



No.2798A

2SA1688

PNP Epitaxial Planar Silicon Transistor

High-Frequency General-Purpose
Amp Applications

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 _{CB0}	-30	V
Collector-to-Emitter Voltage	V _{CEO}	-20	V
Emitter-to-Base Voltage	V _{EBO}	-5	V
Collector Current	I _C	-30	mA
Collector Dissipation	P _C	150	W
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 _{CB0}	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	150	230		MHz
Reverse Transfer Capacitance	C _{re}	V _{CB} = -6V, f = 1MHz		1.1	1.7	pF
Base-to-Collector Time Constant	τ _{bb} 'C _c	V _{CE} = -6V, I _C = -1mA, f = 31.9MHz		11	20	ps
Voltage Gain	PG	See specified Test Circuit.		22		dB
Noise Figure	NF	V _{CE} = -6V, I _C = -1mA, f = 100MHz		2.5		dB

※ : The 2SA1688 is classified by 1mA h_{FE} as follows :

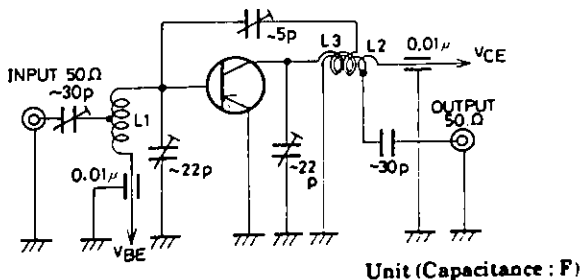
60	3	120	90	4	180	135	5	270
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Note) Marking : E

h_{FE} rank : 3, 4, 5

For CP package version, use the 2SA1256.

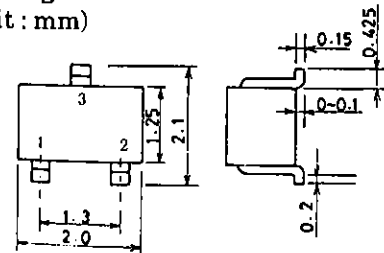
NF, PG Test Circuit



- L1 : 1mmϕ plated wire 10mm 5T, tap : 2T from V_{BE} side
- L2 : 1mmϕ plated wire 10mm 7T, tap : 1T from V_{CE} side
- L3 : 1mmϕ enamel wire 10mm 3T

Package Dimensions 2059A

(unit : mm)

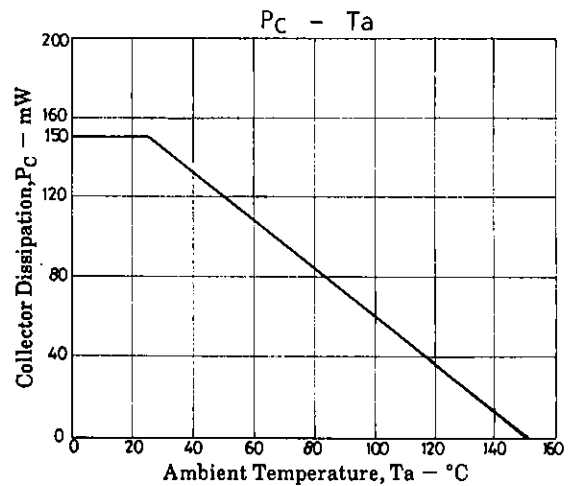
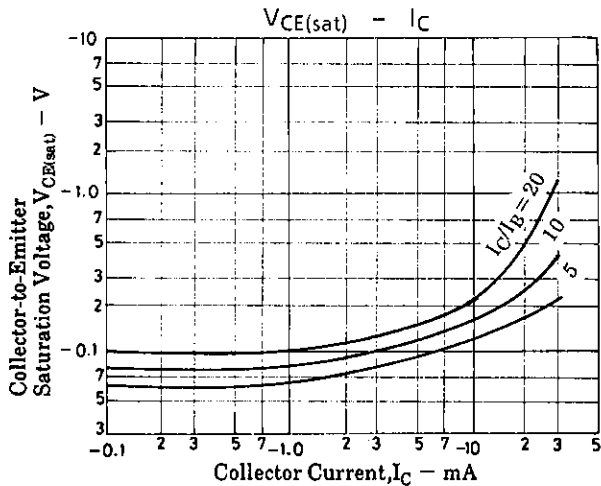
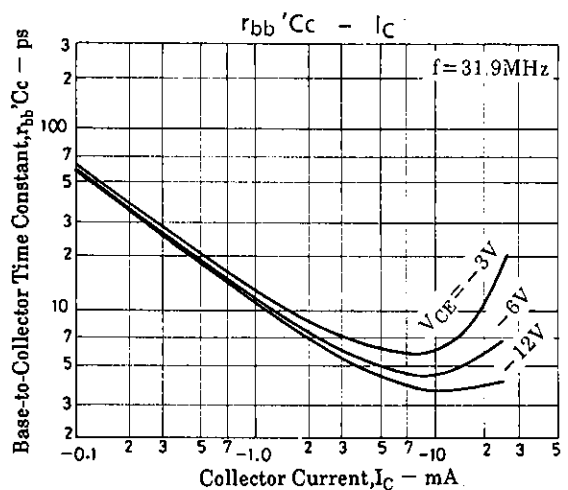
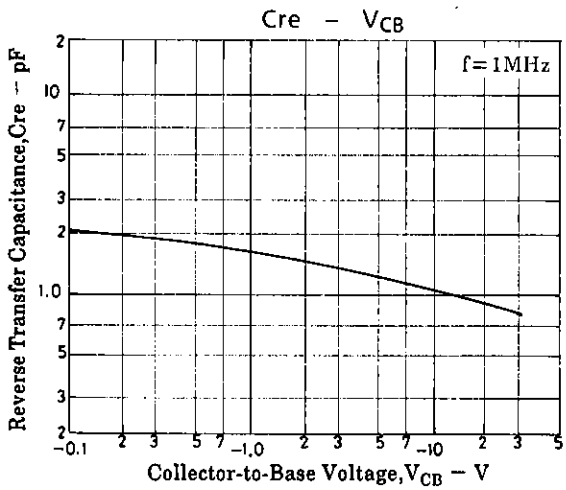
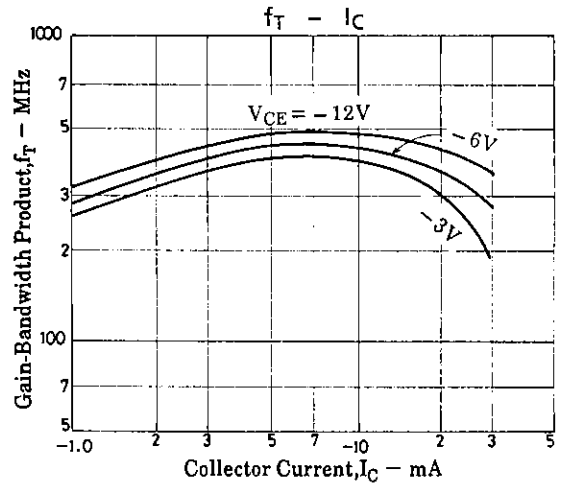
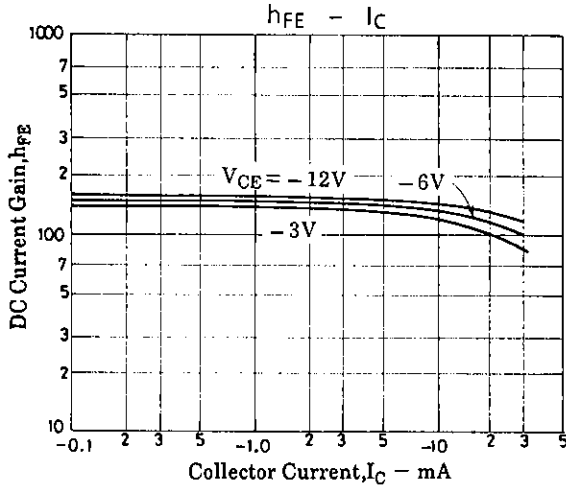
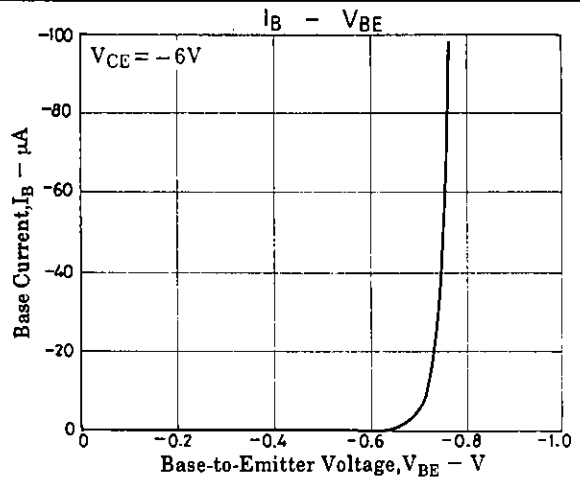
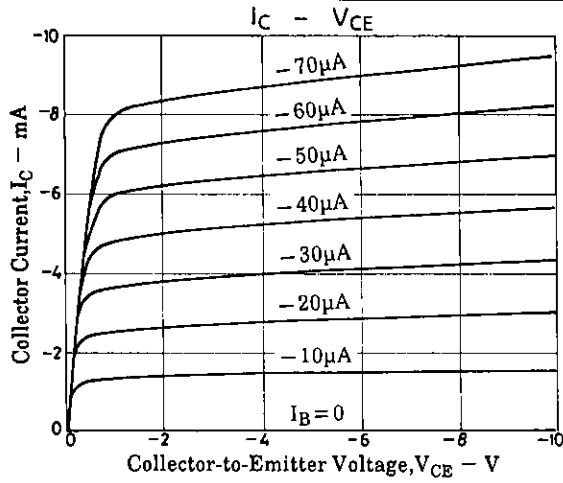


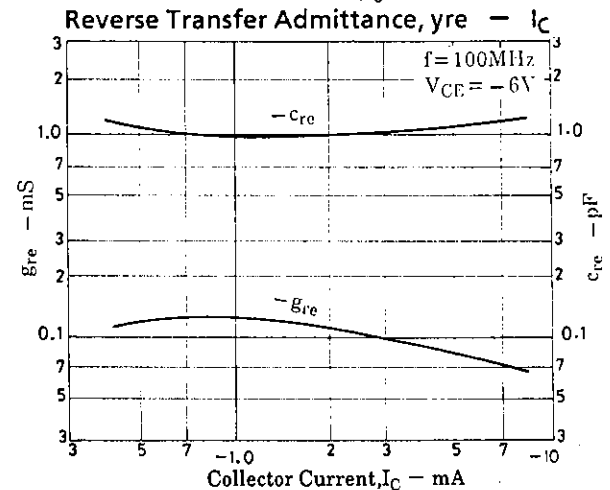
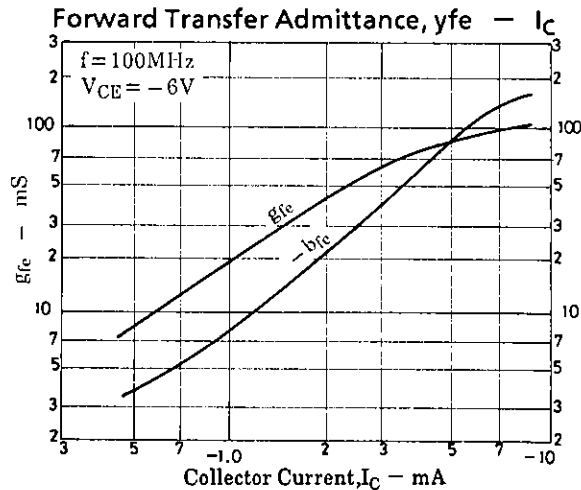
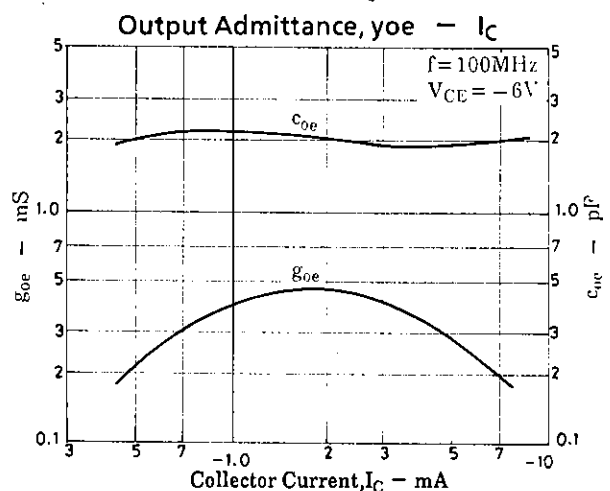
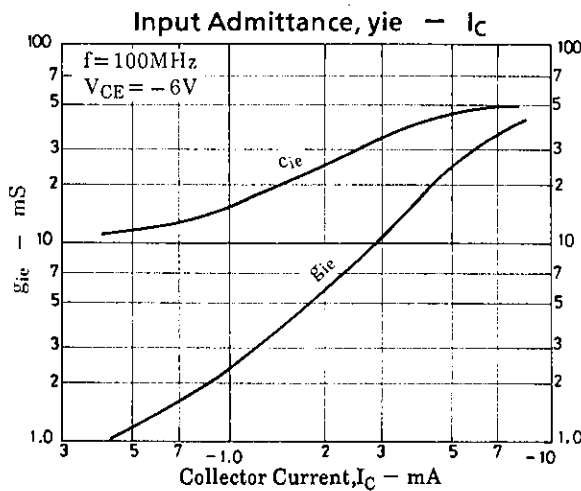
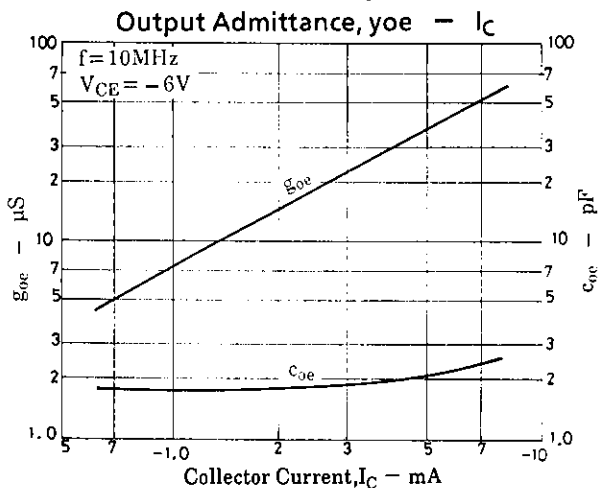
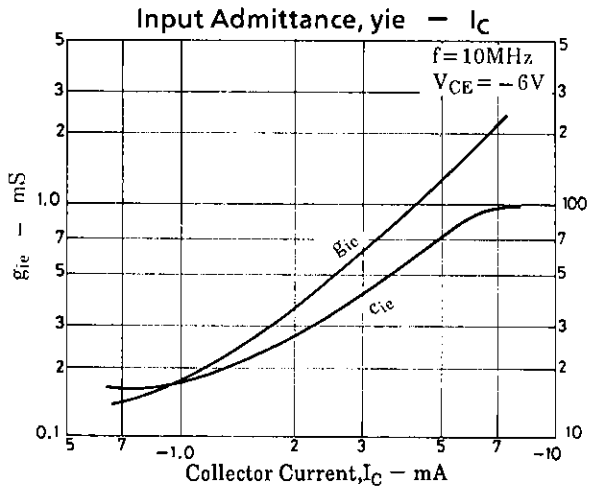
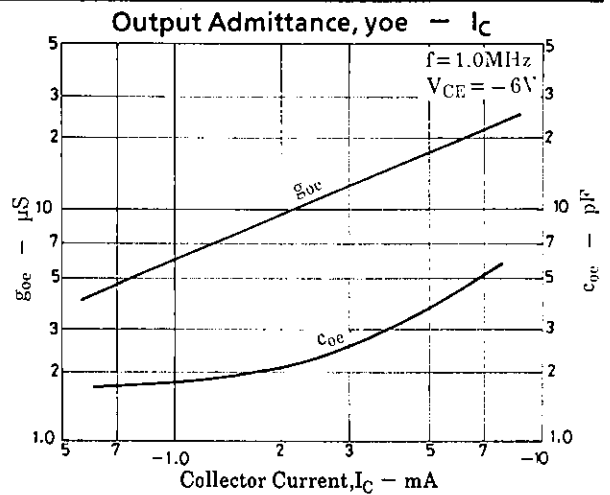
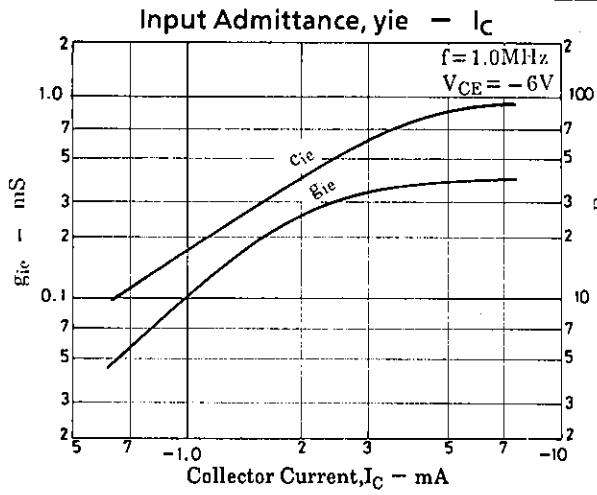
- 1: Base
- 2: Emitter
- 3: Collector

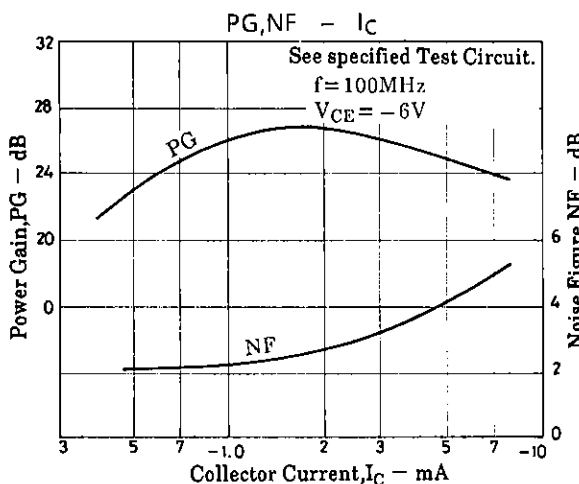
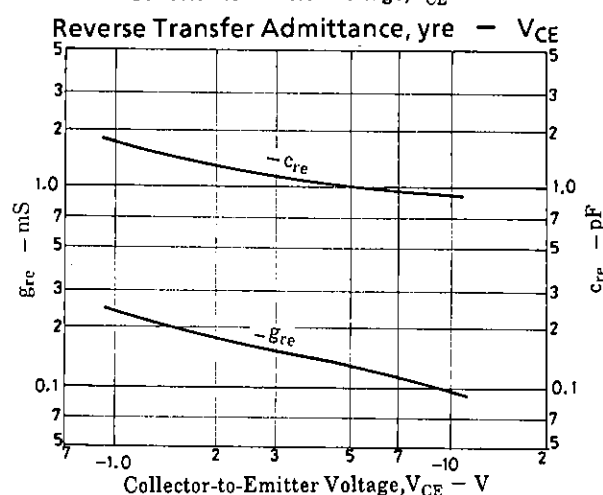
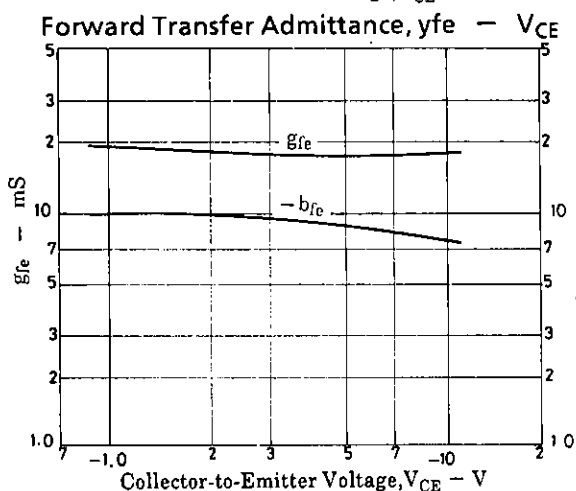
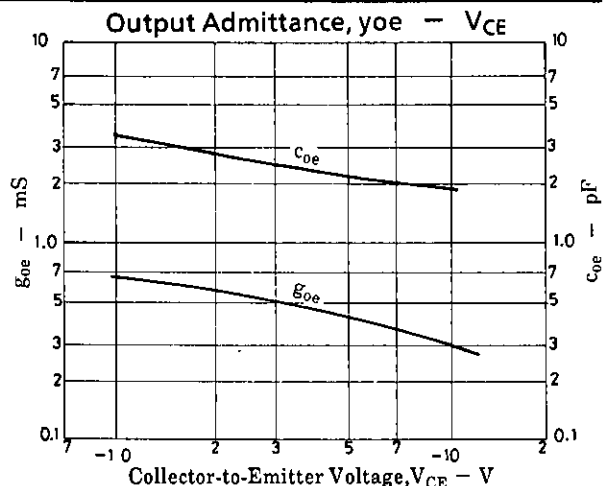
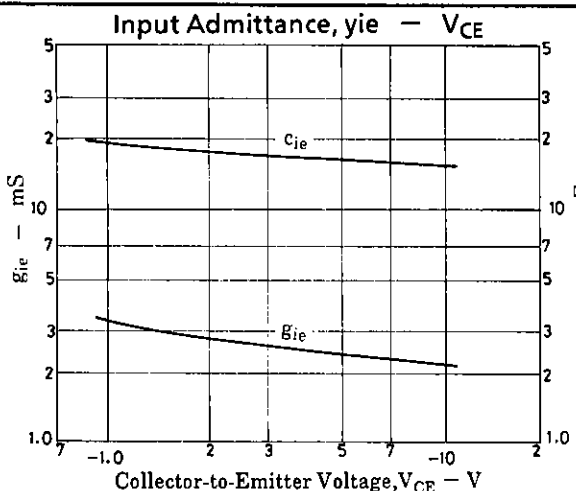
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