

	No.1056C	2SA1256
		PNP Epitaxial Planar Silicon Transistor
High-Frequency Amp Applications		

Applications

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

Features

- High f_T (230MHz typ), and small C_{re} (1.1pF typ).
- Small NF (2.5dB typ).

Absolute Maximum Ratings at $T_a = 25^\circ\text{C}$

Collector-to-Base Voltage	V_{CB0}	-30	V
Collector-to-Emitter Voltage	V_{CE0}	-20	V
Emitter-to-Base Voltage	V_{EB0}	-5	V
Collector Current	I_C	-30	mA
Collector Dissipation	P_C	150	W
Junction Temperature	T_j	125	$^\circ\text{C}$
Storage Temperature	T_{stg}	-55 to +125	$^\circ\text{C}$

Electrical Characteristics at $T_a = 25^\circ\text{C}$

			min	typ	max	unit
Collector Cutoff Current	I_{CBO}	$V_{CB} = -10\text{V}, I_E = 0$			-0.1	μA
Emitter Cutoff Current	I_{EBO}	$V_{EB} = -4\text{V}, I_C = 0$			-0.1	μA
DC Current Gain	h_{FE}	$V_{CE} = -6\text{V}, I_C = -1\text{mA}$	60※		270※	
Gain-Bandwidth Product	f_T	$V_{CE} = -6\text{V}, I_C = -1\text{mA}$	150	230		MHz
Reverse Transfer Capacitance	C_{re}	$V_{CB} = -6\text{V}, f = 1\text{MHz}$		1.1	1.7	pF
Base-to-Collector Time Constant	$r_{bb'}C_c$	$V_{CE} = -6\text{V}, I_C = -1\text{mA}, f = 31.9\text{MHz}$		11	20	ps
Noise Figure	NF	$V_{CE} = -6\text{V}, I_C = -1\text{mA}, f = 100\text{MHz}$		2.5		dB
Voltage Gain	PG	$V_{CE} = -6\text{V}, I_C = -1\text{mA}, f = 100\text{MHz}$		22		dB

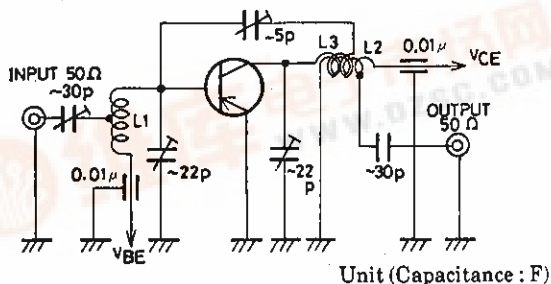
※: The 2SA1256 is classified by 1mA h_{FE} as follows:

60	E3	120	90	E4	180	135	E5	180
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Note) Marking: E

h_{FE} rank: 3, 4, 5

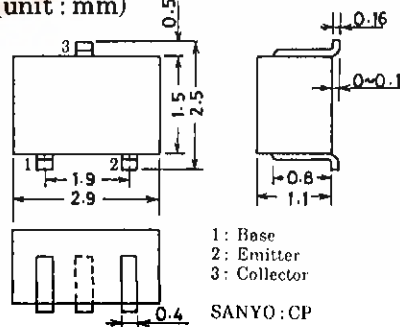
NF, PG Test Circuit



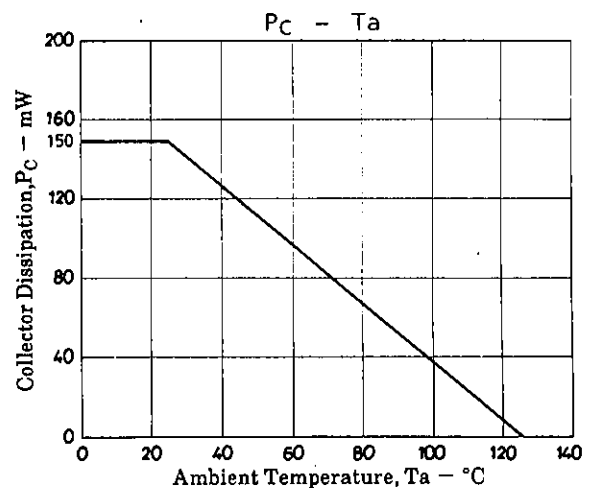
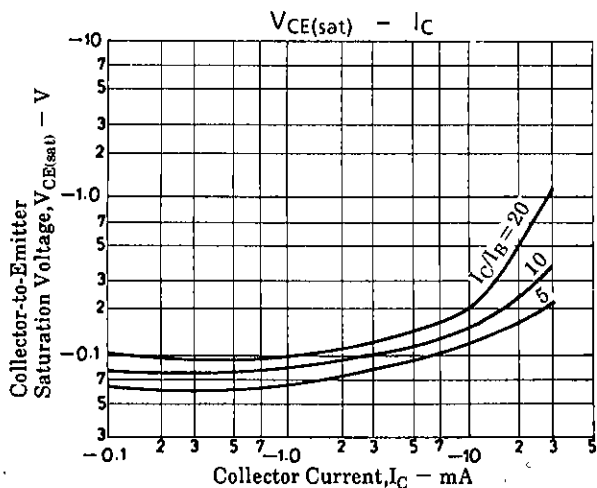
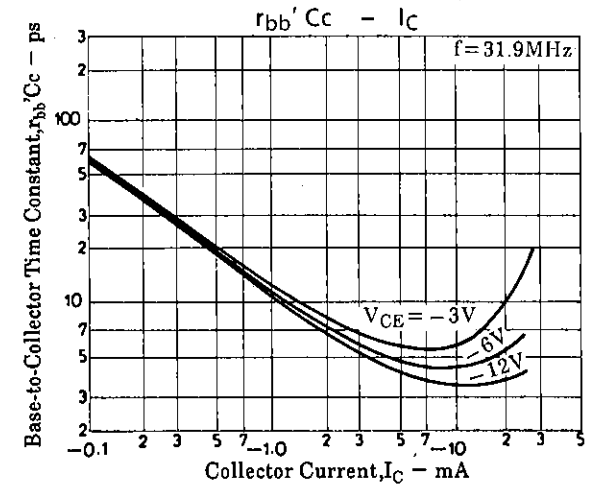
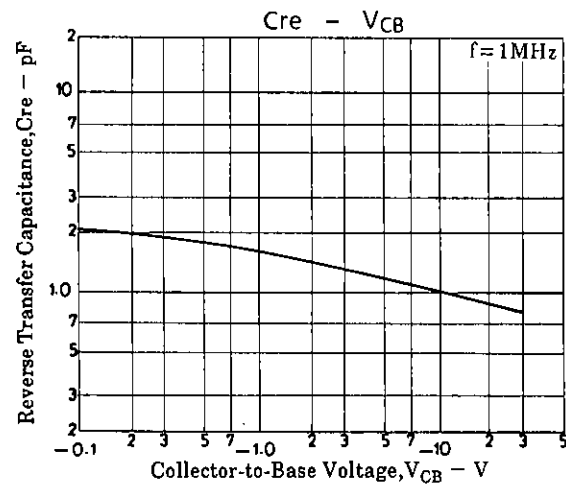
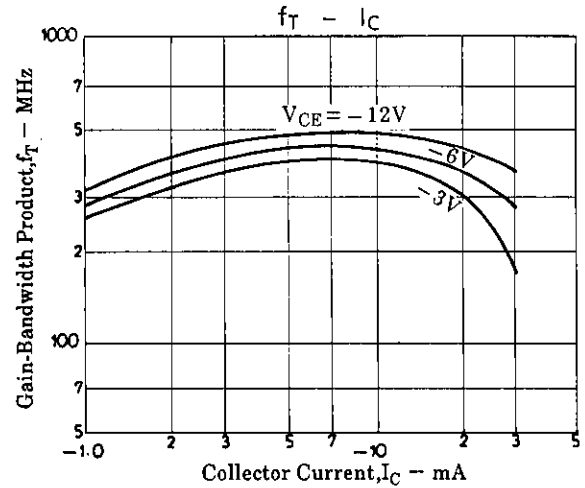
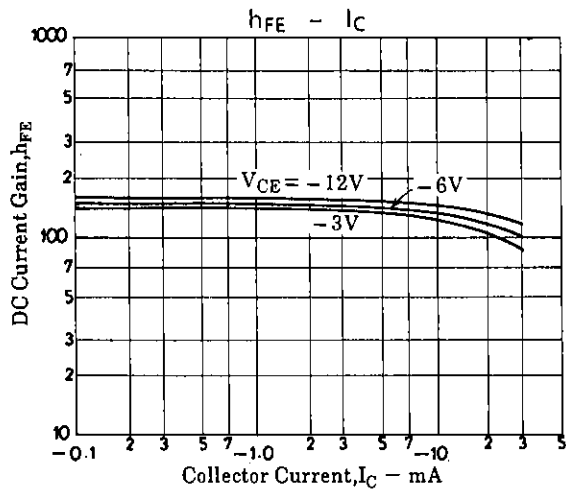
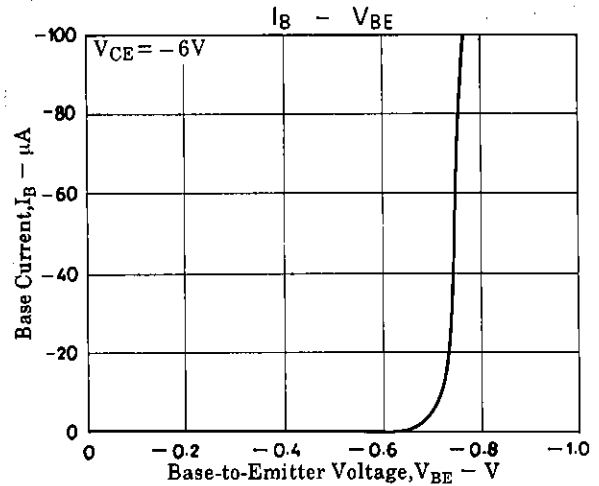
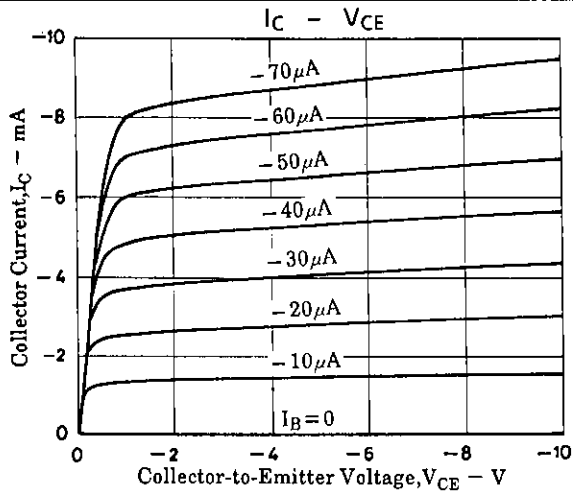
L1: 1mmϕ plated wire 10mmϕ 5T, tap: 2T from V_{BE} side
 L2: 1mmϕ plated wire 10mmϕ 7T, tap: 1T from V_{CE} side
 L3: 1mmϕ enamel wire 10mmϕ 3T

Package Dimensions 2018B

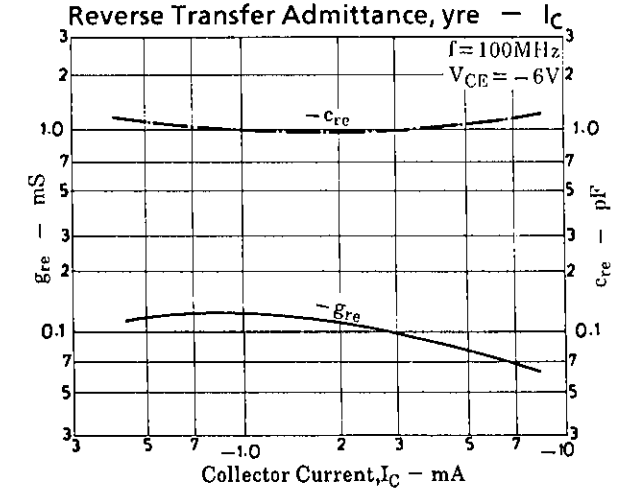
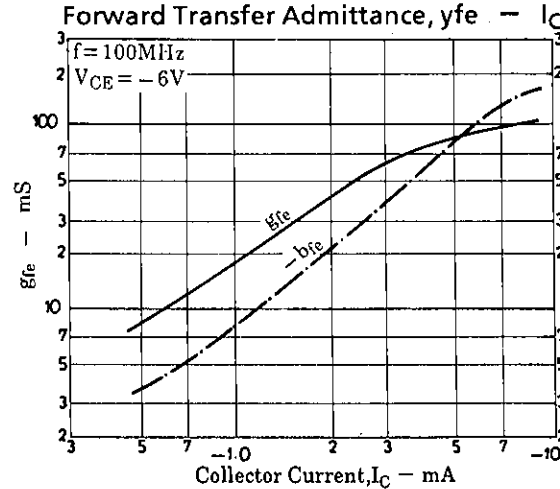
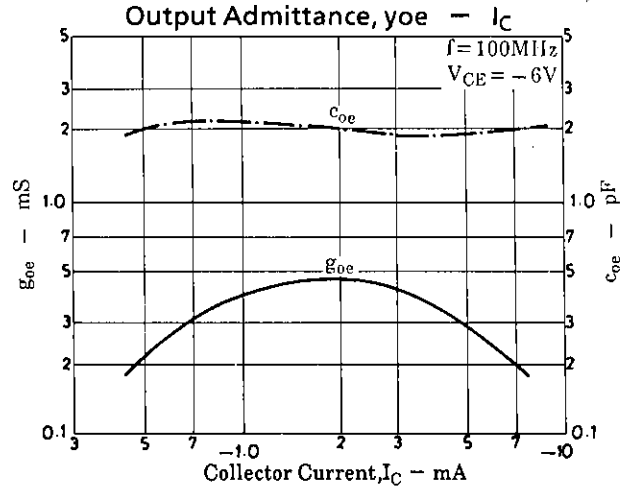
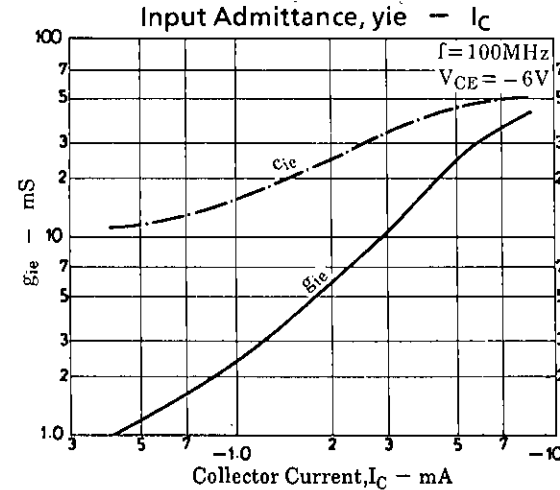
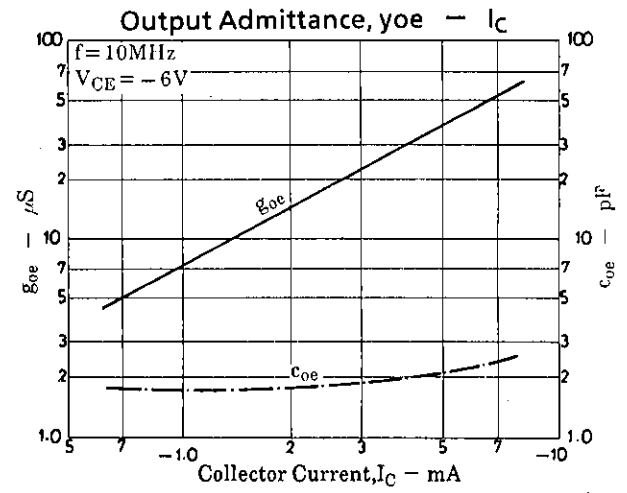
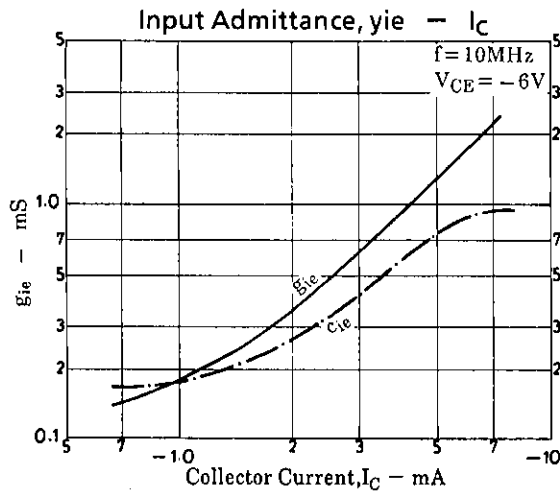
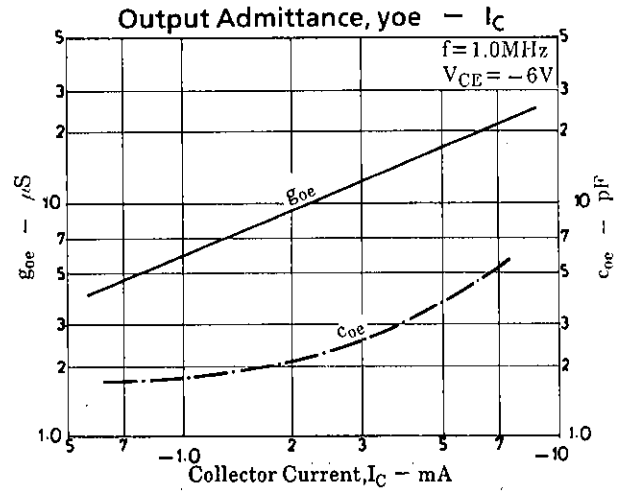
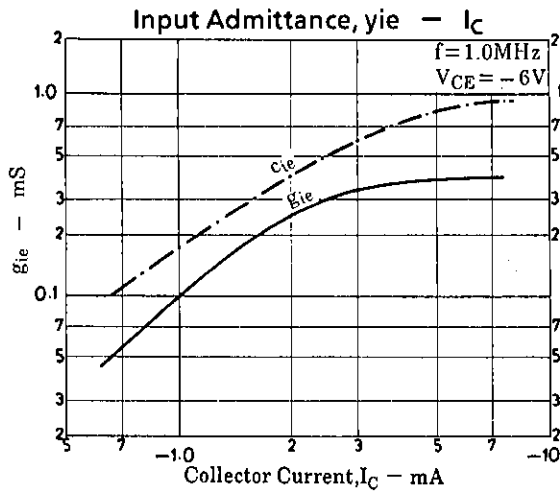
(unit: mm)



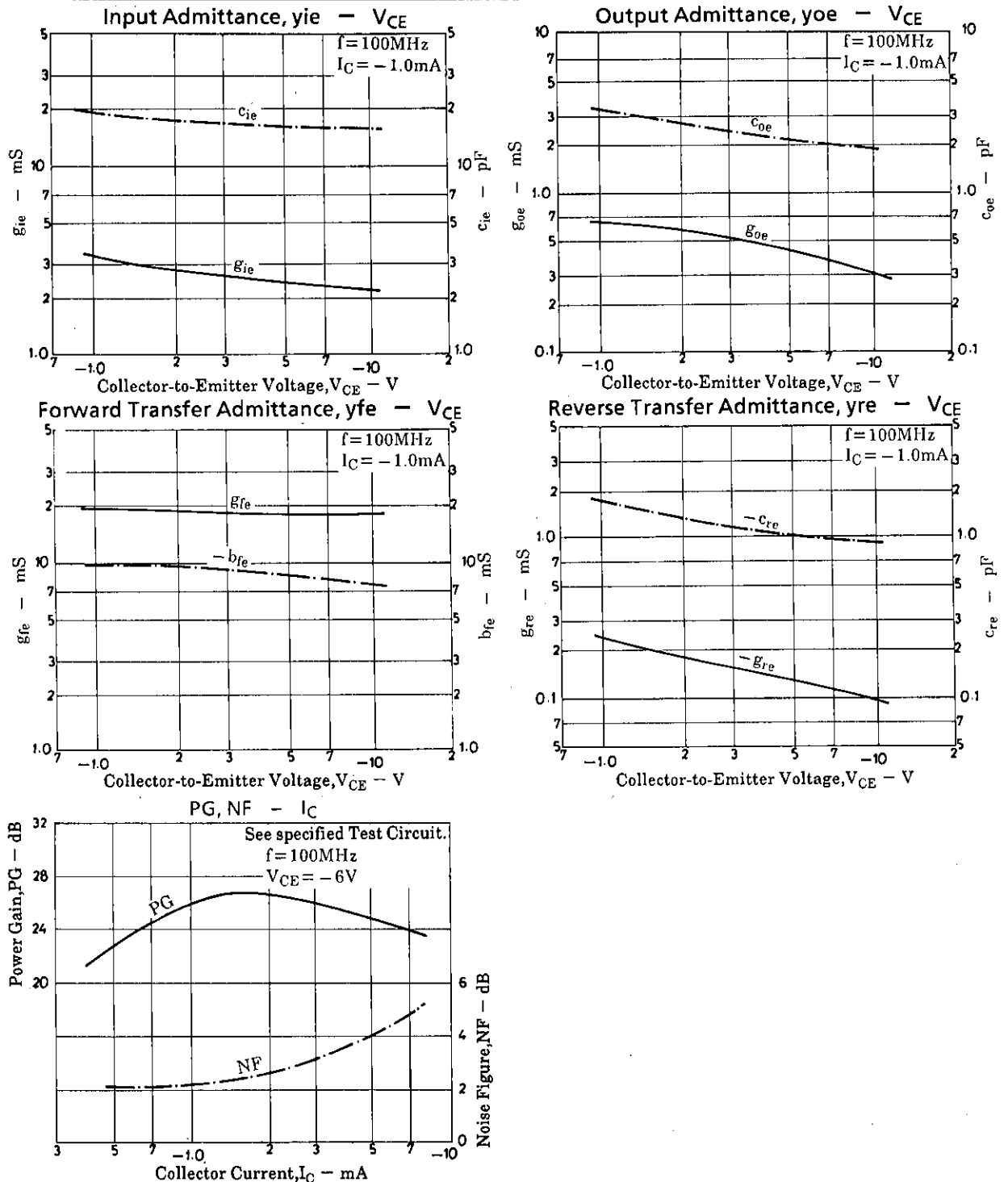
2SA1256



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