

<b>SANYO</b>	No.3020	<b>2SC4399</b>
		NPN Epitaxial Planar Silicon Transistor High-Frequency General-Purpose Amp 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

**Absolute Maximum Ratings at Ta=25°C**

			unit
Collector to Base Voltage	V <sub>CB0</sub>	30	V
Collector to Emitter Voltage	V <sub>CE0</sub>	20	V
Emitter to Base Voltage	V <sub>EB0</sub>	5	V
Collector Current	I <sub>C</sub>	30	mA
Collector Dissipation	P <sub>C</sub>	150	mW
Junction Temperature	T <sub>j</sub>	150	°C
Storage Temperature	T <sub>stg</sub>	-55 to +150	°C

**Electrical Characteristics at Ta=25°C**

			min	typ	max	unit
Collector Cutoff Current	I <sub>CB0</sub>	V <sub>CB</sub> =10V, I <sub>E</sub> =0			0.1	μA
Emitter Cutoff Current	I <sub>EB0</sub>	V <sub>EB</sub> =4V, I <sub>C</sub> =0			0.1	μA
DC Current Gain	h <sub>FE</sub>	V <sub>CE</sub> =6V, I <sub>C</sub> =1mA	60*		270*	
Gain-Bandwidth Product	f <sub>T</sub>	V <sub>CE</sub> =6V, I <sub>C</sub> =1mA	200	320		MHz
Reverse Transfer Capacitance	c <sub>re</sub>	V <sub>CB</sub> =6V, f=1MHz		0.9	1.2	pF
Base to Collector Time Constant	r <sub>bb</sub> 'C <sub>c</sub>	V <sub>CE</sub> =6V, I <sub>C</sub> =1mA, f=31.9MHz		12	20	ps
Power Gain	PG	V <sub>CE</sub> =6V, I <sub>C</sub> =1mA, f=100MHz		25		dB
Noise Figure	NF	V <sub>CE</sub> =6V, I <sub>C</sub> =1mA, f=100MHz		3.0		dB

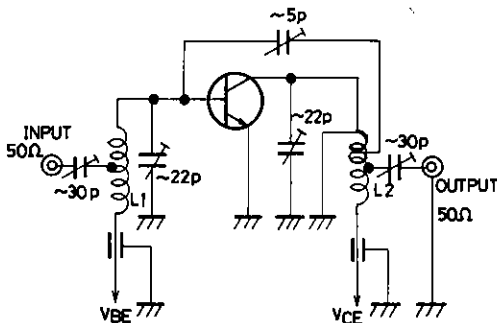
\* : The 2SC4399 is classified by 1mA h<sub>FE</sub> as follows:

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

h<sub>FE</sub> rank : 3,4,5

**NF,PG Test Circuit**

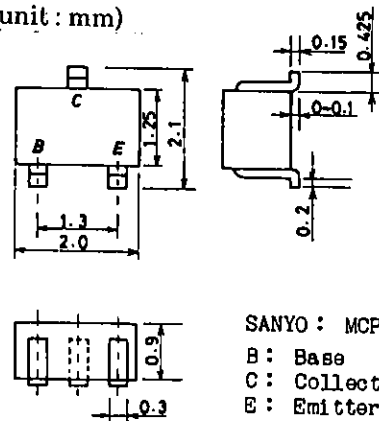


- L1 : 1mmϕ plated wire 10mmϕ 4T, tap : 2T from V<sub>BE</sub> side
- L2 : 1mmϕ plated wire 10mmϕ 7T, tap : 1T from V<sub>CE</sub> side
- L3 : 1mmϕ enameled wire 10mmϕ 3T

Unit (Capacitance : F)

**Package Dimensions 2059A**

(unit : mm)

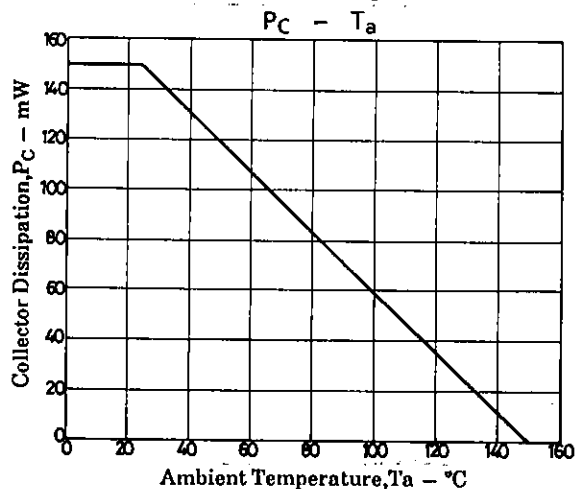
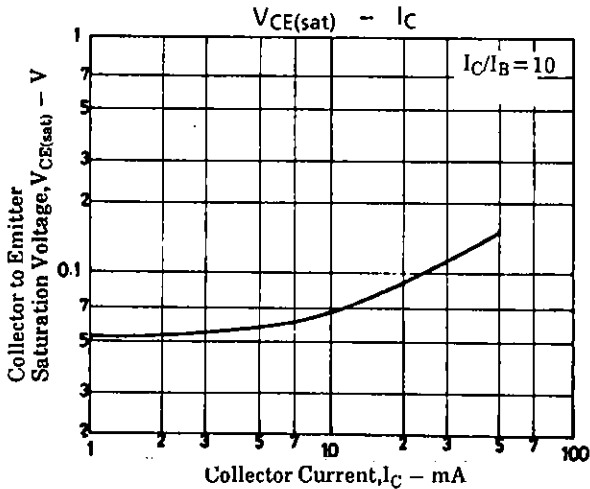
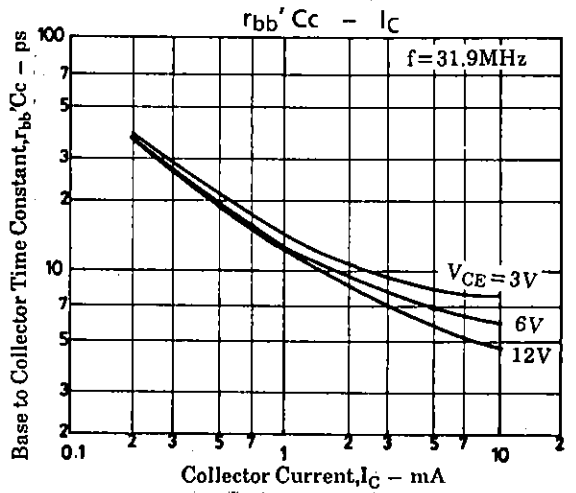
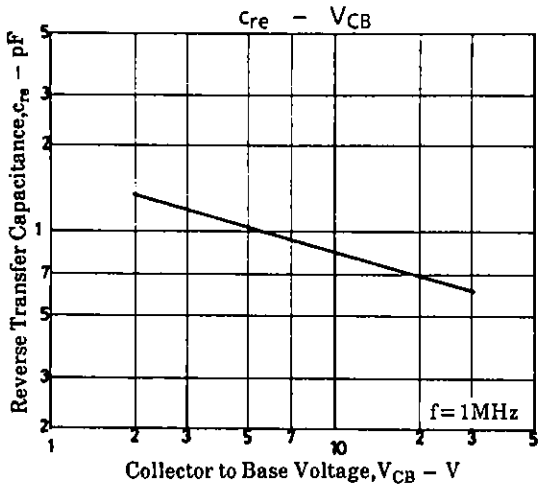
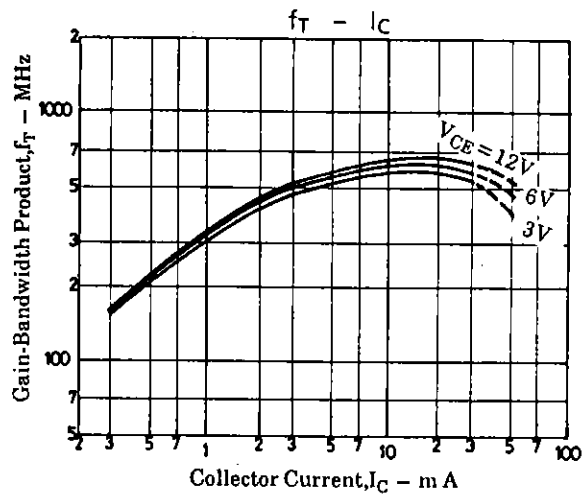
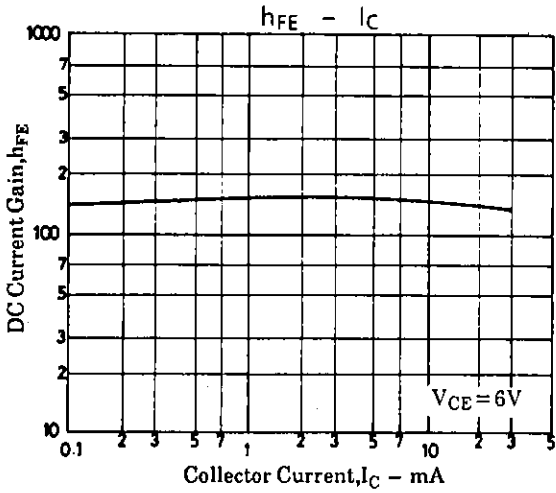
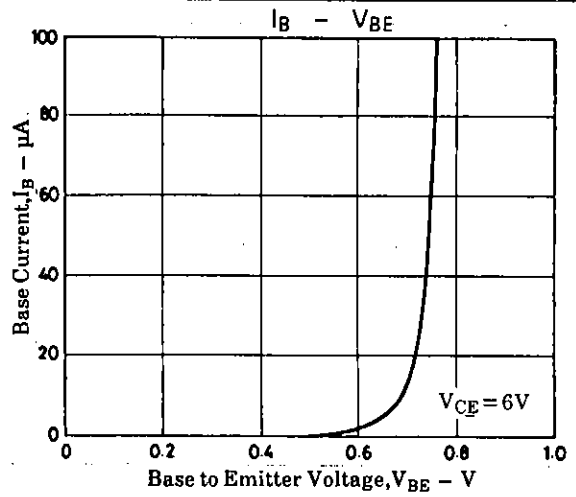
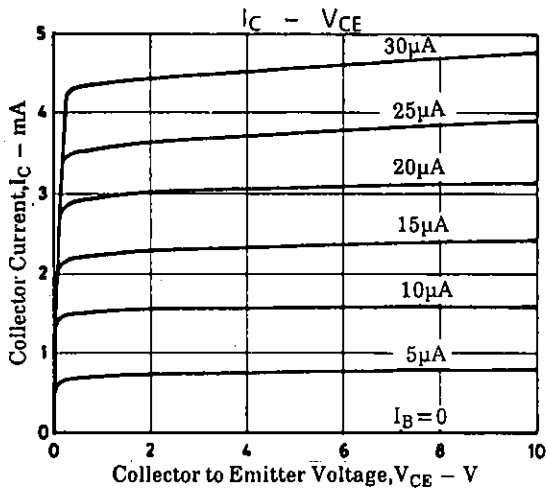


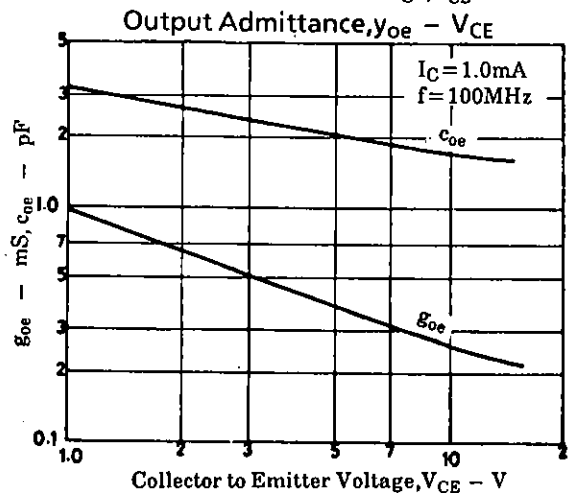
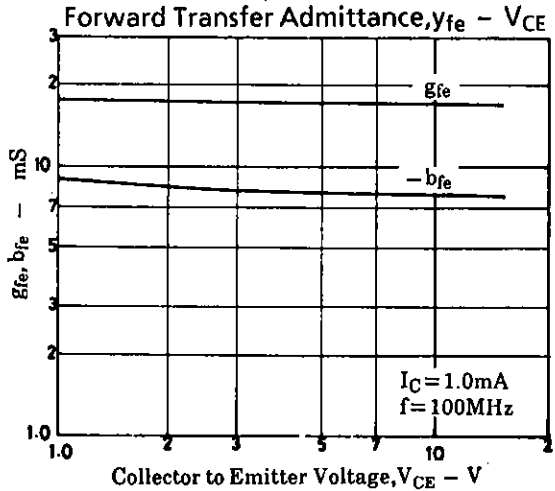
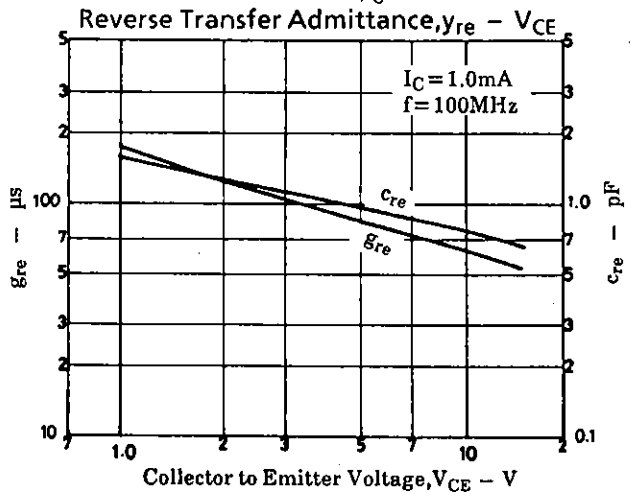
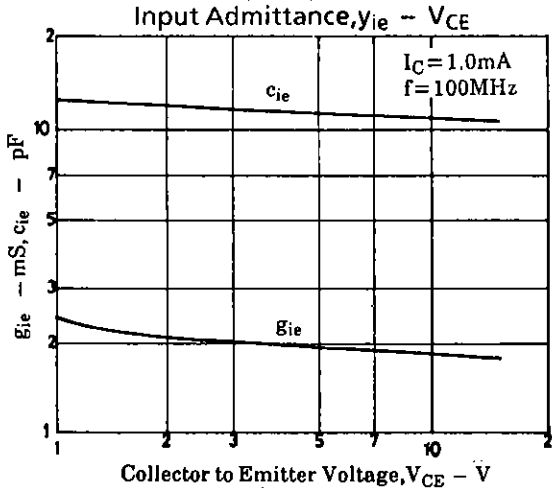
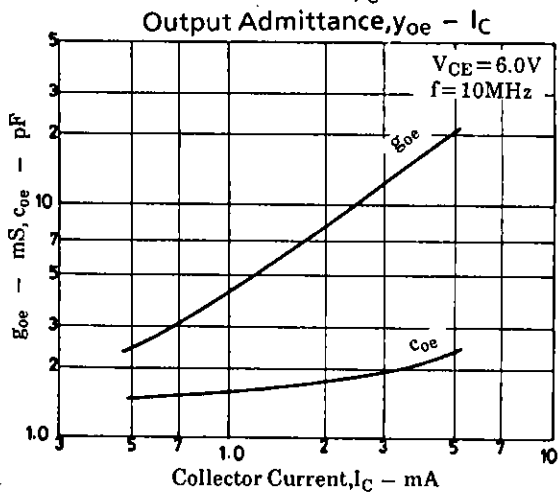
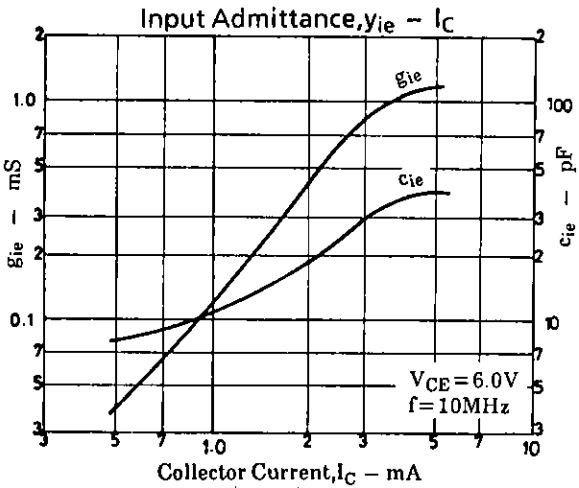
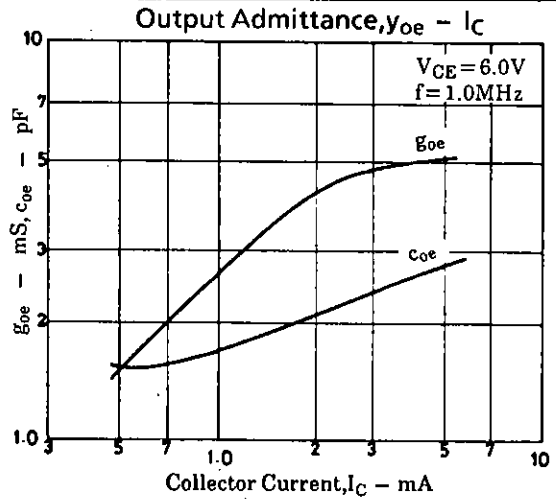
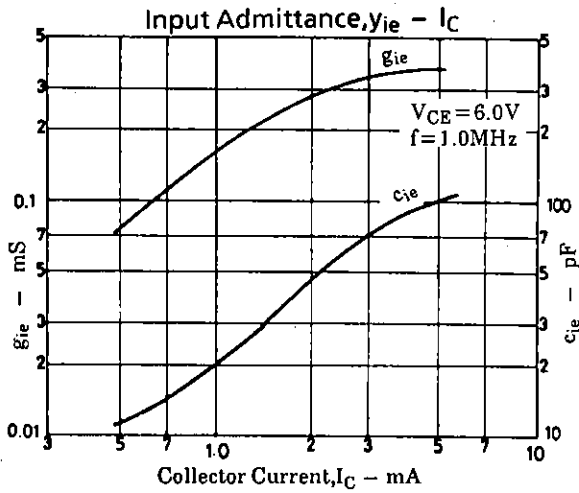
SANYO : MCP

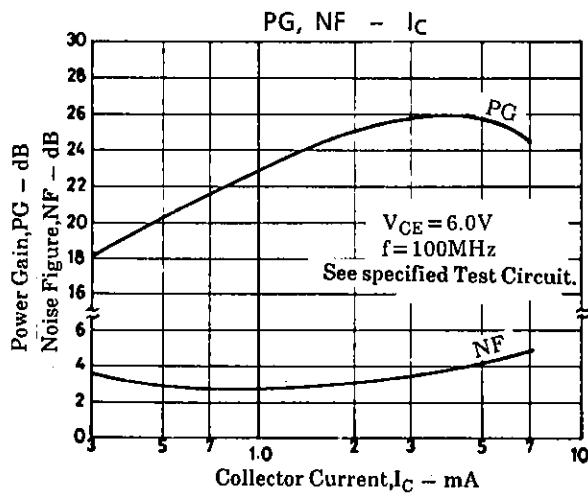
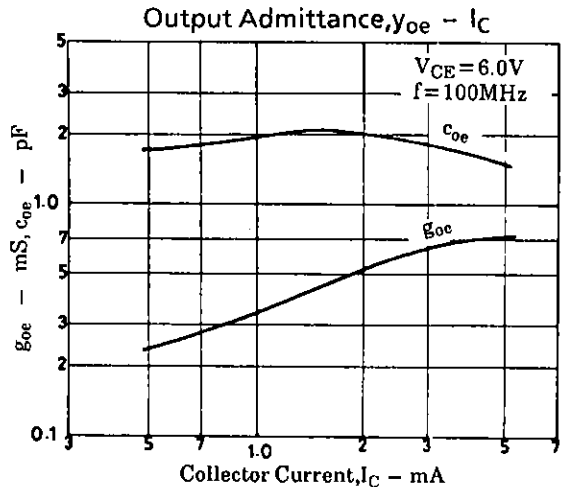
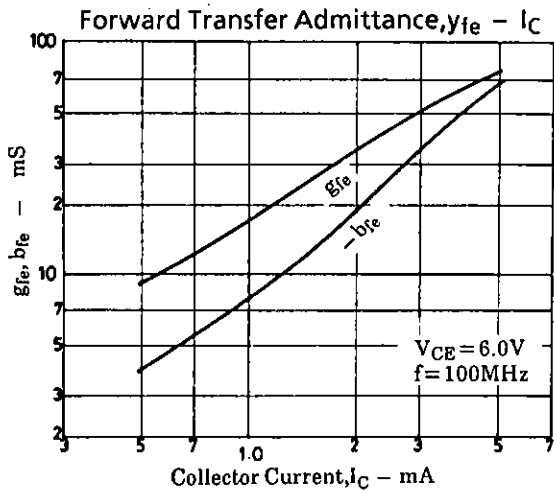
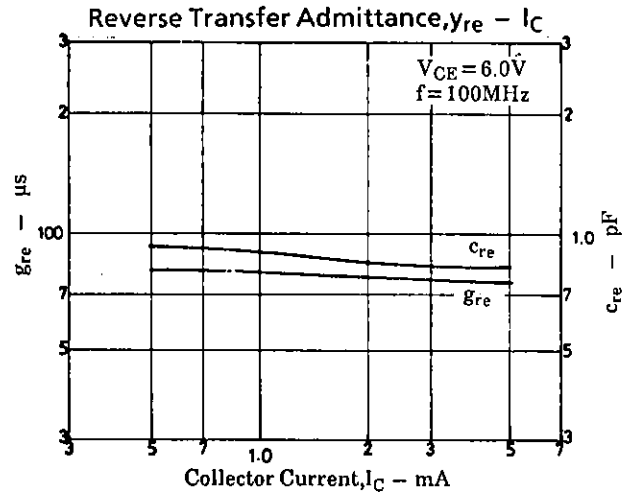
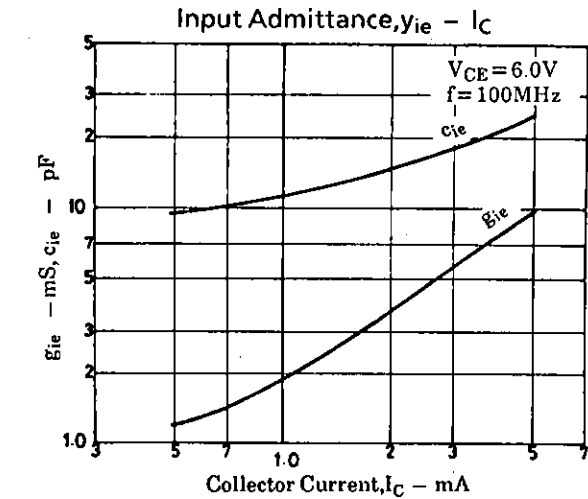
B : Base

C : Collector

E : Emitter







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