

**2SC4399**

High-Frequency General-Purpose Amplifier Applications

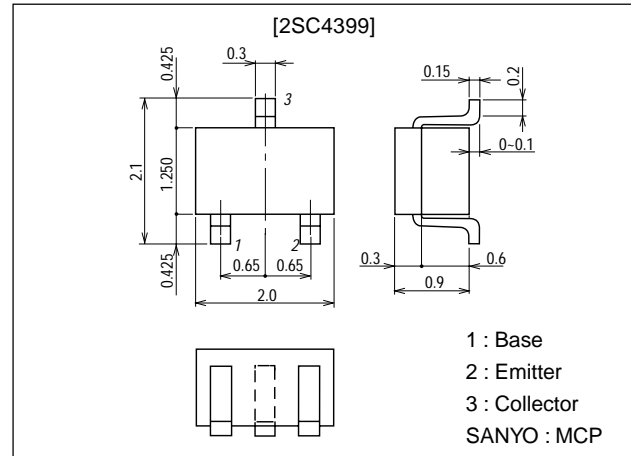
Features

- High power gain : PG=25dB typ (f=100MHz).
- Very small-sized package permitting the 2SC4399-applied sets to be made small and slim.

Package Dimensions

unit:mm

2059B



Specifications

Absolute Maximum Ratings at Ta = 25°C

Parameter	Symbol	Conditions	Ratings	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		150	mW
Junction Temperature	T_J		150	°C
Storage Temperature	T_{stg}		-55 to +150	°C

Electrical Characteristics at Ta = 25°C

Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Collector Cutoff Current	I_{CBO}	$V_{CB}=10V, I_E=0$			0.1	μA
Emitter Cutoff Current	I_{EBO}	$V_{EB}=4V, I_C=0$			0.1	μA
DC Current Gain	h_{FE}	$V_{CE}=6V, I_C=1mA$	60*		270*	
Gain-Bandwidth Product	f_T	$V_{CE}=6V, I_C=1mA$	200	320		MHz
Reverse transfer Capacitance	C_{re}	$V_{CB}=6V, f=1MHz$		0.9	1.2	pF
Base-to-Collector Time Constant	$r_{bb}C_c$	$V_{CB}=6V, I_C=1mA, f=31.9MHz$		12	20	ps
Power Gain	PG	$V_{CB}=6V, I_C=1mA, f=100MHz$		25		dB
Noise Figure	NF	$V_{CB}=6V, I_C=1mA, f=100MHz$		3.0		dB

* : The 2SC4399 is classified by 1mA h_{FE} as follows :

60	3	120	90	4	180	135	5	270
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Marking : F

 h_{FE} rank : 3, 4, 5

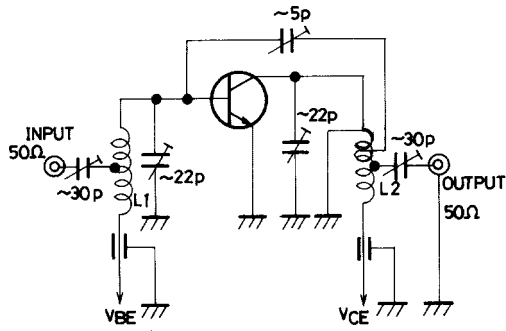
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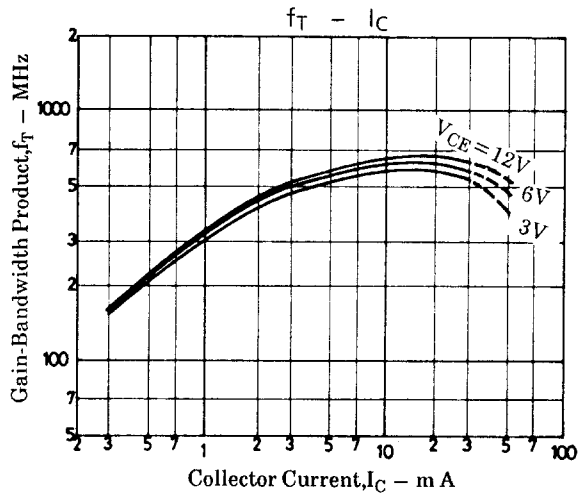
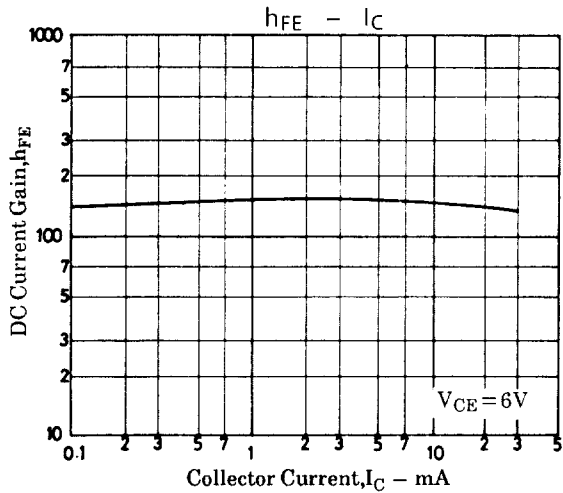
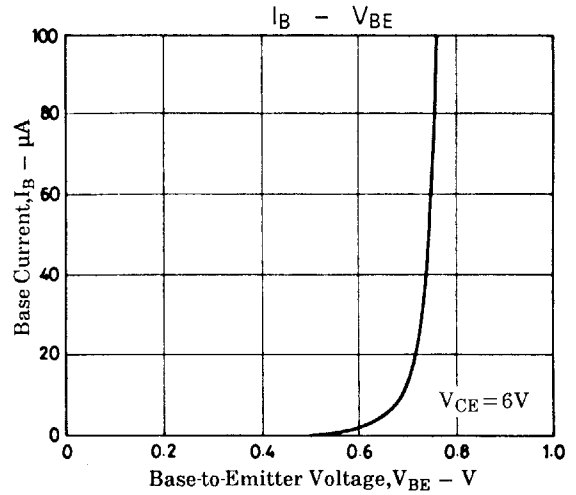
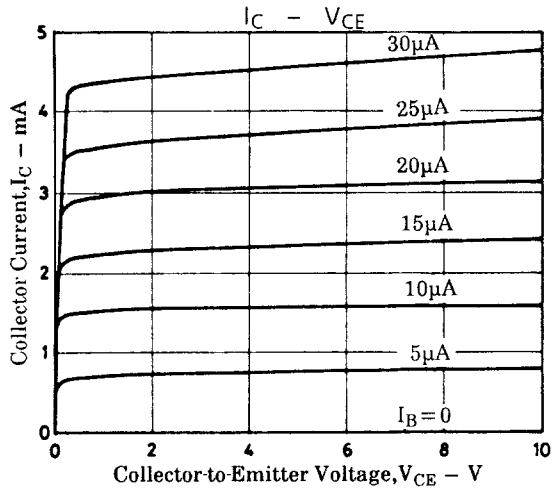
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NF, PG Test Circuit

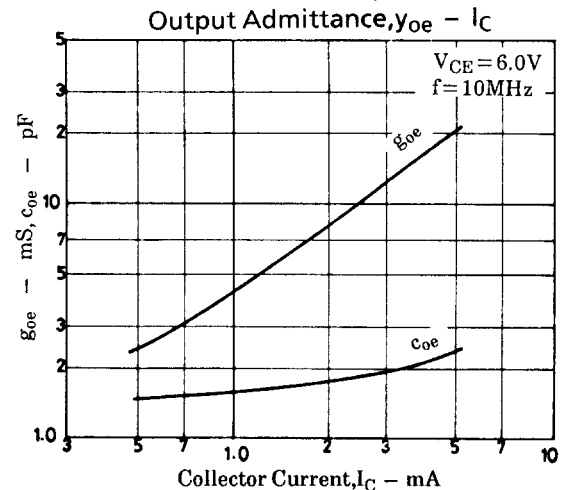
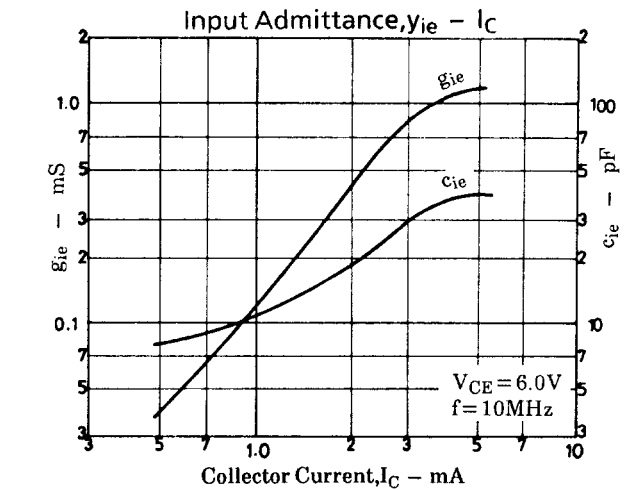
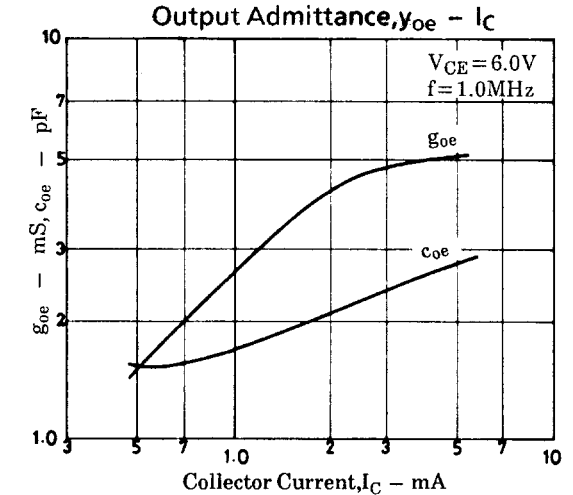
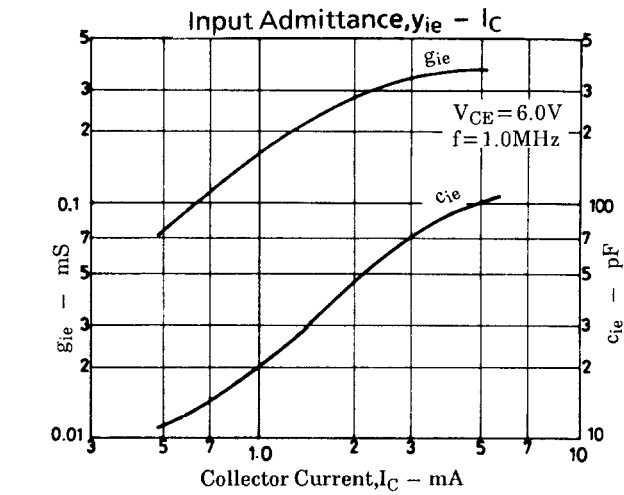
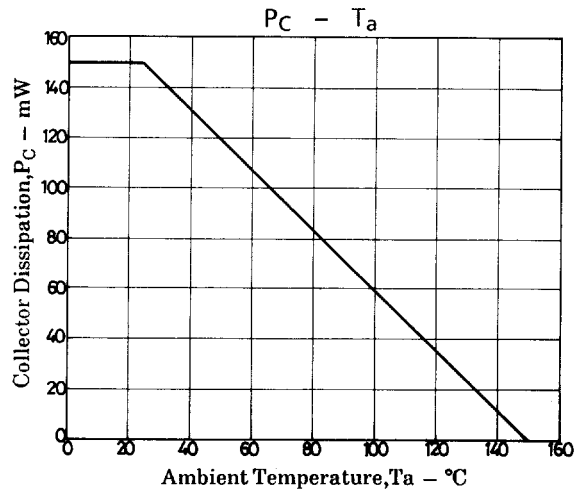
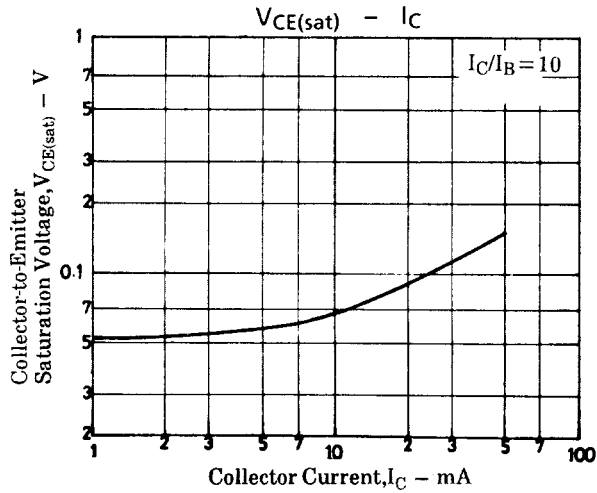
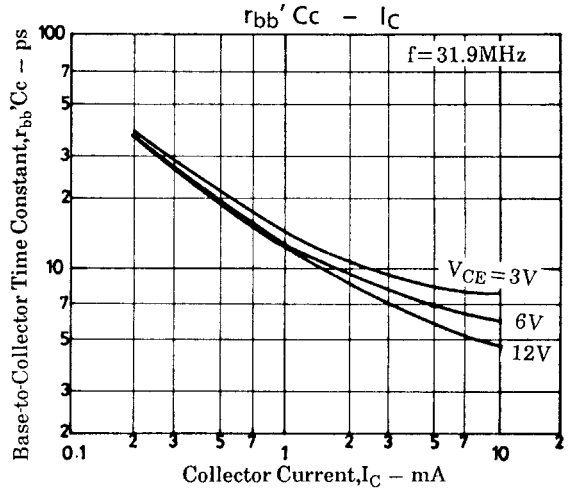
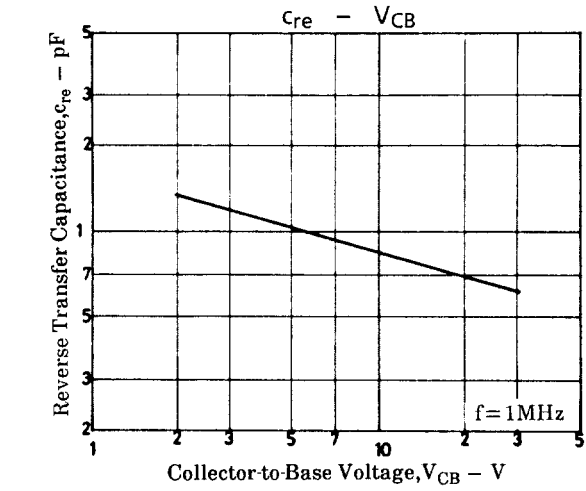


- L1: 1mm \varnothing plated wire 10mm \varnothing 4T, tap: 2T from V_{BE} side
- L2: 1mm \varnothing plated wire 10mm \varnothing 7T, tap: 1T from V_{CE} side
- L3: 1mm \varnothing enameled wire 10mm \varnothing 3T

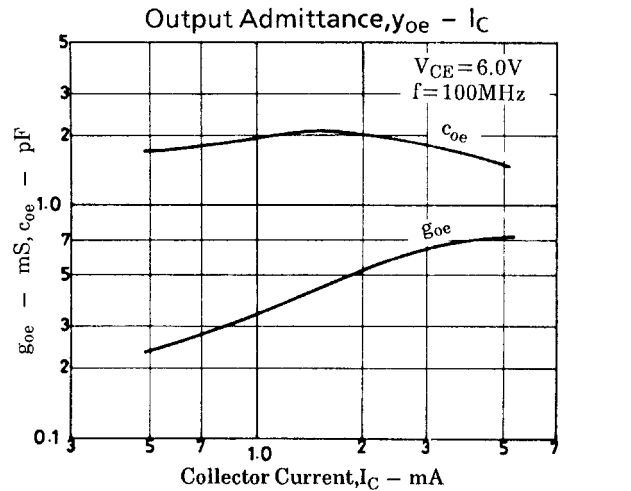
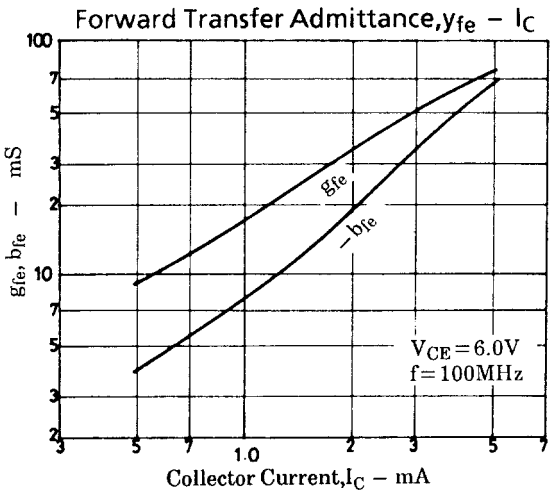
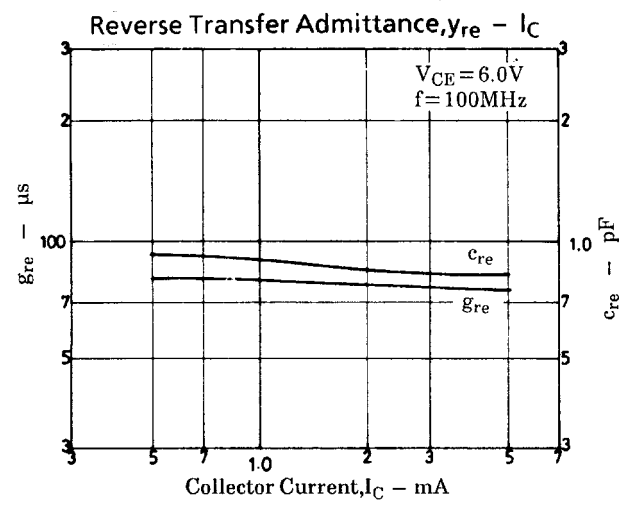
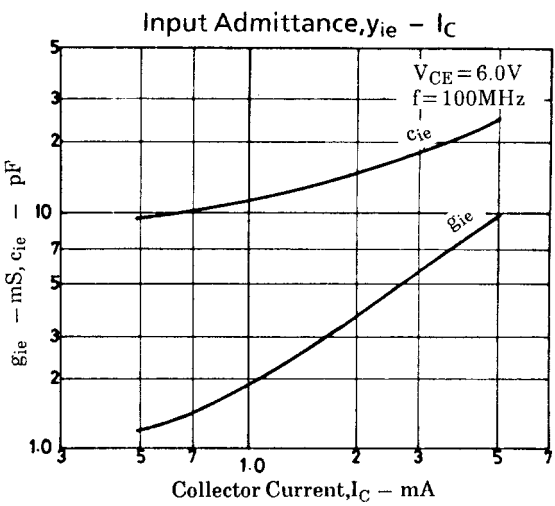
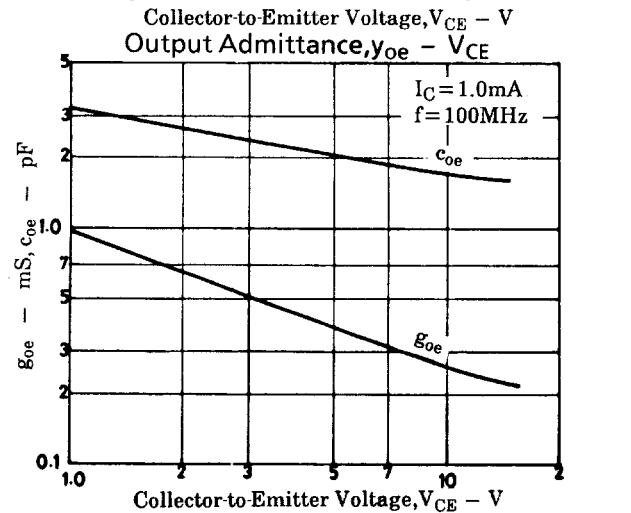
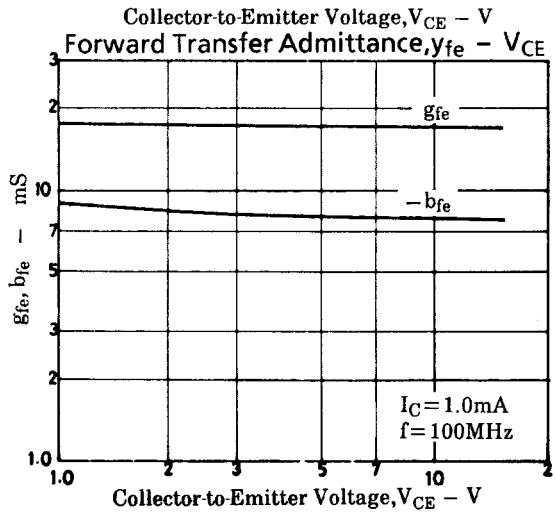
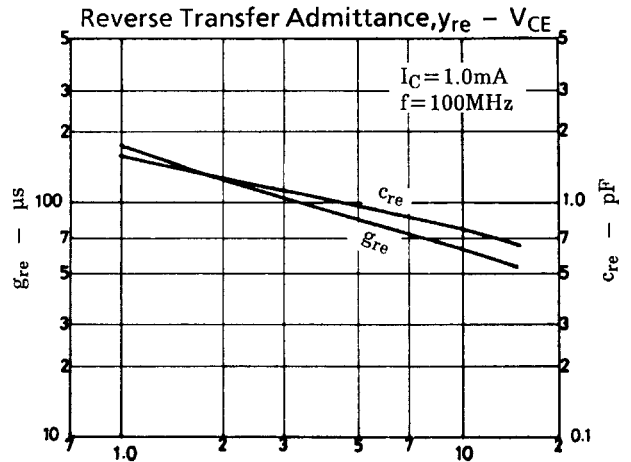
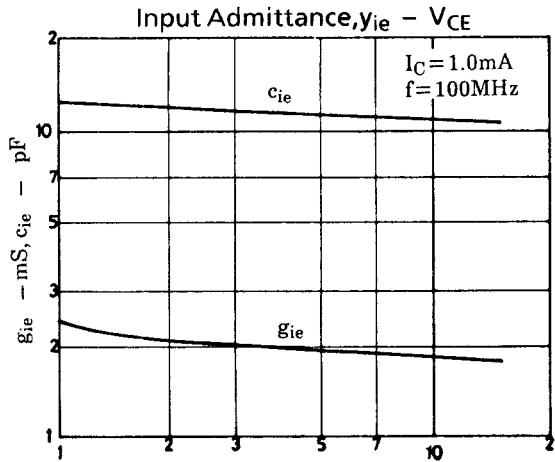
Unit (capacitance : F)

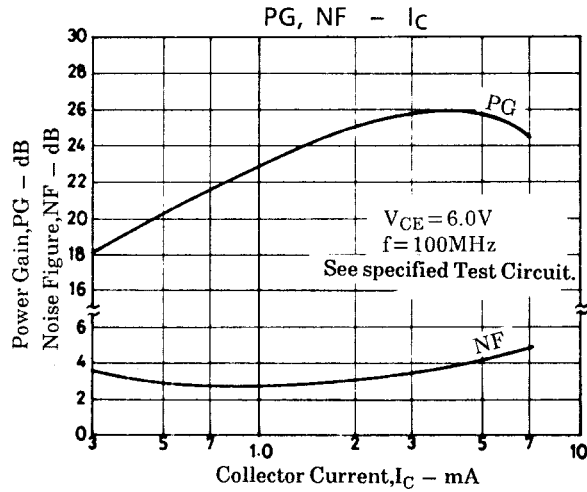


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