Ordering number : ENN3020



ON Semiconductor DATA SHEET

NPN Epitaxial Planar Silicon Transistors

2SC4399 — High-Frequency General-Purpose Amplifier Applications

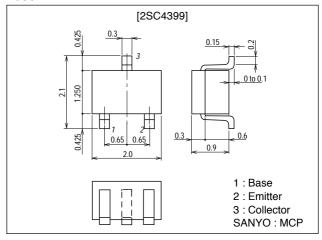
Features

- · High power gain : PG=25dB typ (f=100MHz).
- · Ultrasmall-sized package permitting the 2SC4399-applied sets to be made small and slim.

Package Dimensions

unit:mm

2059B



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	V _{CEO}		20	V
Emitter-to-Base Voltage	V _{EBO}		5	V
Collector Current	lС		30	mA
Collector Dissipation	PC		150	mW
Junction Temperature	Tj		150	°C
Storage Temperature	Tstg		-55 to +150	°C

Electrical Characteristics at Ta = 25°C

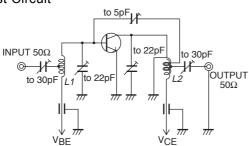
Parameter	Symbol	Conditions	Ratings			Unit
r arameter		Conditions		typ	max	
Collector Cutoff Current	I _{CBO}	V _{CB} =10V, I _E =0			0.1	μΑ
Emitter Cutoff Current	I _{EBO}	V _{EB} =4V, I _C =0			0.1	μΑ
DC Current Gain	h _{FE}	$V_{CE}=6V, I_{C}=1mA$	60*		270*	
Gain-Bandwidth Product	fΤ	V _{CE} =6V, I _C =1mA	200	320		MHz
Reverse transfer Capacitance	C _{re}	V _{CB} =6V, f=1MHz		0.9	1.2	pF
Base-to-Collector Time Constant	r _{bb} 'C _c	V _{CB} =6V, I _C =1mA, f=31.9MHz		12	20	ps
Power Gain	PG	V _{CB} =6V, I _C =1mA, f=100MHz		25		dB
Noise Figure	NF	V _{CB} =6V, I _C =1mA, f=100MHz		3.0		dB

 \ast : The 2SC4399 is classified by 1mA h_{FE} as follows :

Marking: F h_{FE} rank: 3, 4, 5

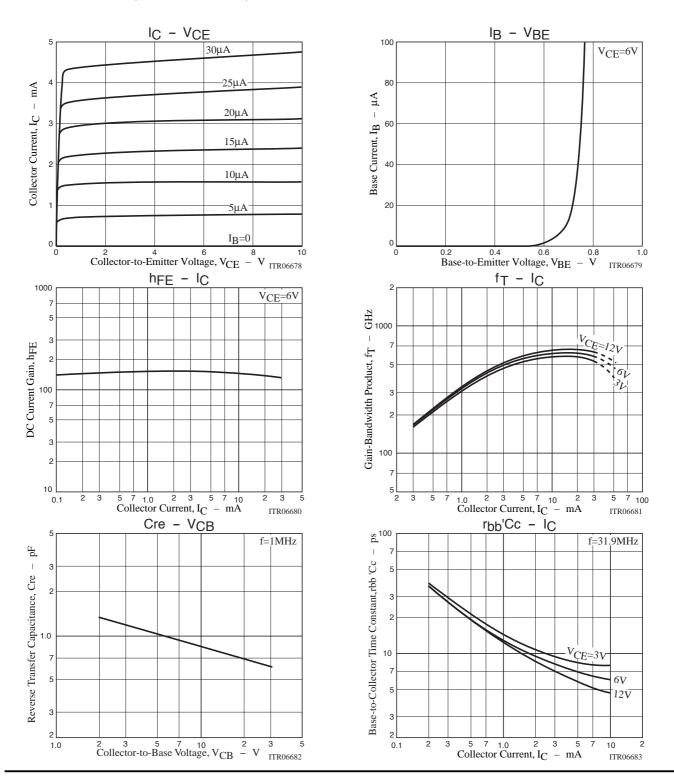
Rank	3	4	5	
h⊨⊨	60 to 120	90 to 180	135 to 270	

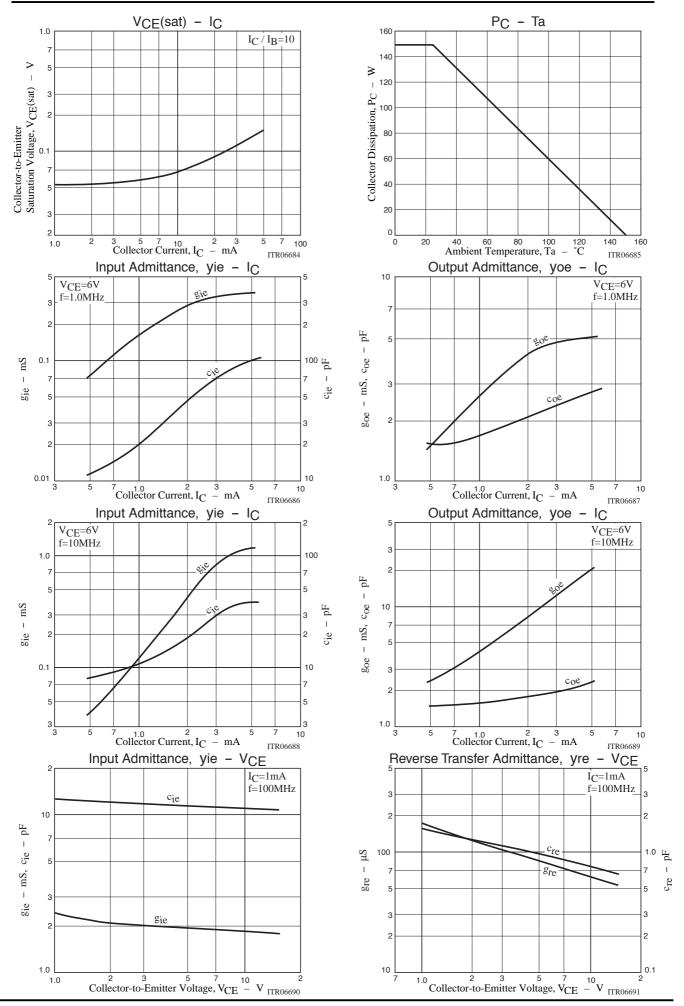
NF, PG Test Circuit

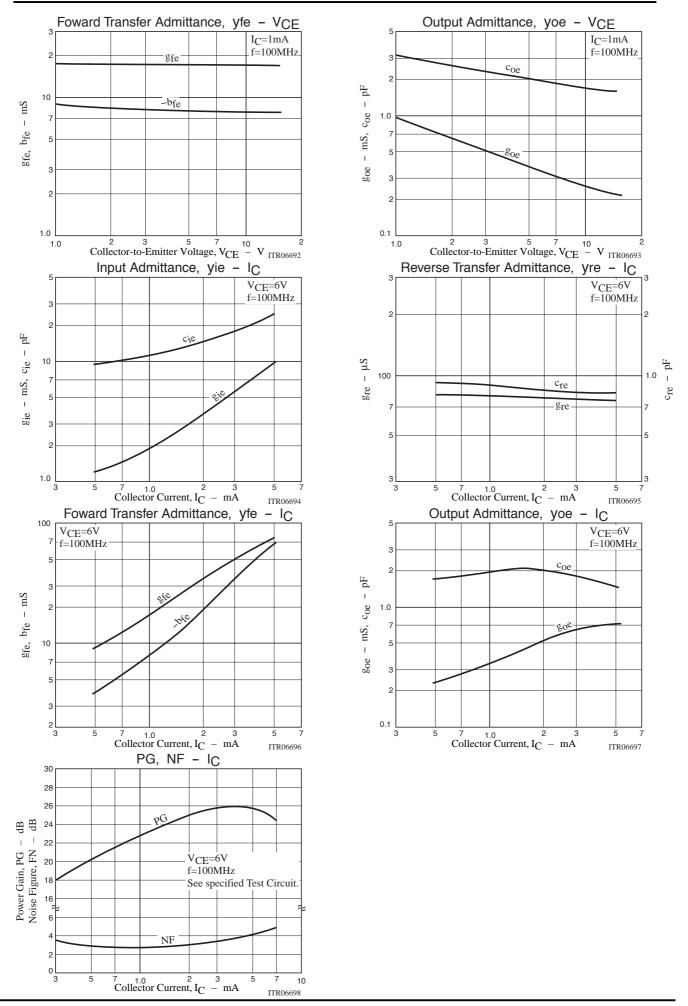


 $L1:1 mm \emptyset \ plated \ wire \ 10 mm \emptyset \ 4 \ T, \ tap:2 T \ from \ VBE \ side. \\ L2:1 mm \emptyset \ plated \ wire \ 10 mm \emptyset \ 7 \ T, \ tap:1 T \ from \ VCE \ side.$

L3: 1mmø enameled wire 10mmø 3 T







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