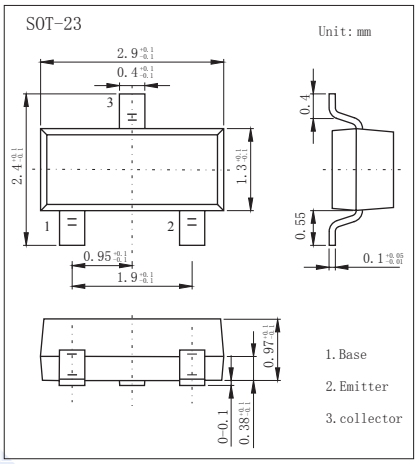
NPN Transistors

2SC4269



■ Features

- Collector Current Capability I_C=50mA
- Collector Emitter Voltage V_{CEO}=15V

■ Absolute Maximum Ratings Ta = 25℃

Parameter	Symbol	Rating	Unit
Collector - Base Voltage	V_{CBO}	30	V
Collector - Emitter Voltage	V_{CEO}	15	
Emitter - Base Voltage	V_{EBO}	3	
Collector Current - Continuous	I_C	50	mA
Base Current	I_B	20	
Collector Power Dissipation	P_C	250	mW
Junction Temperature	T_J	150	℃
Storage Temperature Range	T_{stg}	-55 to 150	

■ Electrical Characteristics Ta = 25℃

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Collector- base breakdown voltage	V_{CBO}	I_C= 100 μA， I_E= 0	30			V
Collector- emitter breakdown voltage	V_{CEO}	I_C= 10 mA， I_B= 0	15			
Emitter - base breakdown voltage	V_{EBO}	I_E= 100 μ A， I_C= 0	3			
Collector-base cut-off current	I_{CBO}	V_{CB}= 20V , I_E= 0			0.1	uA
Emitter cut-off current	I_{EBO}	V_{EB}= 2V , I_C=0			1	
Collector-emitter saturation voltage	$V_{CE(sat)}$	I_C=50mA, I_B=5mA			0.5	V
Base - emitter saturation voltage	$V_{BE(sat)}$	I_C=50mA, I_B=5mA			1.2	
DC current gain	h_{FE}	V_{CE}= 10V, I_C=5mA	40		200	
Power gain	PG	V_{CE} = 10V, I_C = 10 mA, f=0.4GHz		15		dB
Noise Figure	NF	V_{CE} = 10V, I_C =3 mA, f=0.4GHz		2		
Reverse transfer capacitance	C_{re}	V_{CB}= 10V,f=1MHz		0.5		pF
Collector output capacitance	C_{ob}	V_{CB}= 10V,f=1MHz			1.1	pF
Transition frequency	f_T	V_{CE}= 10V, I_C=10mA	0.6			GHz

■ Classification of h_{fe}

Type	2SC4269-JT2	2SC4269-JT3	2SC4269-JT4
Range	40-80	60-120	100-200
Marking	JT2	JT3	JT4

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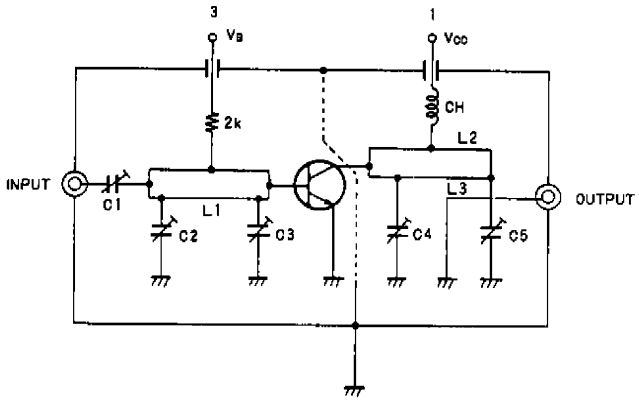
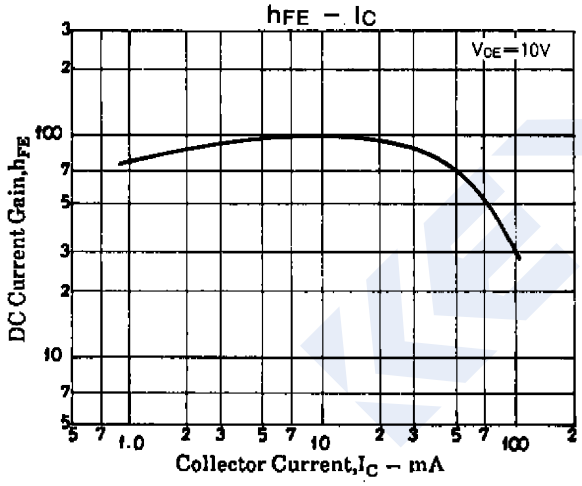
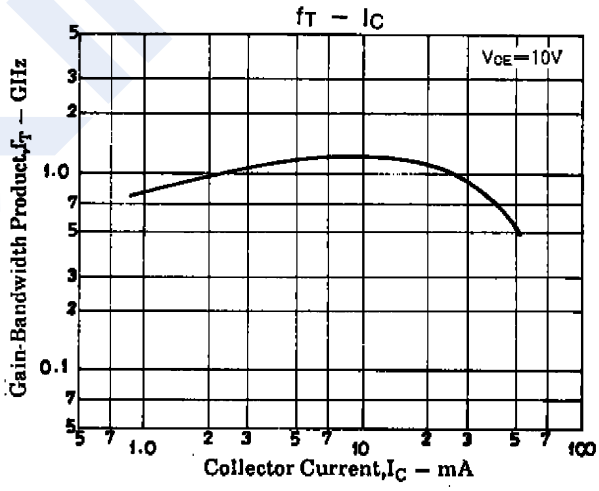
■ Typical Characterisitics

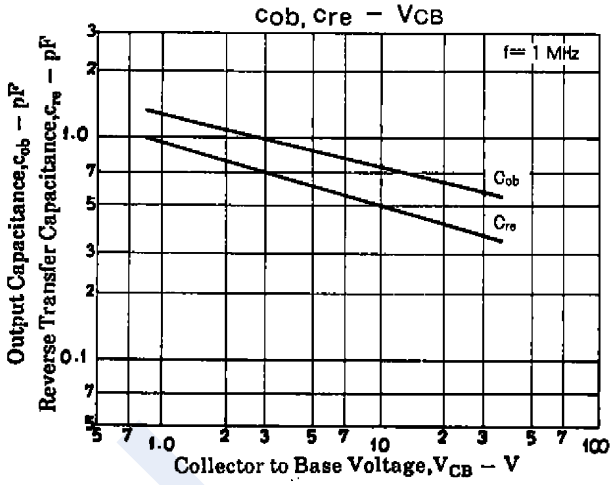


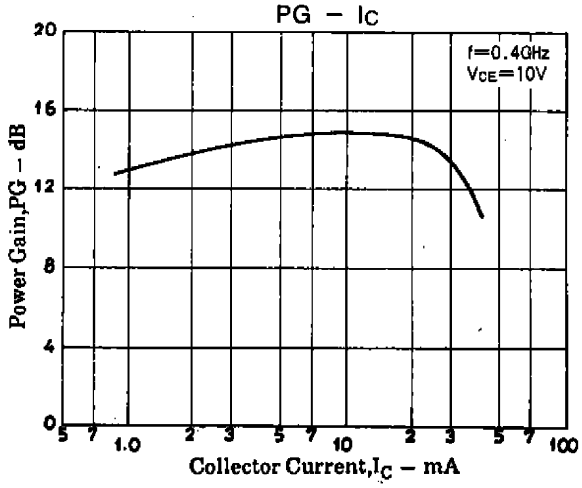
	f=400MHz
C1	~20pF
C2	~10pF
C3	~10pF
C4	~20pF
C5	~30pF
L1	2ø, l=40mm 2/3t
L2	2ø, l=40mm 2/3t
L3	1ø, l=40mm 1/2t

Unit (Resistance : Ω)









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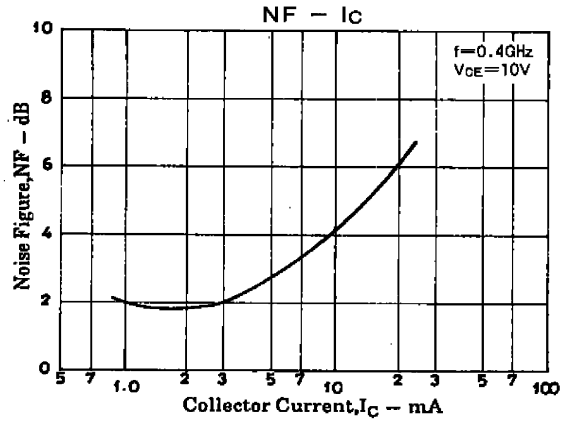
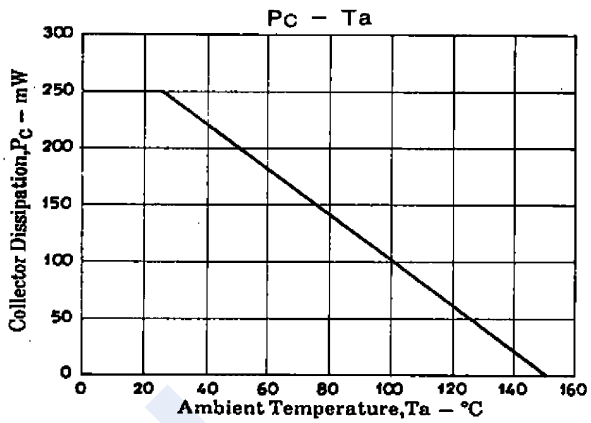
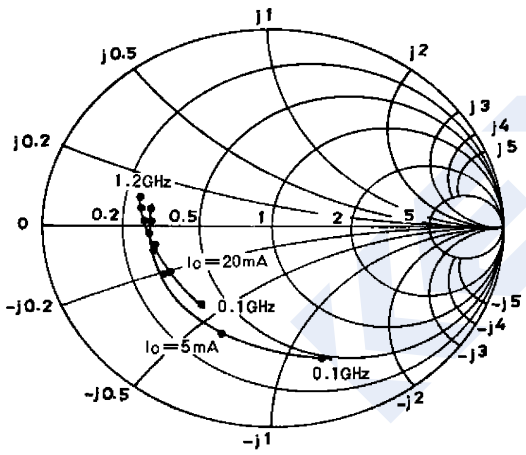
■ Typical Characterisitics



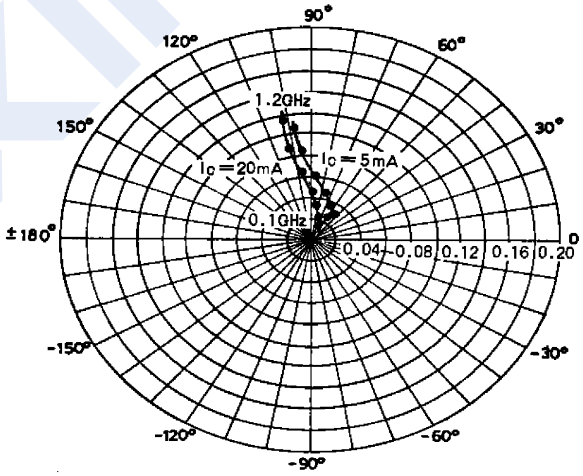


S parameter

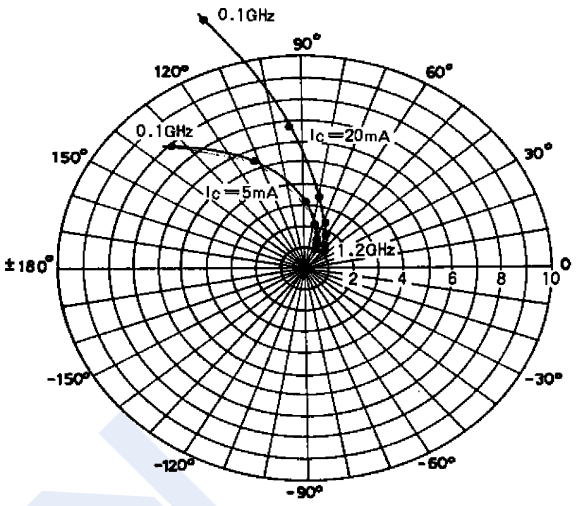
S11e : VCE= 10V
f=100MHz, 200~1200MHz(200MHz step)



S12e : VCE= 10V
f=100MHz, 200~1200MHz(200MHz step)



S21e : VCE= 10V
f=100MHz, 200~1200MHz(200MHz step)



S22e : VCE= 10V
f=100MHz, 200~1200MHz(200MHz step)