

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 $T_a=25^\circ C$

			unit
Collector to Base Voltage	V_{CB0}	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	T_j	150	$^\circ C$
Storage Temperature	T_{stg}	-55 to +150	$^\circ C$

Electrical Characteristics at $T_a=25^\circ C$

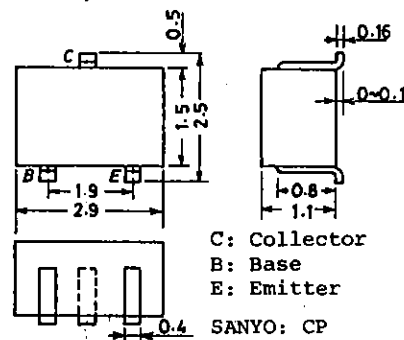
			min	typ	max	unit
Collector Cutoff Current	I_{CB0}	$V_{CB}=20V, I_E=0$			1.0	μA
Emitter Cutoff Current	I_{EBO}	$V_{EB}=2V, I_C=0$			10	μA
DC Current Gain	h_{FE}	$V_{CE}=10V, I_C=3mA$	40*		200*	
Gain-Bandwidth Product	f_T	$V_{CE}=10V, I_C=3mA$	0.6	1.2		GHz
Output Capacitance	c_{ob}	$V_{CB}=10V, f=1MHz$		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
----	---	----	----	---	-----	-----	---	-----

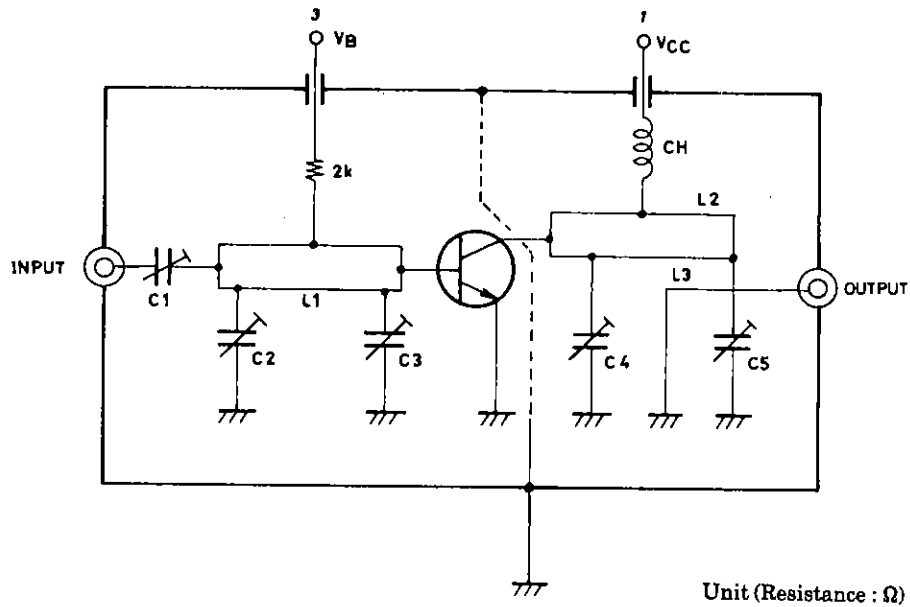
(Note) Marking : JY
 h_{FE} rank : 2,3,4

Package Dimensions 2018A
 (unit:mm)

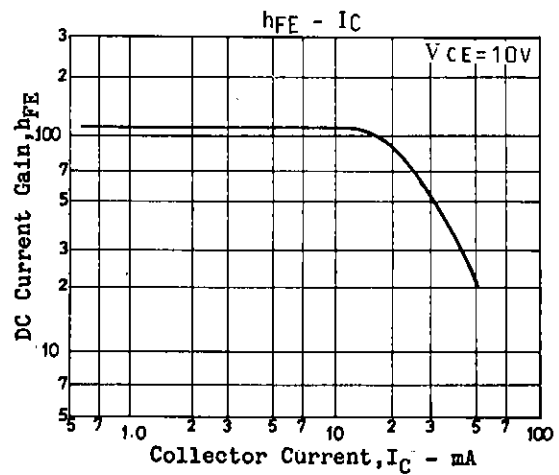
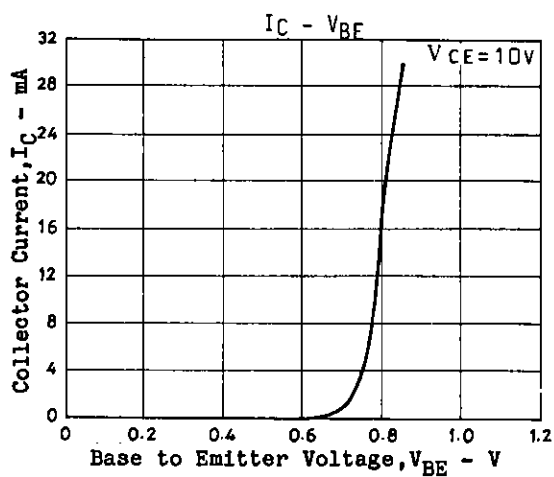


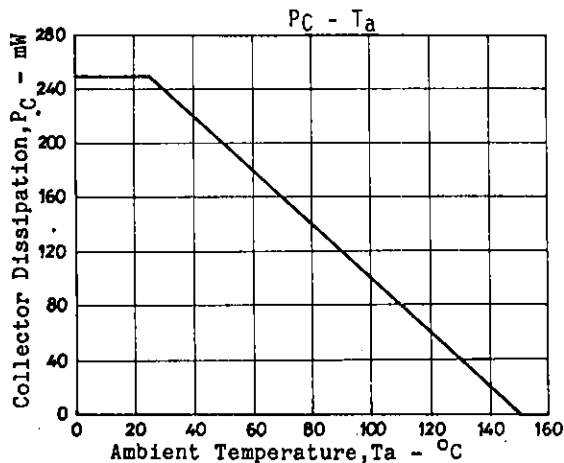
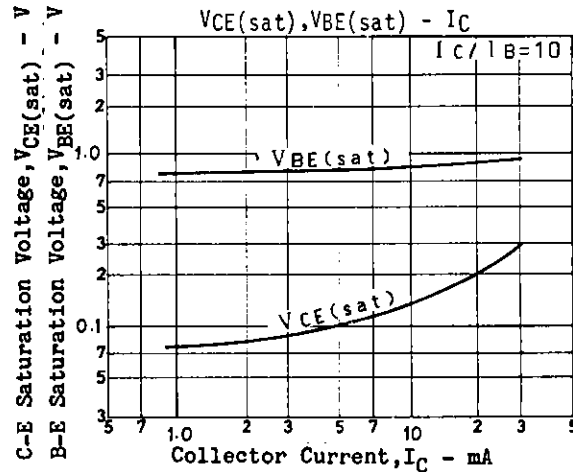
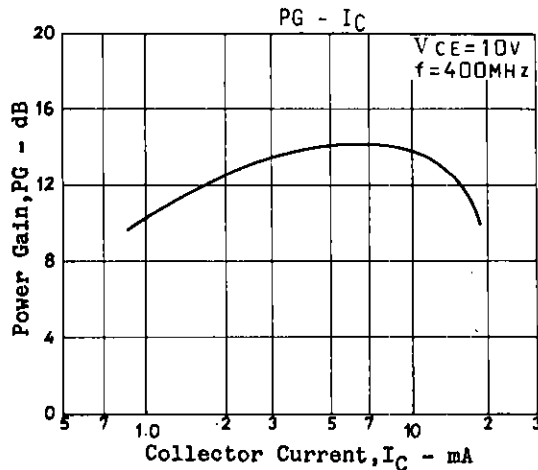
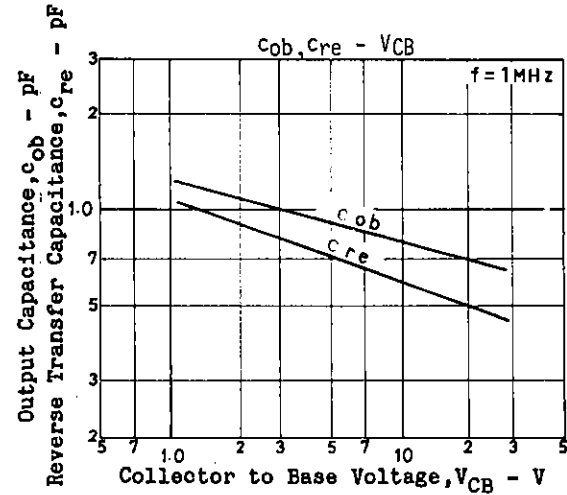
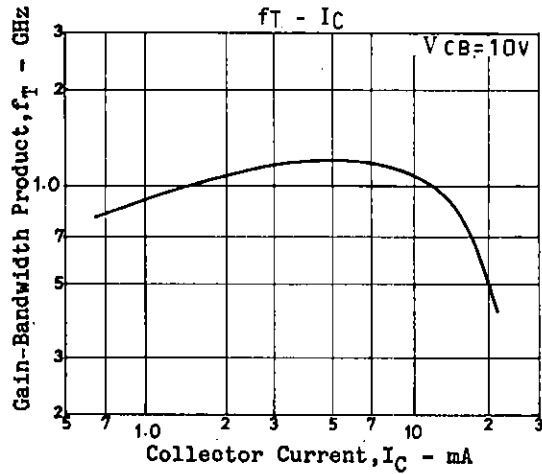
SANYO Electric Co., Ltd. Semiconductor Business Headquarters
 TOKYO OFFICE Tokyo Bldg., 1-10, 1 Chome, Ueno, Taito-ku, TOKYO, 110 JAPAN

PG Test Circuit



$f = 400\text{MHz}$	
C1	$\sim 20\text{pF}$
C2	$\sim 10\text{pF}$
C3	$\sim 10\text{pF}$
C4	$\sim 20\text{pF}$
C5	$\sim 30\text{pF}$
L1	$2\phi, l = 40\text{mm } 2/3\text{ t}$
L2	$2\phi, l = 40\text{mm } 2/3\text{ t}$
L3	$1\phi, l = 40\text{mm } 1/2\text{ t}$





■ No products described or contained herein are intended for use in surgical implants, life-support systems, aerospace equipment, nuclear power control systems, vehicles, disaster/crime-prevention equipment and the like, the failure of which may directly or indirectly cause injury, death or property loss.

■ Anyone purchasing any products described or contained herein for an above-mentioned use shall:

- ① Accept full responsibility and indemnify and defend SANYO ELECTRIC CO., LTD., its affiliates, subsidiaries and distributors and all their officers and employees, jointly and severally, against any and all claims and litigation and all damages, cost and expenses associated with such use;
- ② Not impose any responsibility for any fault or negligence which may be cited in any such claim or litigation on SANYO ELECTRIC CO., LTD., its affiliates, subsidiaries and distributors or any of their officers and employees jointly or severally.

■ Information (including circuit diagrams and circuit parameters) herein is for example only; it is not guaranteed for volume production. SANYO believes information herein is accurate and reliable, but no guarantees are made or implied regarding its use or any infringements of intellectual property rights or other rights of third parties.