SANYO

No.2095A

2SC3770

NPN Epitaxial Planar Silicon Transistor

UHF, VHF Oscillator, Mixer, HF Amp Applications

Applications

. UHF/VHF frequency converters, local oscillators, HF amplifiers

Features

. High power gain: PG=15dB typ(f=0.4GHz).
. High cutoff frequency: f_T=1.2GHz typ.

Absolute Maximum Ratings at Ta=25°C

			unit
Collector to Base Voltage	V_{CBO}	30	V
Collector to Emitter Voltage	V_{CEO}	20	V
Emitter to Base Voltage	V_{EBO}	3	V
Collector Current	I_C	30	mA
Base Current	I_B	10	mA
Collector Dissipation	P_C	250	mW
Junction Temperature	Tj	150	°C
Storage Temperature	Tstg	-55 to +150	°C

Electrical Characteristics at Ta=25°C

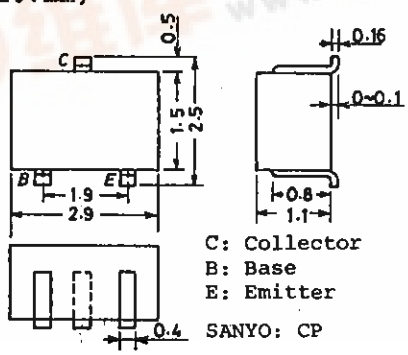
			min	typ	max	unit
Collector Cutoff Current	I_{CBO}	V_{CB}=20V,I_E=0			1.0	μA
Emitter Cutoff Current	I_{EBO}	V_{EB}=2V,I_C=0			10	μA
DC Current Gain	h_{FE}	V_{CE}=10V,I_C=3mA	40*		200*	
Gain-Bandwidth Product	f_T	V_{CE}=10V,I_C=3mA	0.6	1.2		GHz
Output Capacitance	c_{ob}	V_{CB}=10V,f=1MHz		0.7		pF
Reverse Transfer Capacitance	c_{re}	V_{CB}=10V,f=1MHz		0.6		pF
Power Gain	PG	V_{CE}=10V,I_C=5mA,f=0.4GHz		15		dB

*: The 2SC3770 is classified by 3mA h_{FE} as follows:

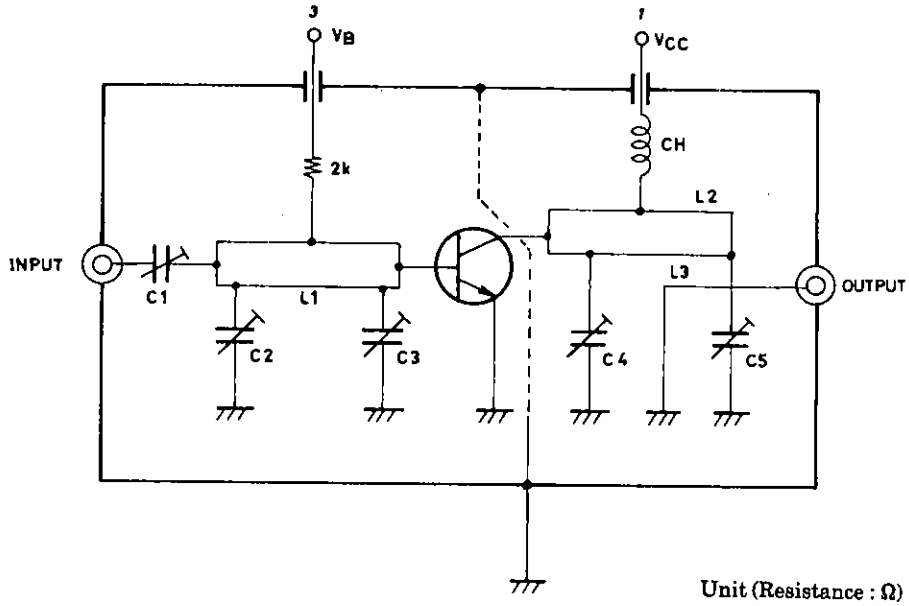
40	2	80	60	3	120	100	4	200

(Note) Marking :JY
h_{FE} rank :2,3,4

Package Dimensions 2018A
(unit:mm)

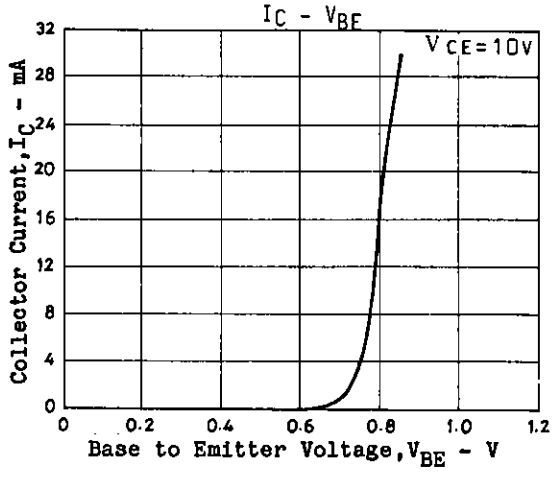


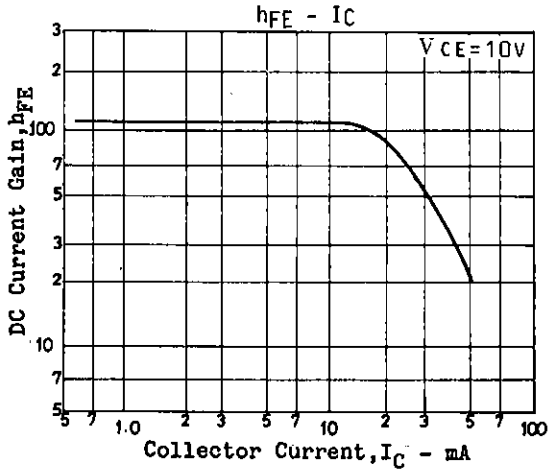
PG Test Circuit

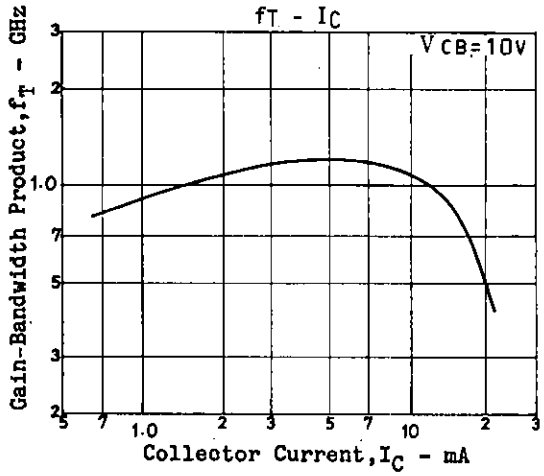


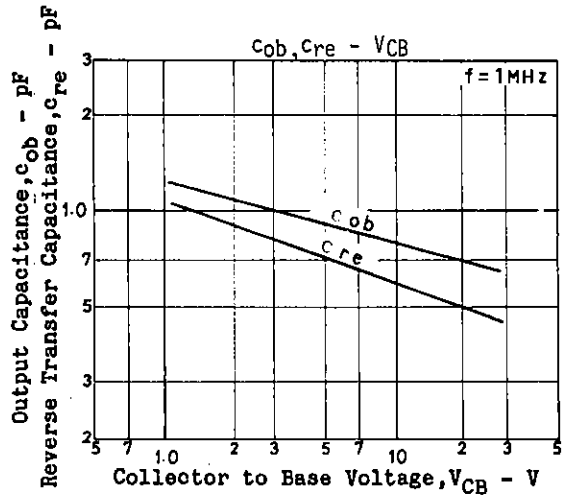
Unit (Resistance : Ω)

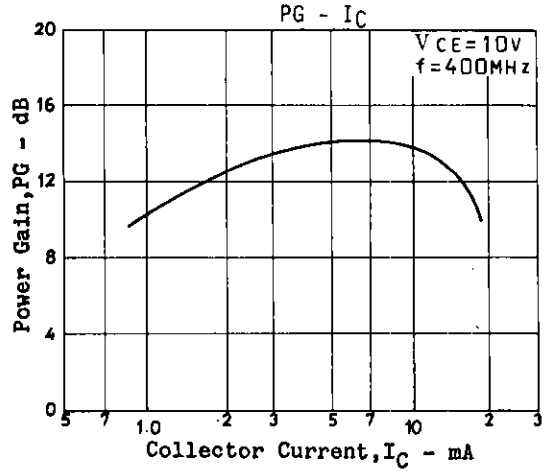
	f=400MHz
C1	~20pF
C2	~10pF
C3	~10pF
C4	~20pF
C5	~30pF
L1	2φ, l=40mm 2/3t
L2	2φ, l=40mm 2/3t
L3	1φ, l=40mm 1/2t

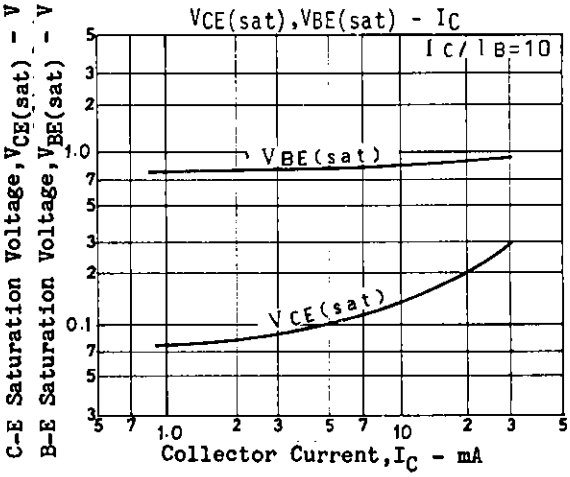


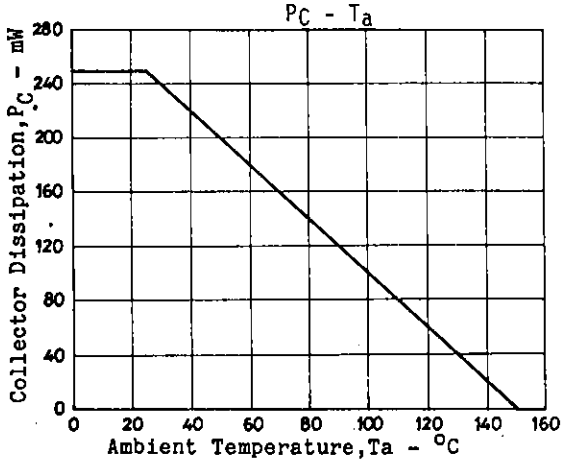












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