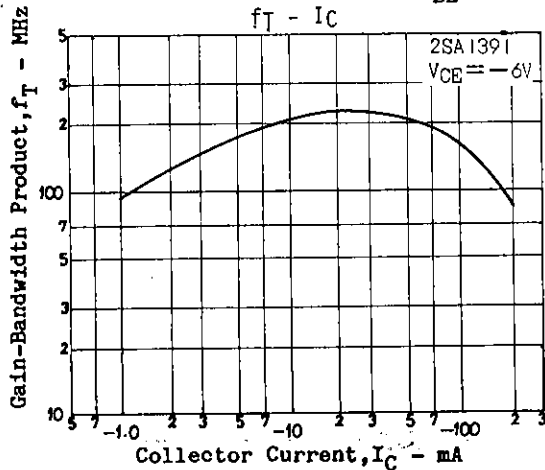
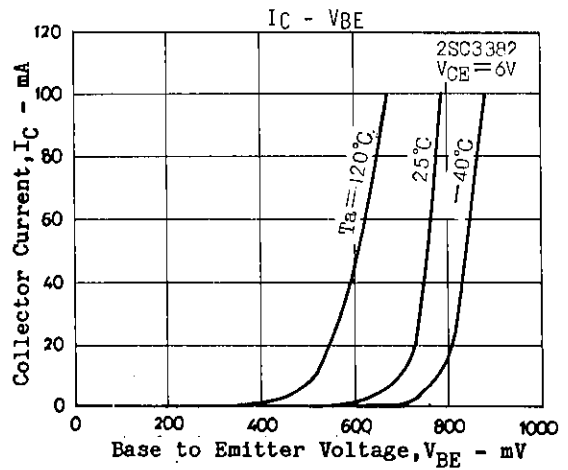
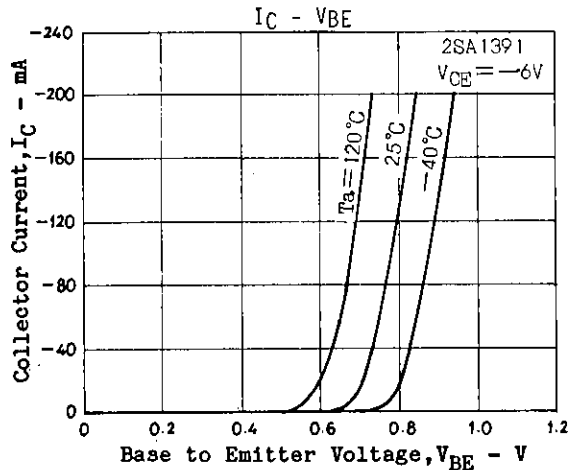
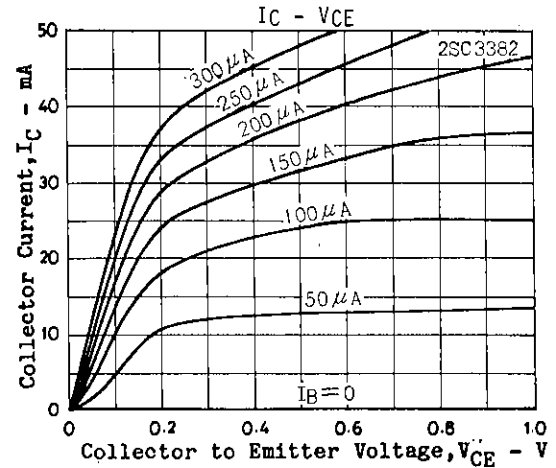
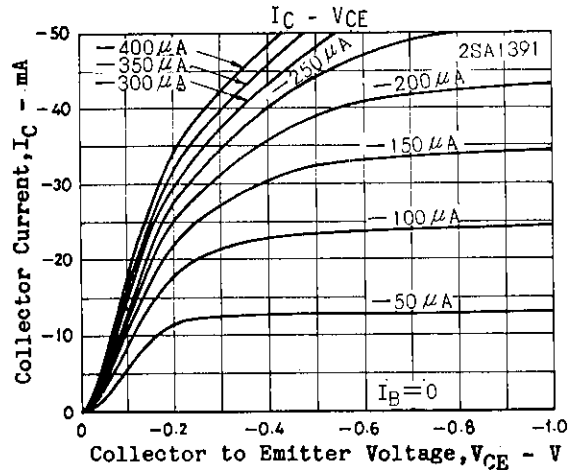
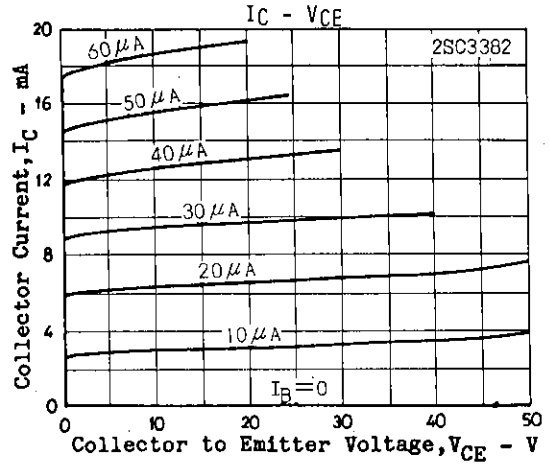
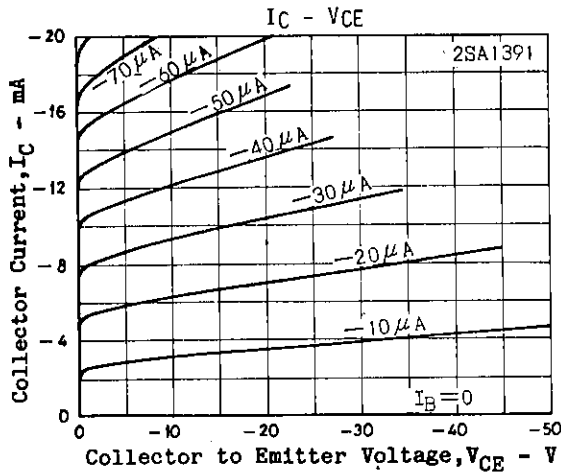
100	R	200	140	S	280	200	T	400	280	U	560
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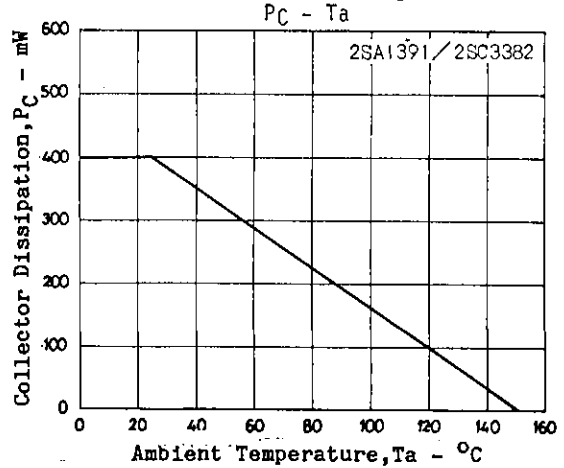
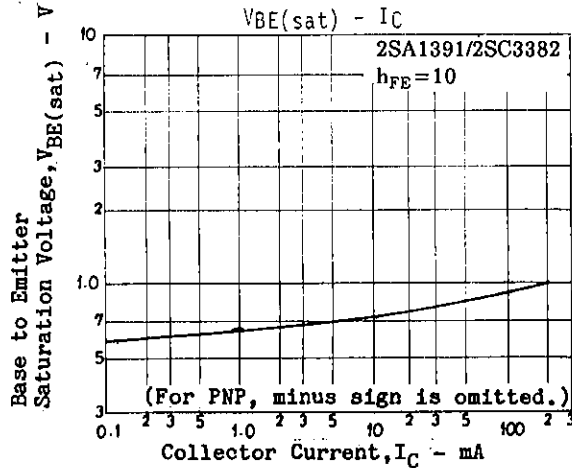
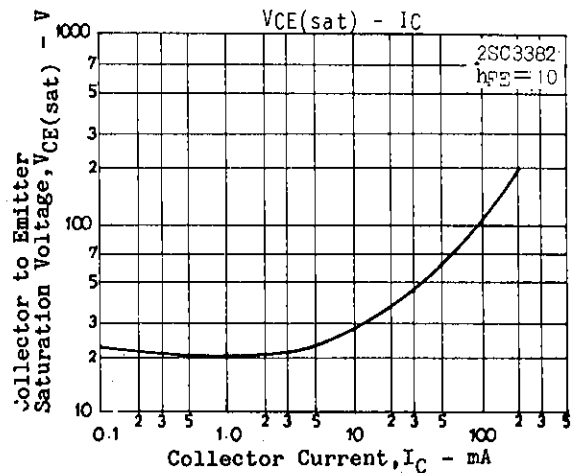
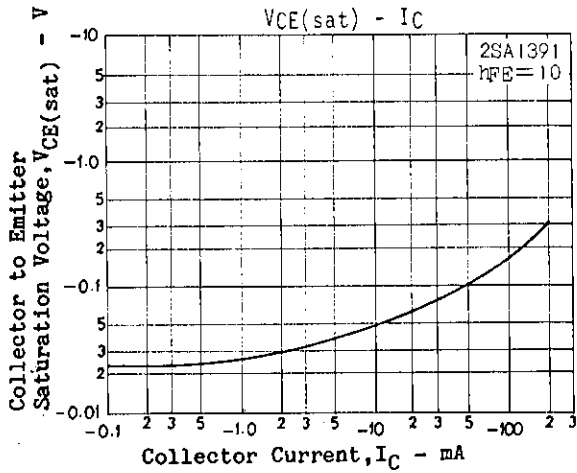
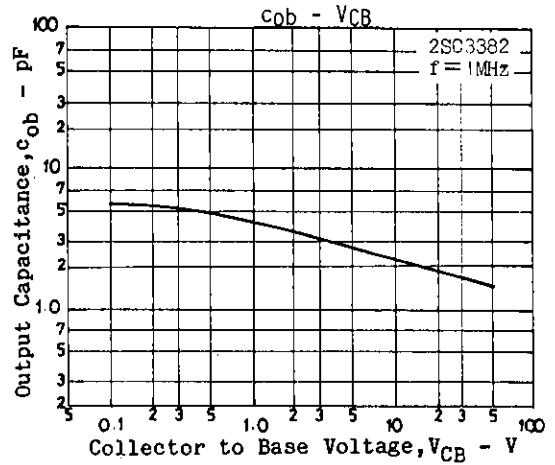
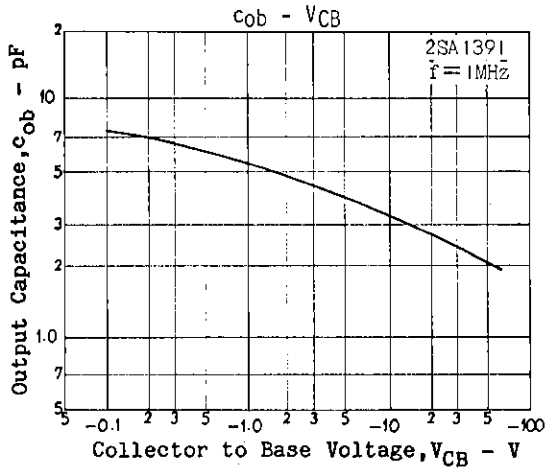
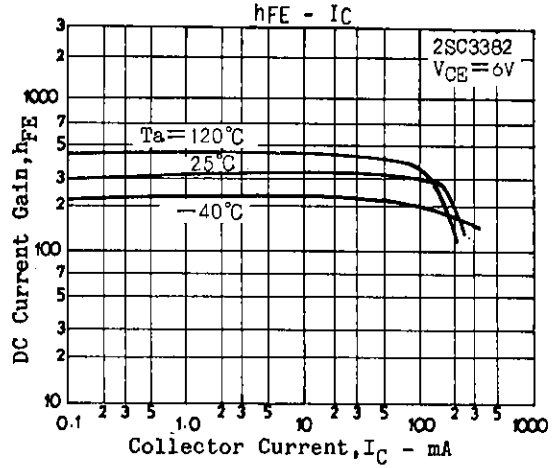
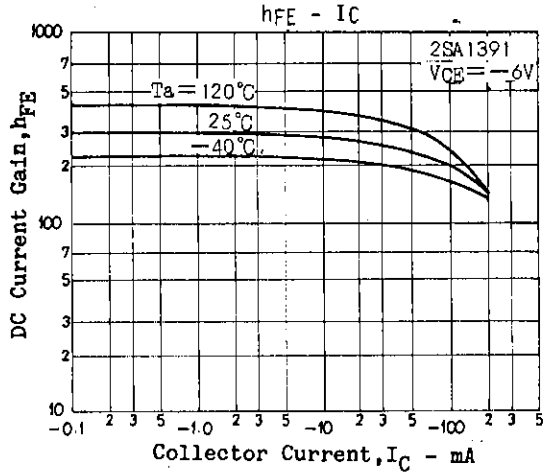
Noise Test Circuit

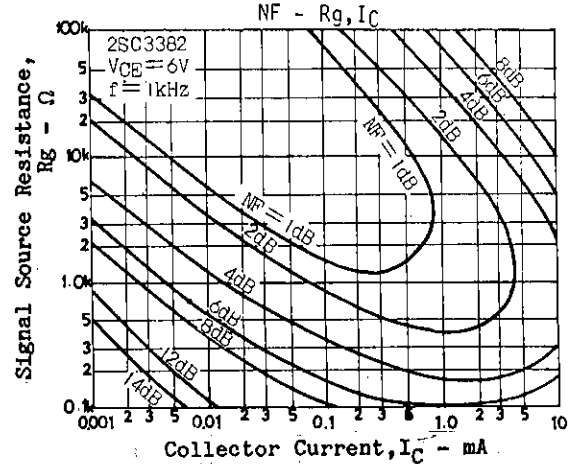
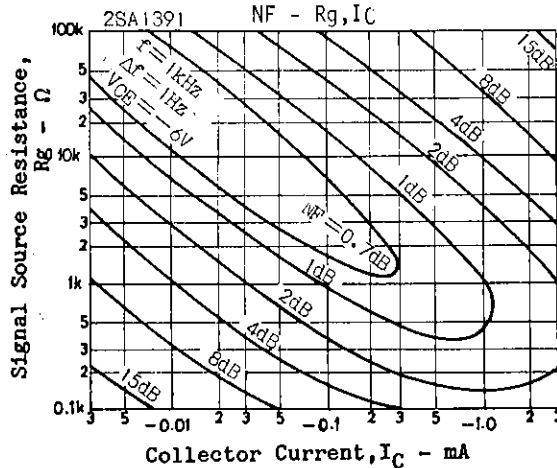
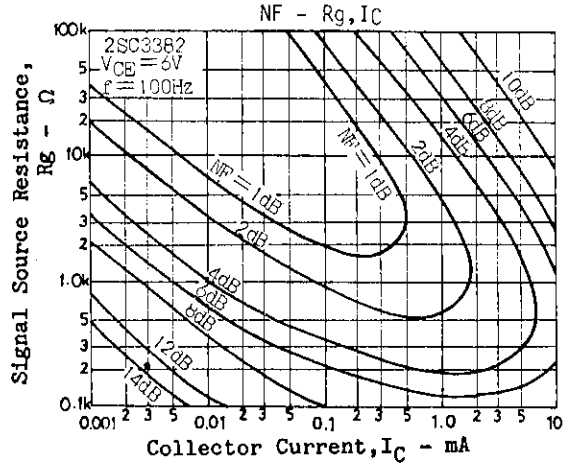
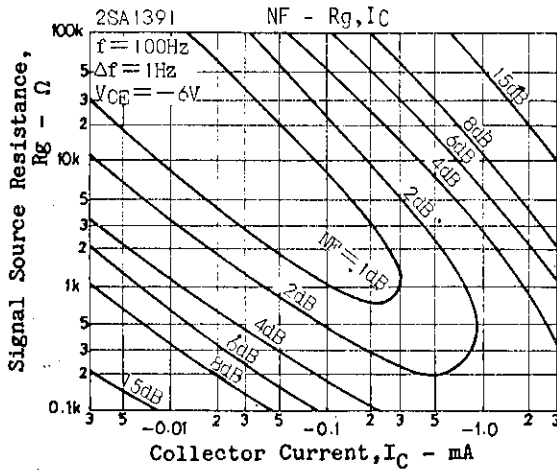
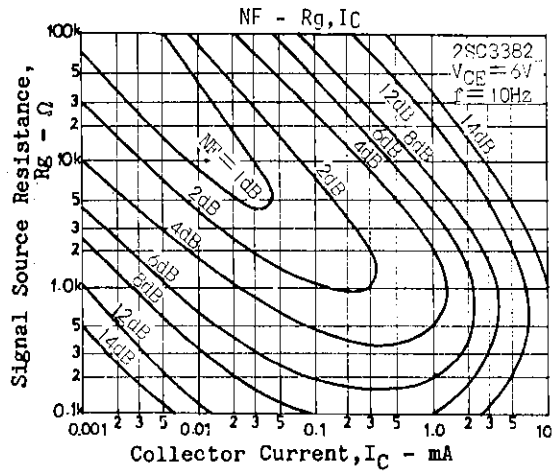
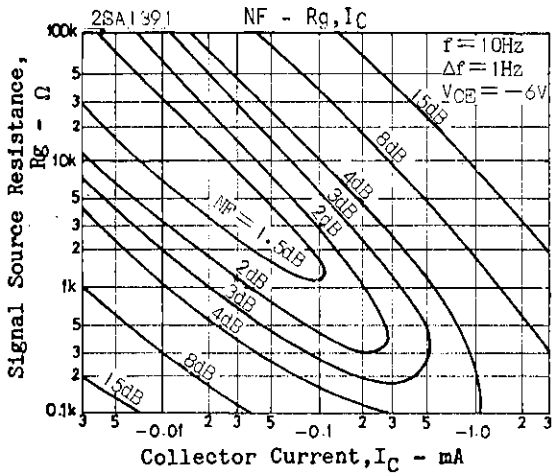
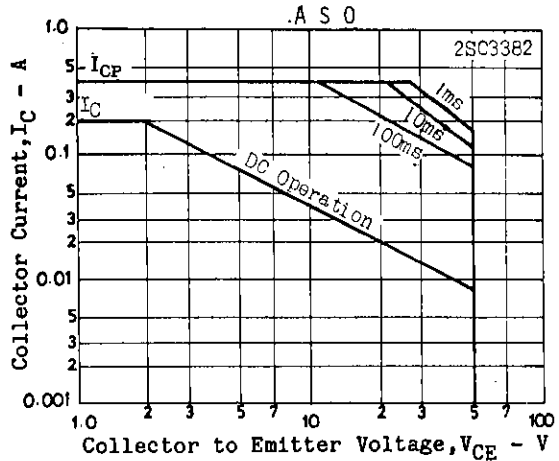
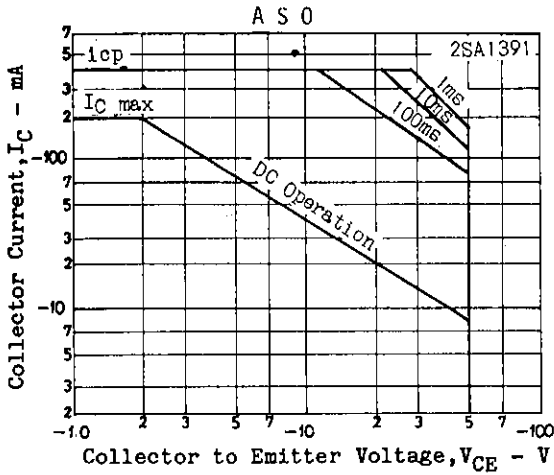


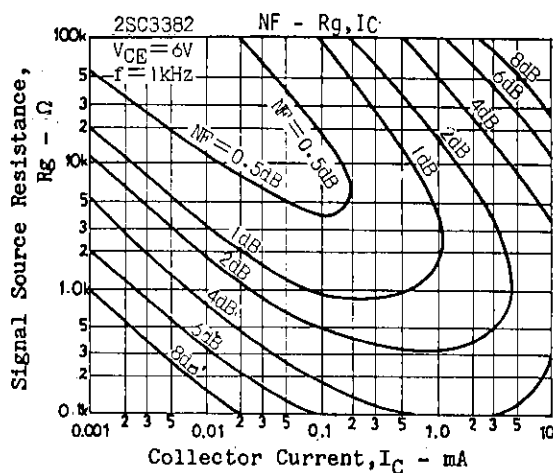
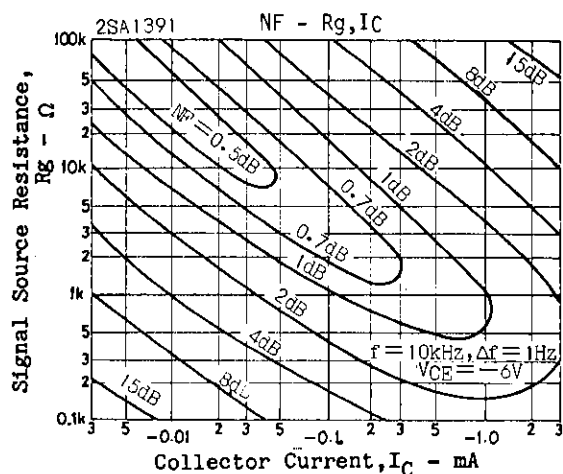
Package Dimensions 2003A
(unit: mm)











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