



High Frequency Amp Applications

Applications

· Ideally suited for use in FM RF amplifiers, mixers, oscillators, converters, and IF amplifiers.

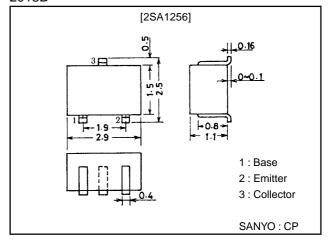
Features

- \cdot High f_T (230MHz typ), and small Cre (1.1pF typ).
- · Small NF (2.5dB typ).

Package Dimensions

unit:mm

2018B



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	V _{EBO}		-5	V
Collector Current	l _C		-30	mA
Collector Dissipation	PC		150	W
Junction Temperature	Tj		125	°C
Storage Temperature	Tstg		-55 to +125	°C

Electrical Characteristics at Ta = 25°C

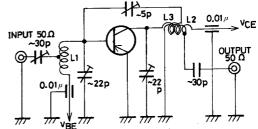
Parameter	Symbol	Conditions		Ratings					
			min	typ	max	Unit			
Collector Cutoff Current	I _{CBO}	V _{CB} =(-)10V, I _E =0			-0.1	μΑ			
Emitter Cutoff Current	I _{EBO}	V _{EB} =(-)4V, I _C =0			-0.1	μΑ			
DC Current Gain	h _{FE}	V _{CE} =(-)6V, I _C =(-)1mA	60*		270*				
Gain-Bandwidth Product	fT	V _{CE} =(-)6V, I _C =(-)1mA	150	230		MHz			
Reverse Transfer Capacitace	Cre	V _{CB} =-6V, f=1MHz		1.1	1.7	pF			
Base-to-Collector Time Constant	r _{bb} ', Cc	V _{CE} =-6V, I _C =-1mA, f=31.9MHz		11	20	ps			
Noise Figure	NF	V _{CE} =-6V, I _C =-1mA, f=100MHz		2.5		dB			
Voltage Gain	PG	V _{CE} =-6V, I _C =-1mA, f=100MHz		22		dB			

 \ast : The 2SA1256 is classified by 1mA h_{FE} as follows :

60 E3 120 90 E4 180 135 E5 180

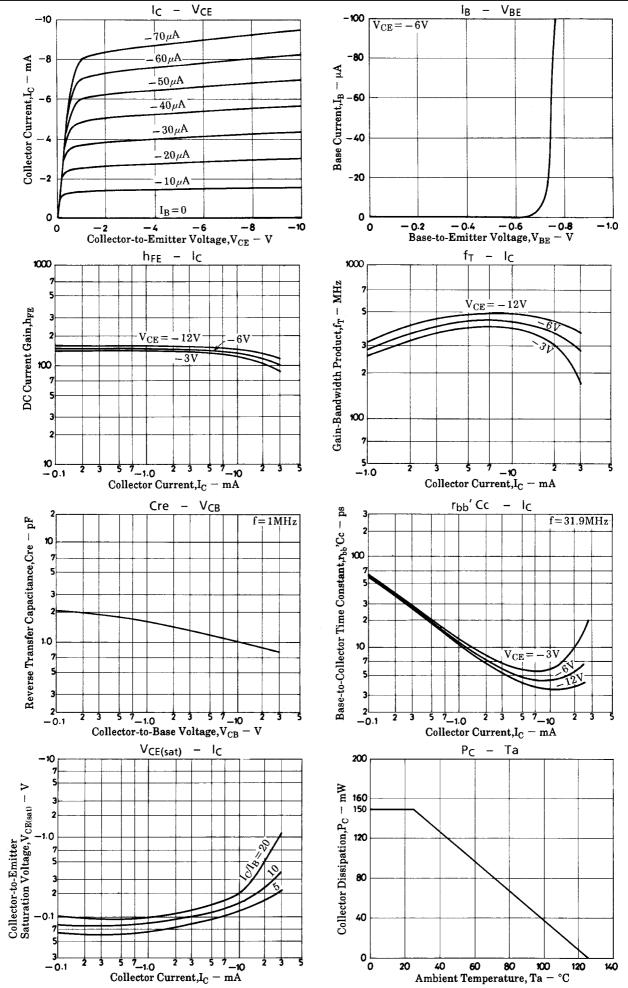
Note : Marking : E h_{FE} rank : 3, 4, 5

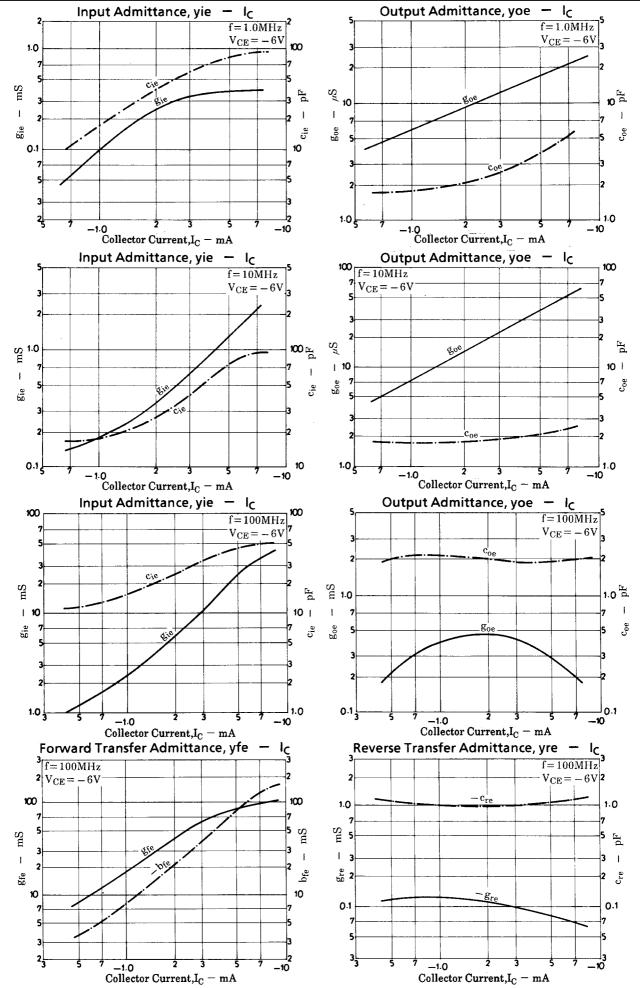
NF, PG Test Circuit

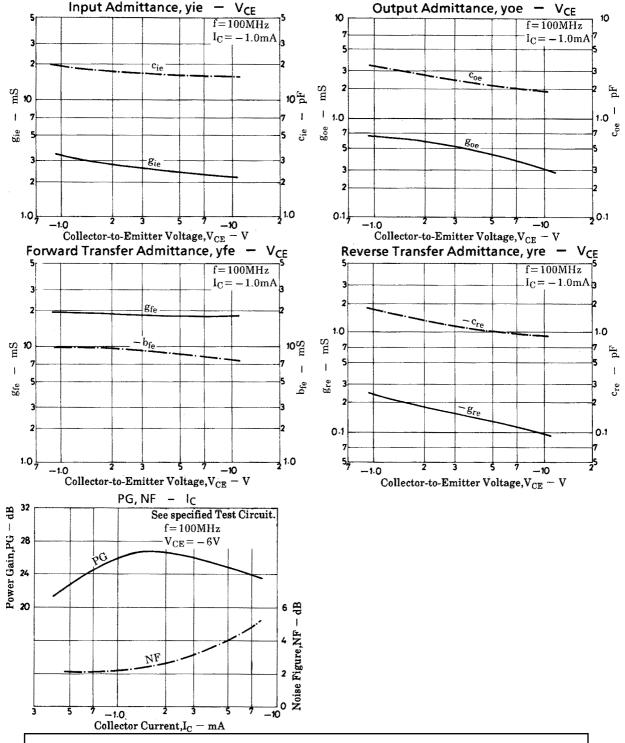


L1 : 1mmø plated wire 10mmø 5T, tap : 2T from V_{BE} side L2 : 1mmø plated wire 10mmø 7T, tap : 1T from V_{CE} side

L3: 1mmø enamel wire 10mmø 3T







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