

2SC5397

For High Frequency Amplify, Middle Frequency Amplify
Silicon NPN Epitaxial Type Micro (Frame type)

DESCRIPTION

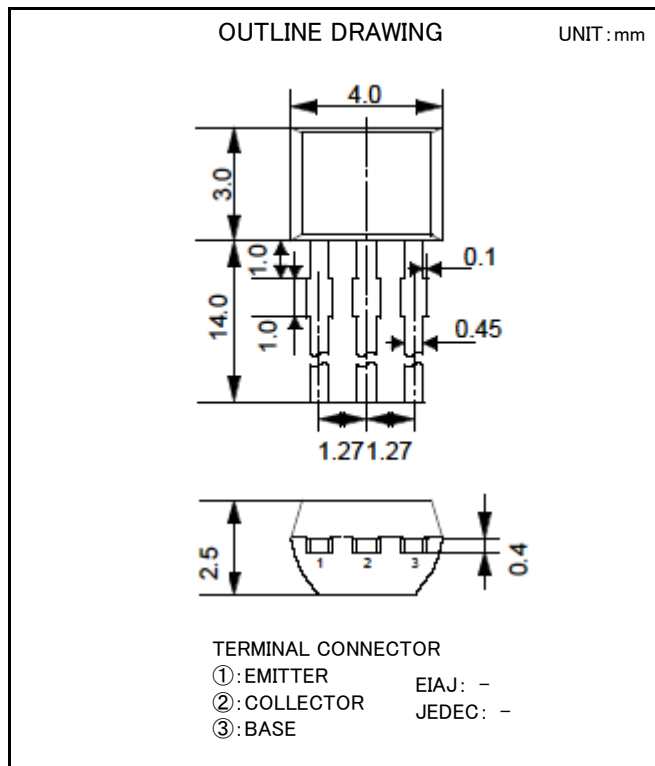
2SC5397 is a silicon NPN epitaxial type transistor.

FEATURE

- High gain 10.7MHz MAG=45dB typ
- Low noise 10.7MHz NF=3.0dB typ
- Low yre 10.7MHz yre=-J0.11mS typ
- Small package

APPLICATION

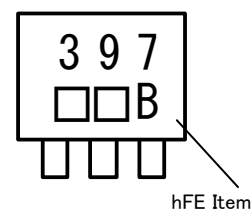
High frequency amplify, oscillating, frequency exchange, medium frequency amplify for small communication machine, FM/AM radio.



MAXIMUM RATINGS (Ta=25°C)

Symbol	Parameter	Ratings	Unit
V _{CB0}	Collector to Base voltage	30	V
V _{EB0}	Emitter to Base voltage	4	V
V _{CE0}	Collector to Emitter voltage	25	V
I _c	Collector current	30	mA
P _c	Collector dissipation	450	mW
T _j	Junction temperature	+150	°C
T _{stg}	Storage temperature	-55~+150	°C

MARKING



ELECTRICAL CHARACTERISTICS (Ta=25°C)

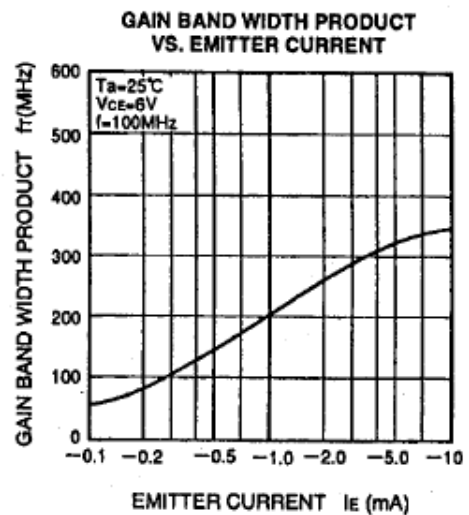
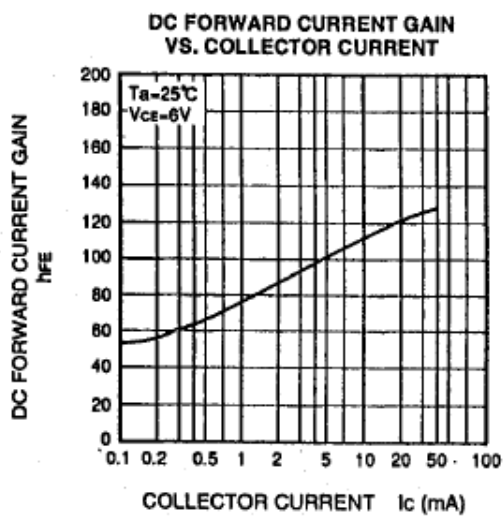
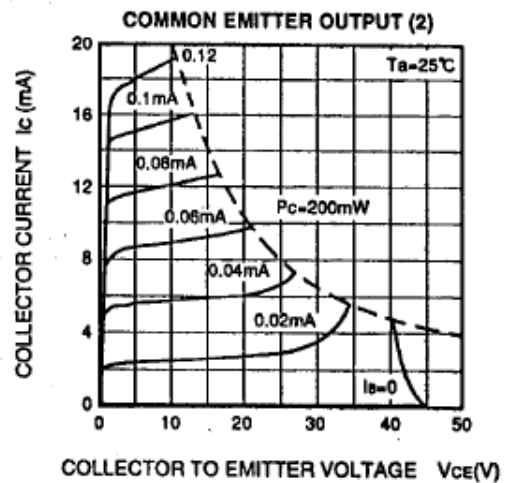
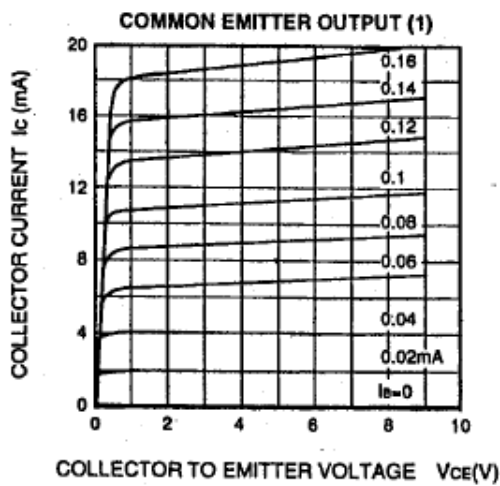
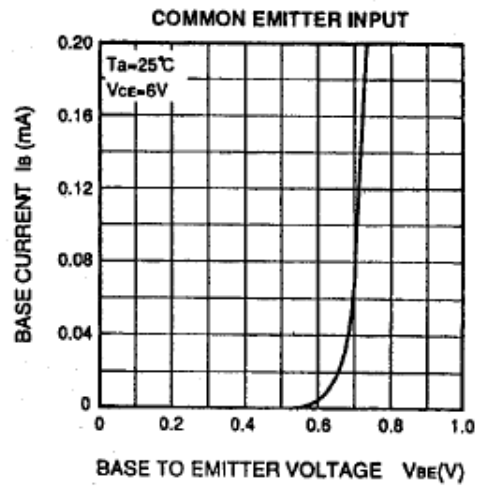
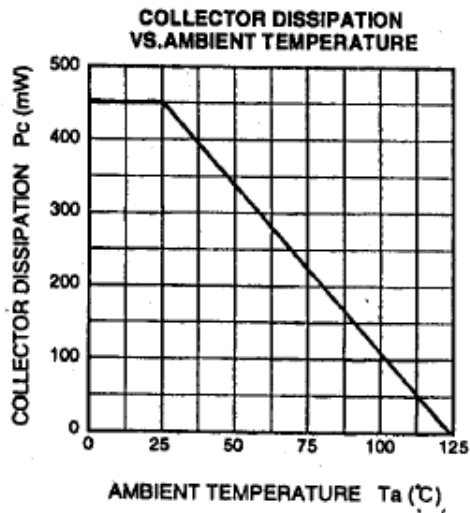
Parameter	Symbol	Test conditions	Limits			Unit
			Min	Typ	Max	
I _{CB0}	Collector cut off current	V _{CB} = 30V, I _E = 0mA	-	-	1	μA
I _{EB0}	Emitter cut off current	V _{EB} = 4V, I _C = 0mA	-	-	1	μA
hFE	DC forward current gain ※	V _{CE} = 6V, I _C = 1mA	35	-	300	-
f _T	Gain bandwidth product	V _{CE} = 6V, I _E = -1mA	150	200	-	MHz
C _{ob}	Collector output capacitance	V _{CB} = 6V, I _E = 0mA, f=1MHz	-	2.0	2.7	pF
C _{orb}	Collector-base time constant	V _{CB} =6V, I _E =-1mA, f=31.8MHz	-	20	60	pS
NF	Noise figure	V _{CE} = 6V, I _E = -0.1mA, f=1kHz, R _G =2kΩ		3.0	-	dB

※ : It shows hFE classification at right table.

Item	B	C	D	E
hFE	35~70	55~110	90~180	150~300

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TYPICAL CHARACTERISTICS



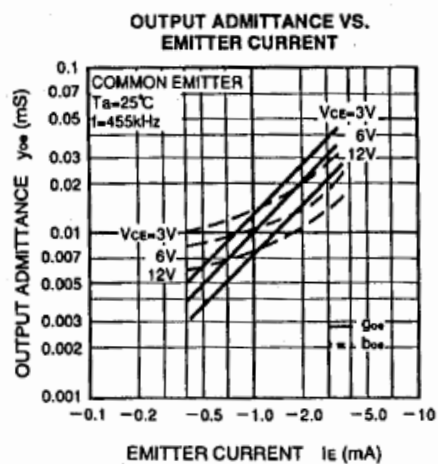
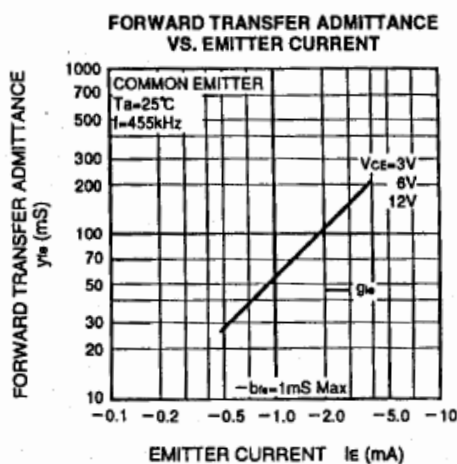
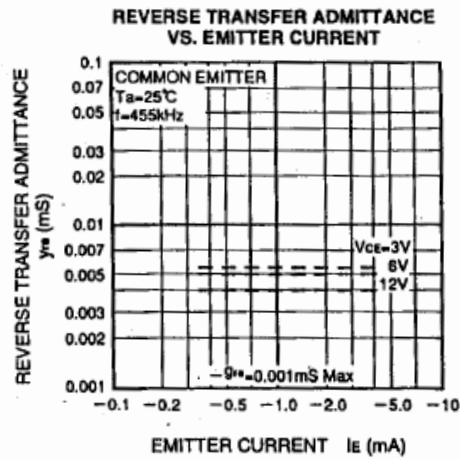
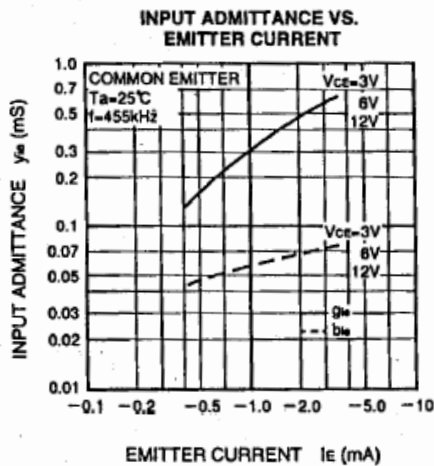
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COMMON EMITTER, y PARAMETER (TYPICAL VALUE)

Test conditions		f=455kHz V _{CE} =6V I _E =-1mA	f=1MHz V _{CE} =6V I _E =-1mA	f=10.7MHz V _{CE} =6V I _E =-1mA	f=100MHz V _{CE} =6V I _E =-1mA
y _{ie} (mS)	g _{ie}	0.30	0.30	0.38	4.4
	b _{ie}	0.06	0.12	1.40	11.0
y _{re} (mS)	-g _{re}	0.001Max	0.001Max	0.005Max	0.05Max
	-b _{re}	0.005	0.010	0.11	1.0
y _{ie} (mS)	g _{ie}	50	46	37	25
	-b _{ie}	1.0Max	1.0Max	2.8	16
y _{oe} (mS)	g _{oe}	0.010	0.012	0.03	0.32
	b _{oe}	0.011	0.022	0.18	1.3

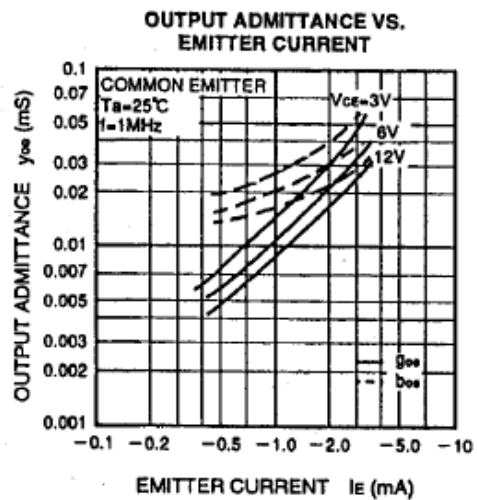
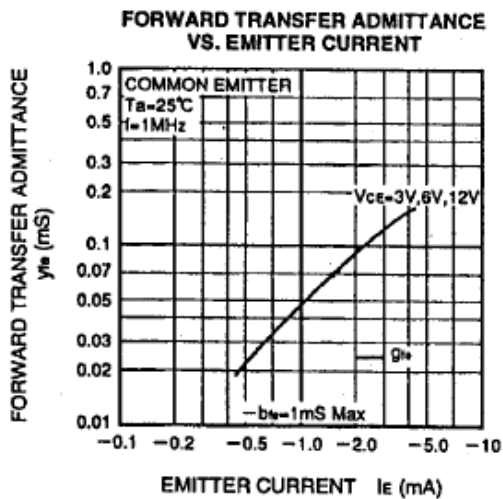
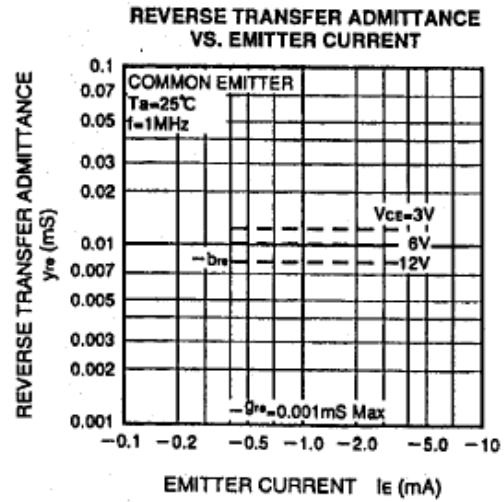
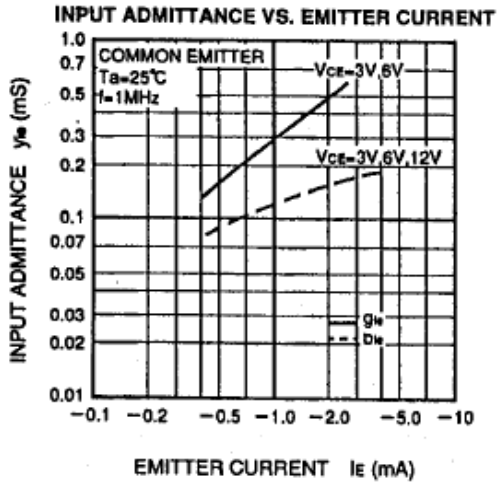
COMMON EMITTER, 455kHz y PARAMETER



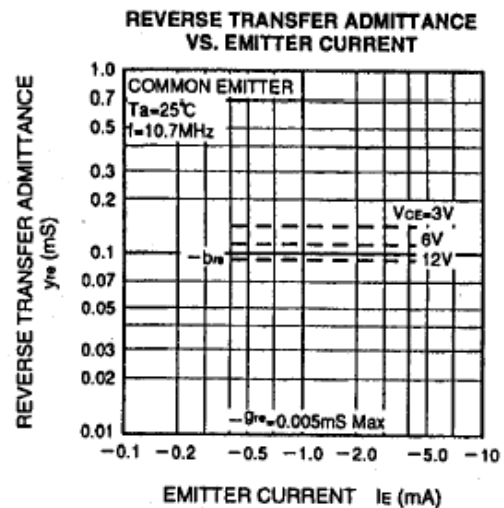
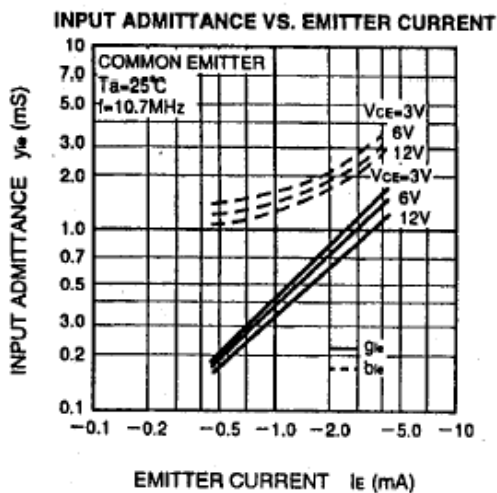
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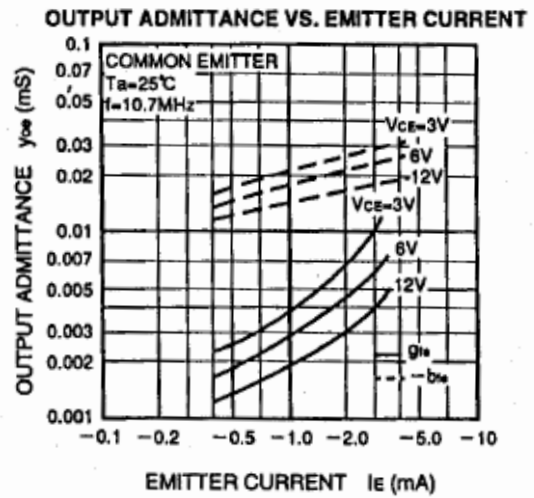
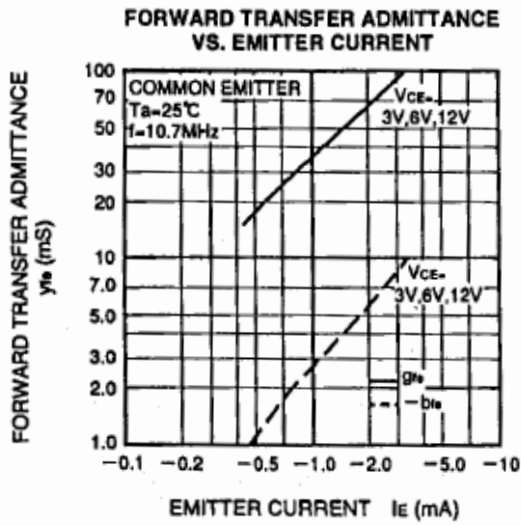
COMMON EMITTER, 1MHz y PARAMETER



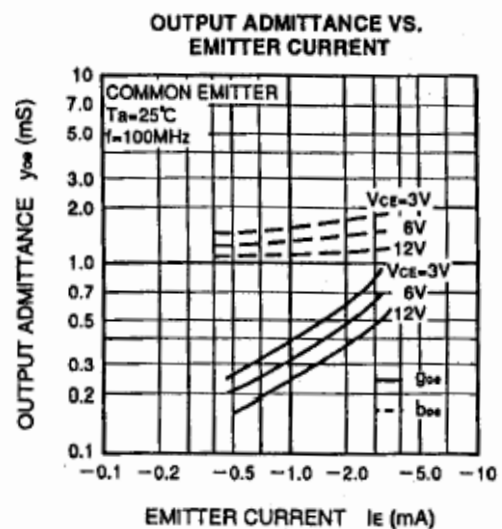
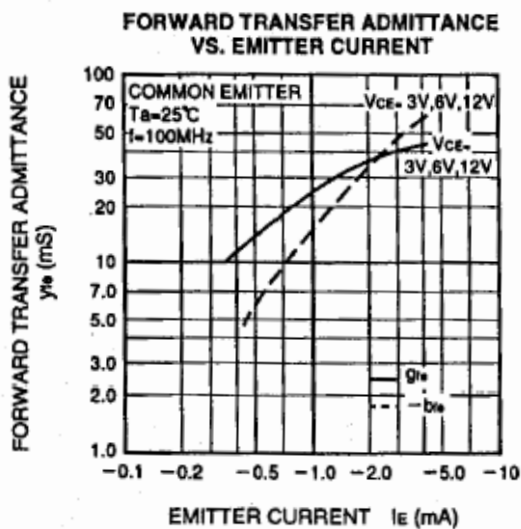
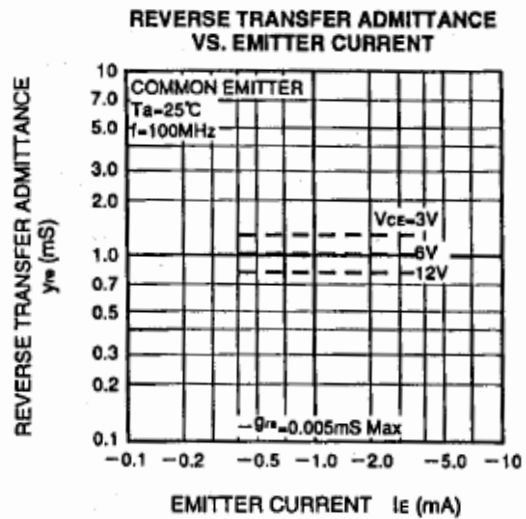
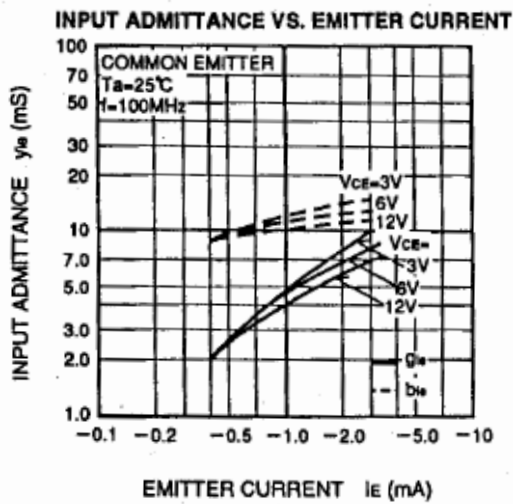
COMMON EMITTER, 10.7MHz y PARAMETER



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COMMON EMITTER, 100MHz y PARAMETER





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