

<b>SANYO</b>	No.2798A	<h1 style="margin: 0;">2SA1688</h1> <p style="margin: 0;">PNP Epitaxial Planar Silicon Transistor</p> <h2 style="margin: 0;">High-Frequency General-Purpose Amp Applications</h2>
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**Applications**

- Ideally suited for use in FM RF amplifiers, mixers, oscillators, converters, and IF amplifiers.

**Features**

- High power gain : PG = 22dB typ (f = 100MHz).
- Very small-sized package permitting 2SA1688-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>CEO</sub>	-20	V
Emitter-to-Base Voltage	V <sub>EBO</sub>	-5	V
Collector Current	I <sub>C</sub>	-30	mA
Collector Dissipation	P <sub>C</sub>	150	W
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>EBO</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	150	230		MHz
Reverse Transfer Capacitance	C <sub>re</sub>	V <sub>CB</sub> = -6V, f = 1MHz		1.1	1.7	pF
Base-to-Collector Time Constant	τ <sub>bb</sub> 'C <sub>c</sub>	V <sub>CE</sub> = -6V, I <sub>C</sub> = -1mA, f = 31.9MHz		11	20	ps
Voltage Gain	PG	See specified Test Circuit. V <sub>CE</sub> = -6V, I <sub>C</sub> = -1mA, f = 100MHz		22		dB
Noise Figure	NF			2.5		dB

※ : The 2SA1688 is classified by 1mA h<sub>FE</sub> as follows :

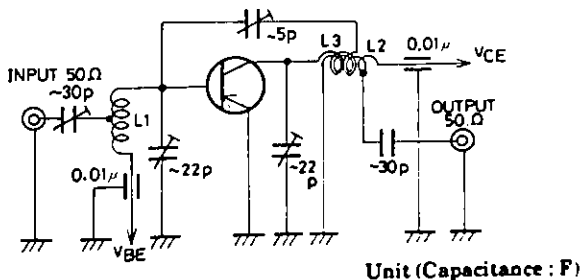
60	3	120	90	4	180	135	5	270
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Note) Marking : E

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

For CP package version, use the 2SA1256.

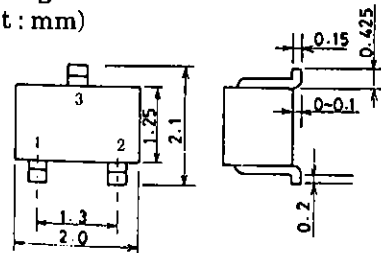
**NF, PG Test Circuit**



- L1 : 1mmϕ plated wire 10mm 5T, tap : 2T from V<sub>BE</sub> side
- L2 : 1mmϕ plated wire 10mm 7T, tap : 1T from V<sub>CE</sub> side
- L3 : 1mmϕ enamel wire 10mm 3T

**Package Dimensions 2059A**

(unit : mm)

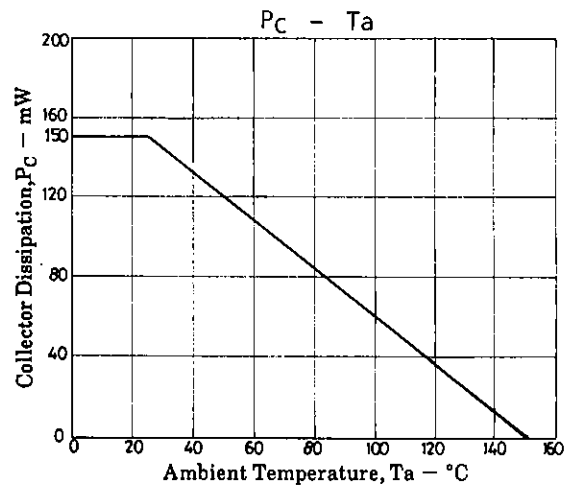
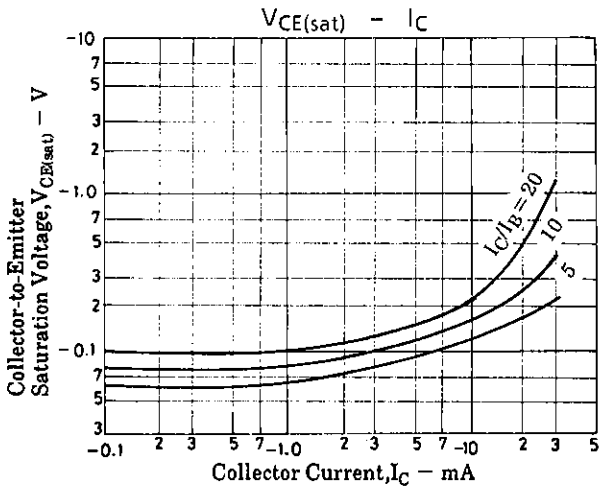
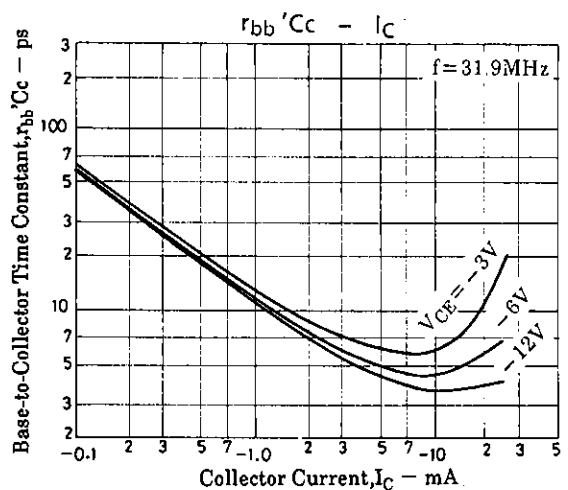
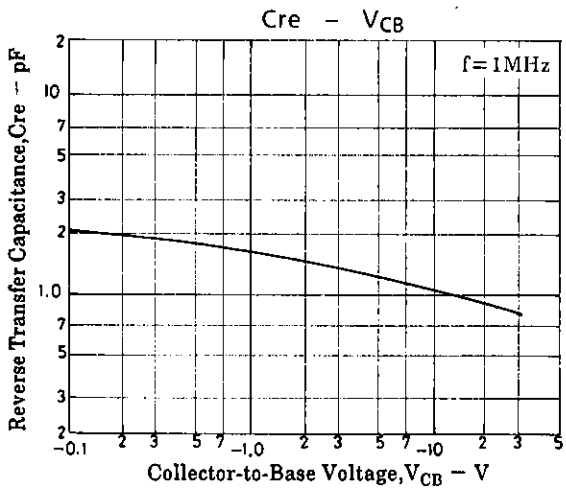
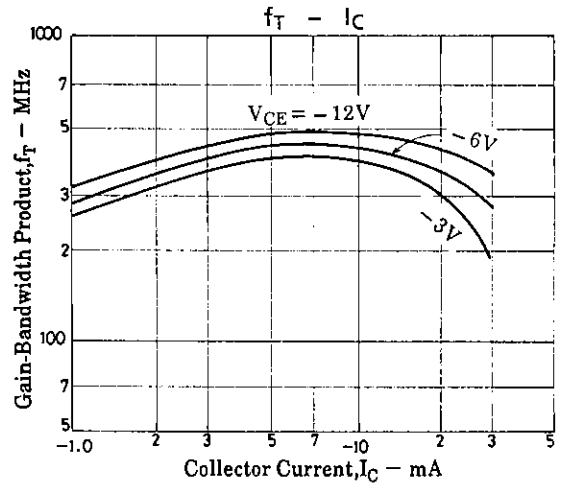
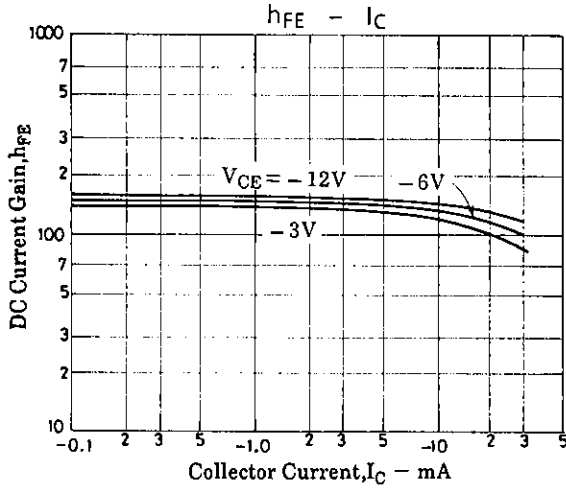
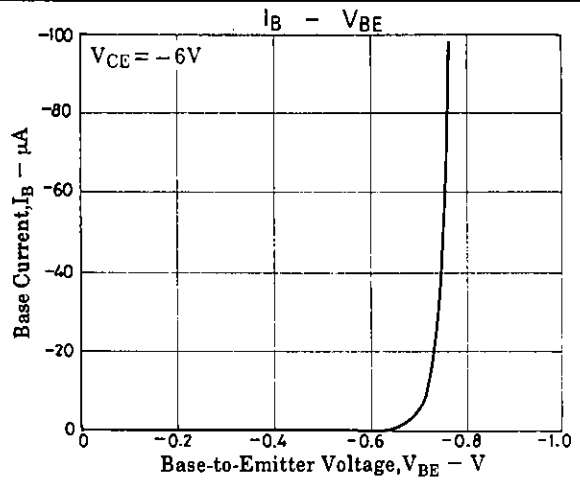
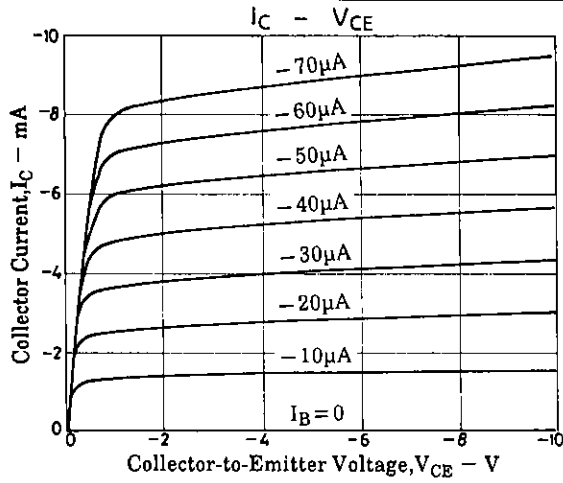


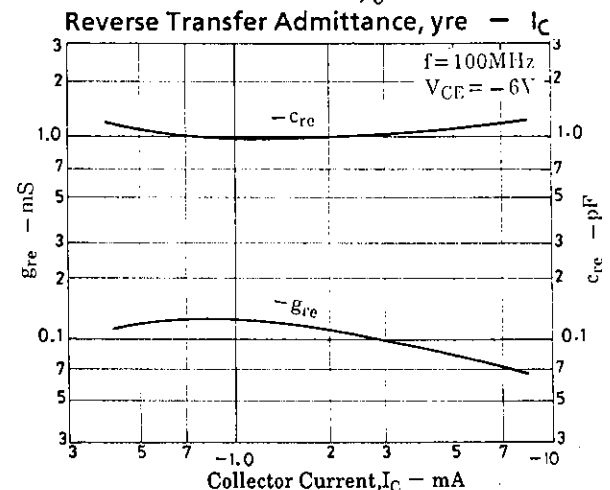
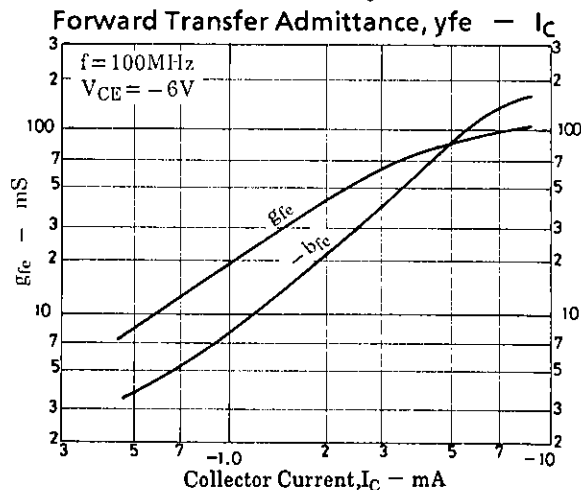
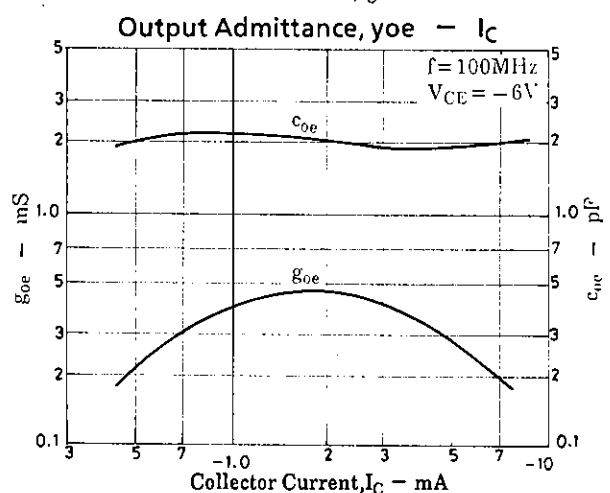
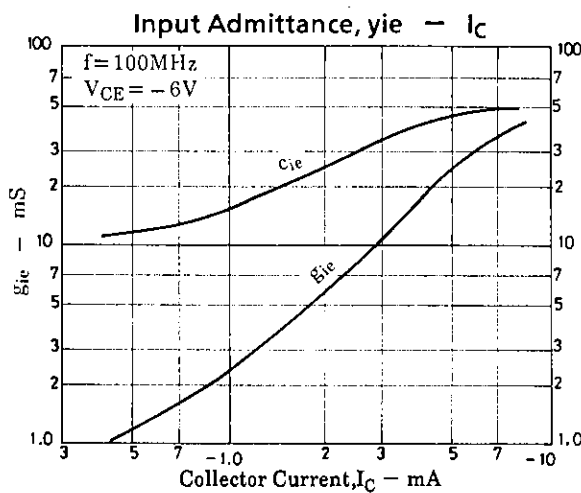
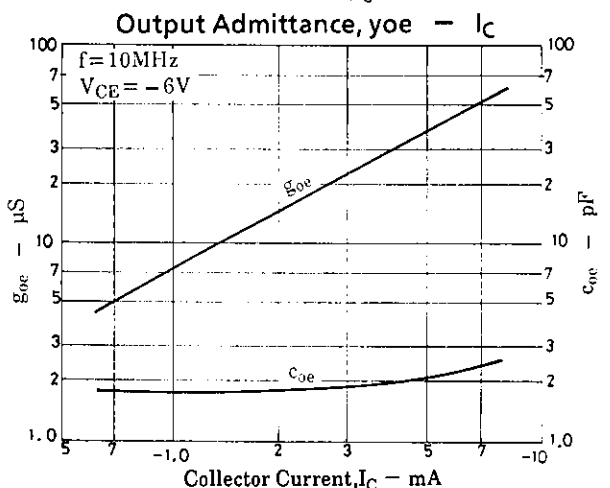
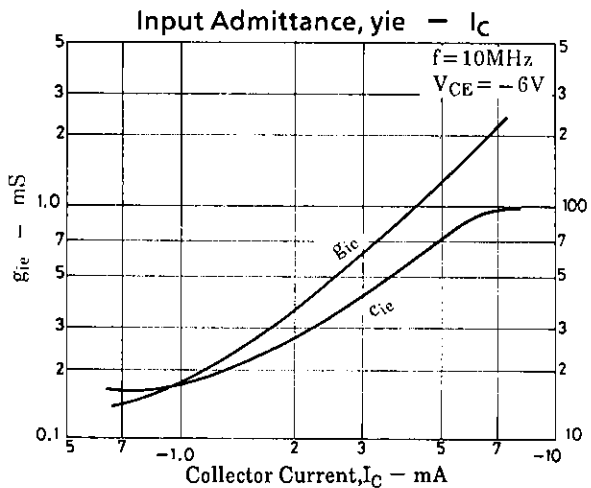
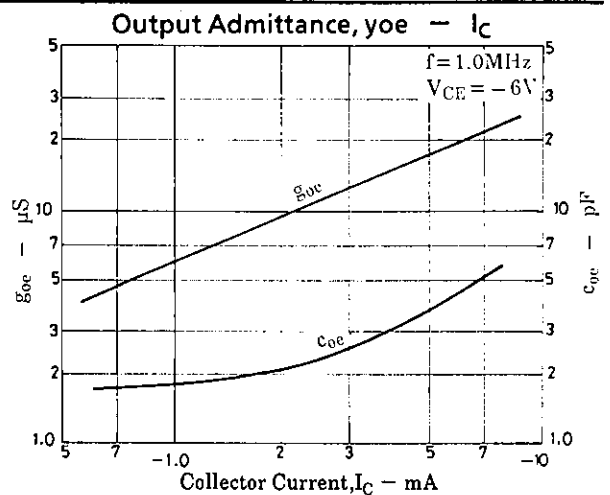
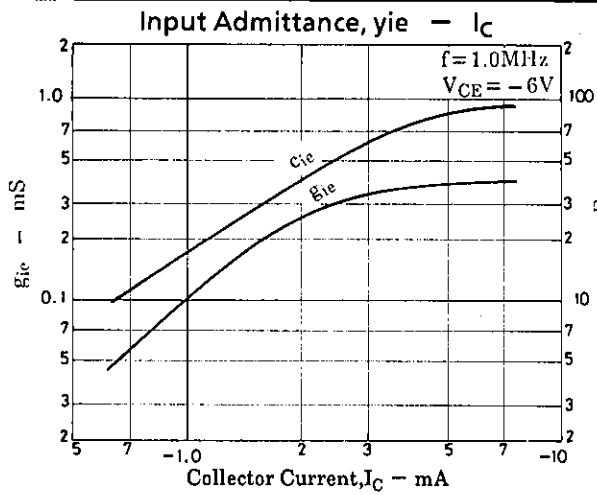
- 1: Base
- 2: Emitter
- 3: Collector

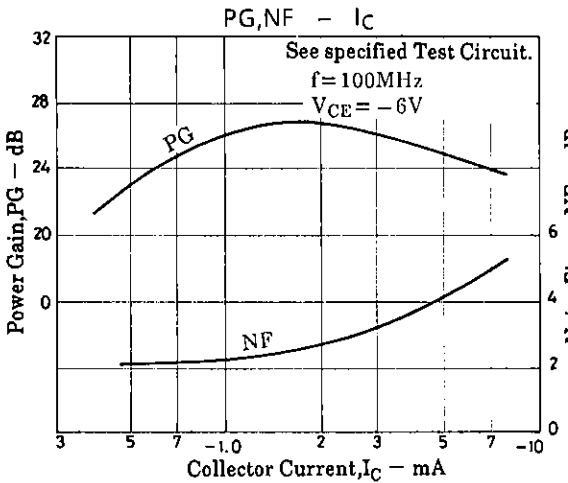
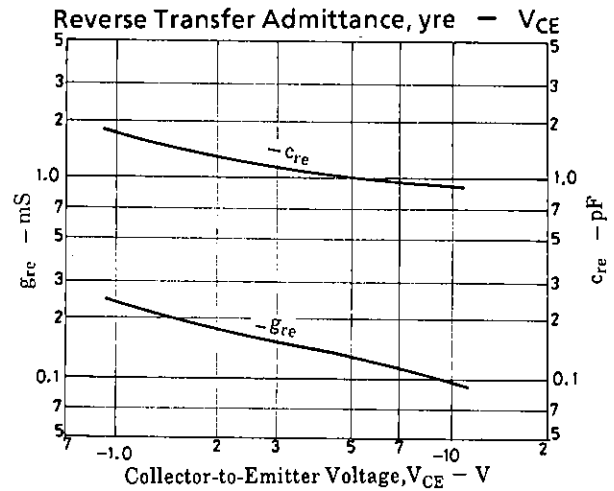
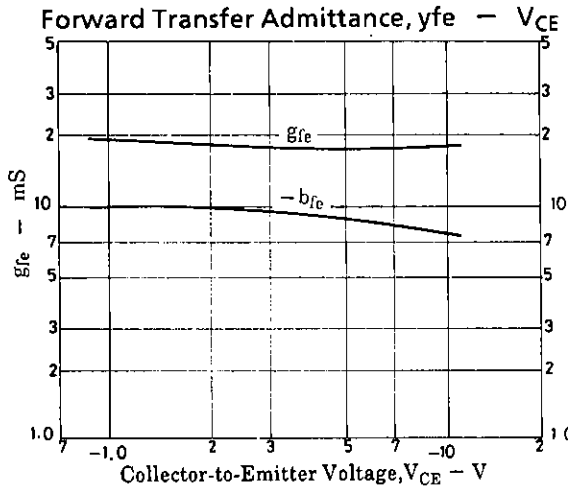
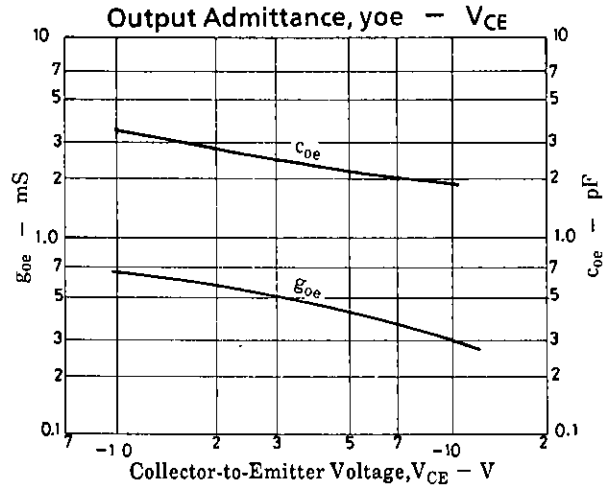
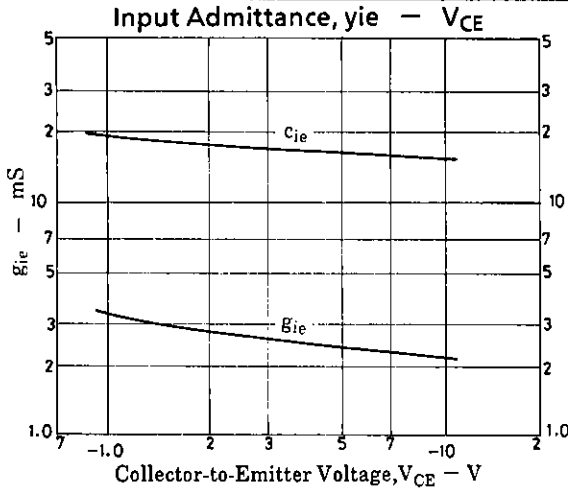
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