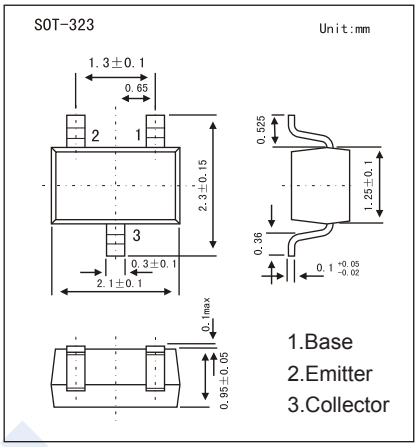
NPN Transistors

2SC4226



■ Features

- Collector Current Capability I_C=100mA
- Collector Emitter Voltage V_{CEO}=12V

■ Absolute Maximum Ratings Ta = 25℃

Parameter	Symbol	Rating	Unit
Collector - Base Voltage	V_{CBO}	20	V
Collector - Emitter Voltage	V_{CEO}	12	
Emitter - Base Voltage	V_{EBO}	3	
Collector Current - Continuous	I_C	100	mA
Collector Power Dissipation	P_C	150	mW
Junction Temperature	T_J	150	℃
Storage Temperature Range	T_{stg}	-65 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	20			V
Collector- emitter breakdown voltage	V_{CEO}	I_C= 1 mA, I_B= 0	12			
Emitter - base breakdown voltage	V_{EBO}	I_E= 100 μ A, I_C= 0	3			
Collector-base cut-off current	I_{CBO}	V_{CB}= 10 V , I_E= 0			1	uA
Emitter cut-off current	I_{EBO}	V_{EB}= 1V , I_C=0			1	
Collector-emitter saturation voltage	$V_{CE(sat)}$	I_C=100 mA, I_B=10mA			0.5	V
Base - emitter saturation voltage	$V_{BE(sat)}$	I_C=100 mA, I_B=10mA			1.2	
DC current gain	h_{FE}	V_{CE}= 3V, I_C= 7mA	40		250	
Insertion Power Gain	$\|S_{21e}\|^2$	V_{CE}= 3V, I_C= 7mA,f=1GHz	7			dB
Noise Figure	NF	V_{CE}= 3V, I_C= 7mA,f=1GHz			2.5	
Feed back Capacitance	C_{re}	V_{CE}= 3V, I_E=0,f=1MHz			1.5	pF
Transition frequency	f_T	V_{CE}= 3V, I_C= 7mA	3			GHz

Note.Pulse Measurement ; PW ≤ 350 us, Duty Cycle ≤ 2 % Pulsed.

■ Classification of h_{fe}

Type	2SC4226-R23	2SC4226-R24	2SC4226-R25
Range	40-80	70-140	125-250
Marking	R23	R24	R25

NPN Transistors

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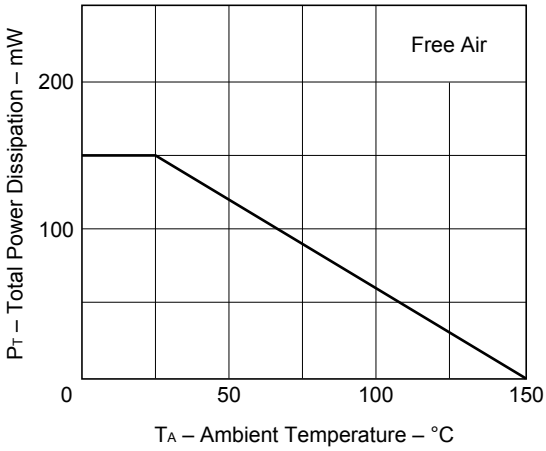
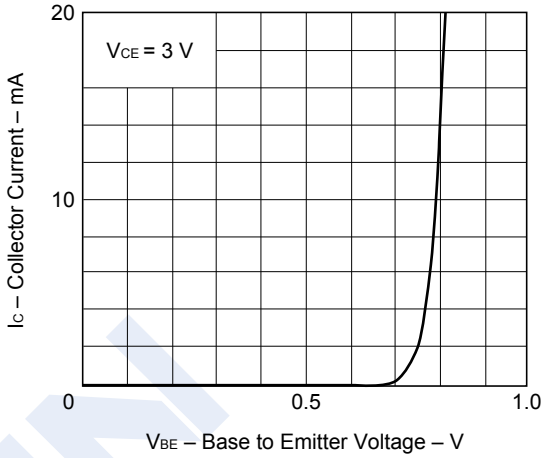
■ Typical Characterisitics

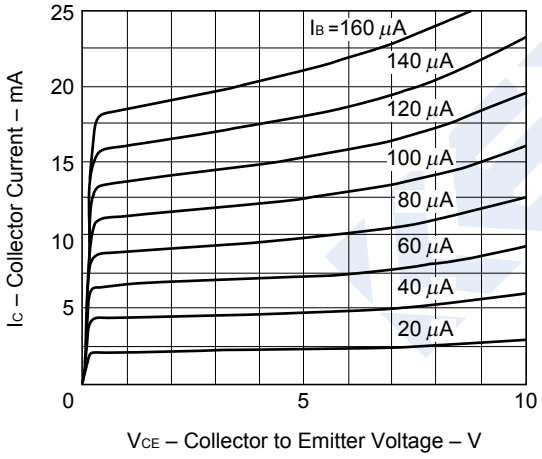
TOTAL POWER DISSIPATION
vs. AMBIENT TEMPERATURE



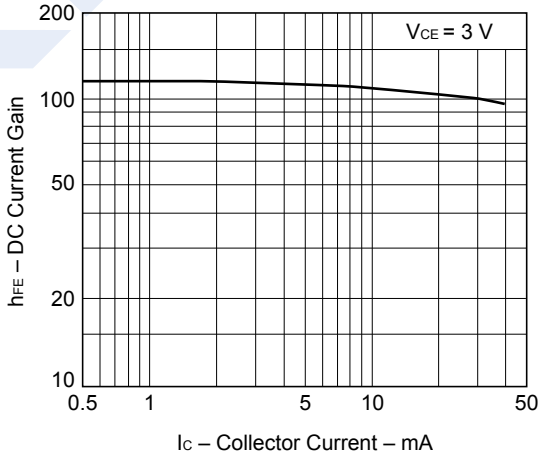
COLLECTOR CURRENT vs.
BASE TO EMITTER VOLTAGE



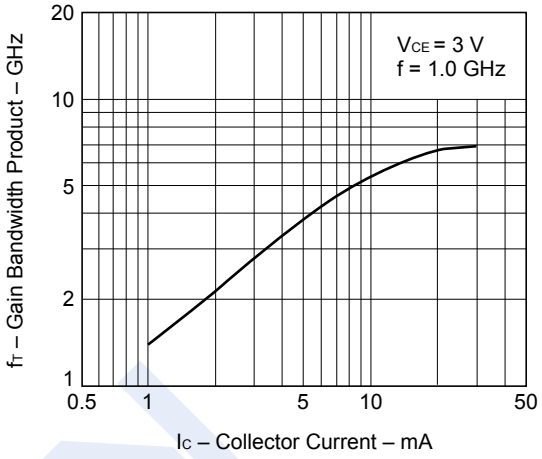
COLLECTOR CURRENT vs.
COLLECTOR TO EMITTER VOLTAGE



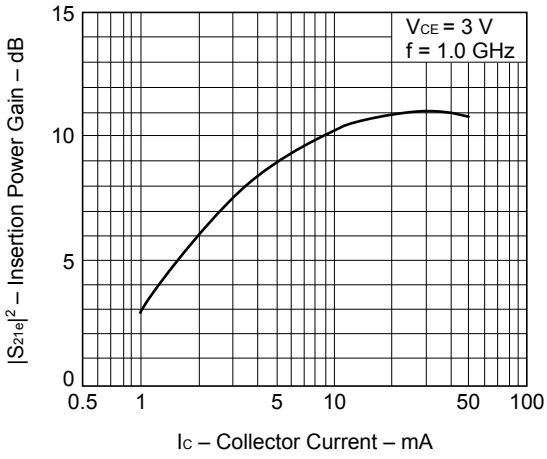
DC CURRENT GAIN vs.
COLLECTOR CURRENT



GAIN BANDWIDTH PRODUCT
vs. COLLECTOR CURRENT



INSERTION POWER GAIN vs.
COLLECTOR CURRENT



NPN Transistors

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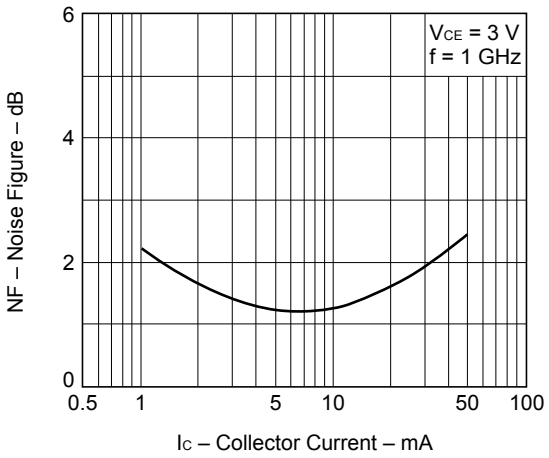
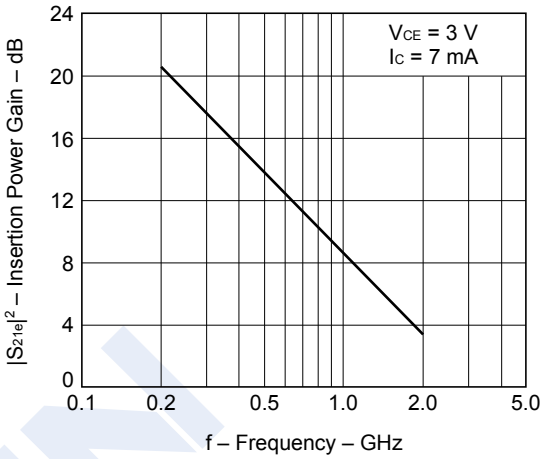
■ Typical Characterisitics

NOISE FIGURE vs.
COLLECTOR CURRENT



INSERTION POWER GAIN vs. FREQUENCY



FEED-BACK CAPACITANCE vs.
COLLECTOR TO BASE VOLTAGE