

2SC3770

UHF, VHF Oscillator Mixer, HF Amplifier Applications

Applications

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

Features

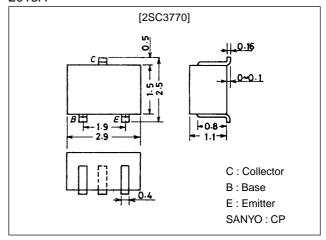
· High power gain : PG=15dB typ (f=0.4GHz).

 \cdot High cutoff frequency : f_T=1.2GHz typ.

Package Dimensions

unit:mm

2018A



Specifications

Absolute Maximum Ratings at Ta = 25°C

Parameter	Symbol	Conditions	Ratings	Unit
Collector-to-Base Voltage	V _{CBO}		30	V
Collector-to-Emitter Voltage	VCEO		20	V
Emitter-to-Base Voltage	VEBO		3	V
Collector Current	IC		30	mA
Base Current	IB		10	mA
Collector Dissipation	PC		250	mW
Junction Temperature	Tj		150	°C
Storage Temperature	Tstg		-55 to +150	°C

Electrical Characteristics at Ta = 25°C

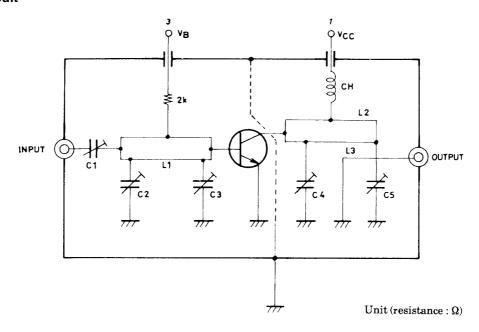
Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	Offic
Collector Cutoff Current	I _{CBO}	V _{CB} =20V, I _E =0			1.0	μΑ
Emitter Cutoff Current	I _{EBO}	V _{EB} =2V, I _C =0			10	μA
DC Current Gain	hFE	V _{CE} =10V, I _C =3mA	40*		200*	
Gain-Bandwidth Product	fΤ	V _{CE} =10V, I _C =3mA	0.6	1.2		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 : $\begin{bmatrix} 40 & 2 & 80 & 60 & 3 & 120 & 100 & 4 & 200 \end{bmatrix}$ (Note) Marking : JY

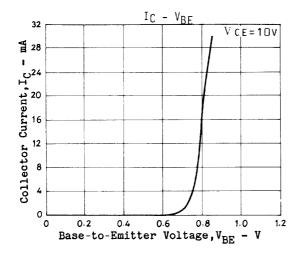
h_{FE} rank: 2, 3, 4

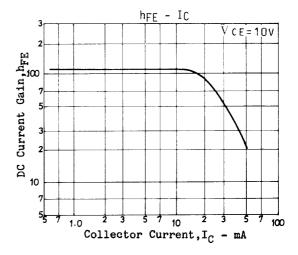
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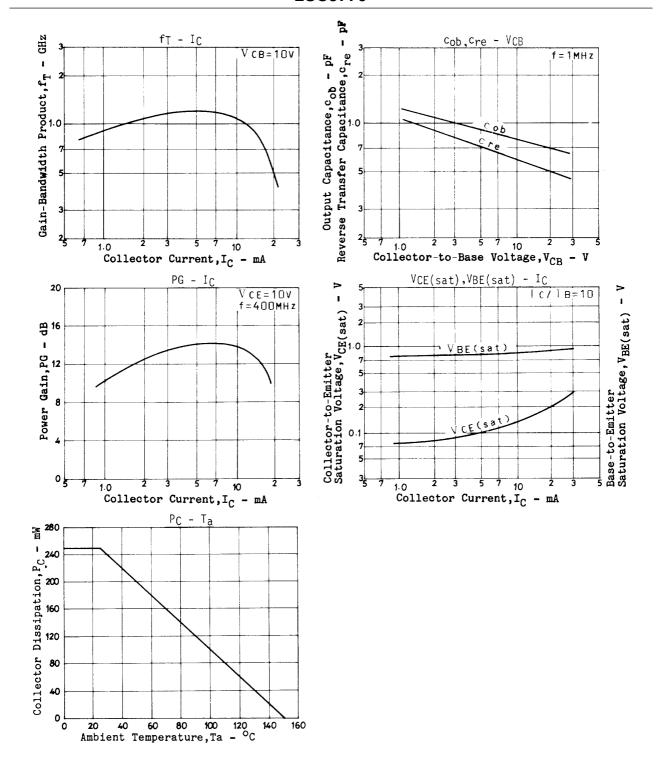
PG Test Circuit



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







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