

SOT-323 Plastic-Encapsulate Transistors

Features

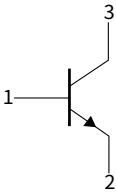
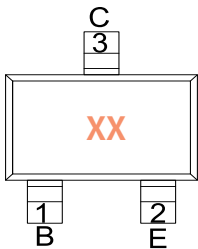
- Collector Emitter Voltage VCEO=12V
- Power dissipation of 150mW

Mechanical Data

- Case: SOT-323
Molding compound meets UL 94V-0 flammability rating, RoHS-compliant,halogen-free
- Terminals: Solder plated, solderable per MIL-STD-750,Method 2026

Function Diagram

XX=Device Code
R23=2SC4226-L
R24=2SC4226-M
R25=2SC4226-H



Collector-Emitter Voltage
VCEO 12V
Collector Current
0.10 Ampere



Ordering Information

PACKAGE	PACKAGE CODE	UNIT WEIGHT(g)	REEL(pcs)	BOX(pcs)	CARTON(pcs)	DELIVERY MODE
SOT-323	R1	0.005	3000	30000	240000	7"

Maximum Ratings (Ta=25°C Unless otherwise specified)

PARAMETER	SYMBOL	UNIT	VALUE
Collector-Base Voltage	V _{CBO}	V	20
Collector-Emitter Voltage	V _{CEO}		12
Emitter-Base Voltage	V _{EBO}		3
Collector Current	I _C	mA	100
Collector Power Dissipation	P _C	mW	150
Storage temperature	T _{stg}	°C	-65 ~+150
Junction temperature	T _j	°C	150

Electrical Characteristics (Ta=25°C Unless otherwise noted)

PARAMETER	SYMBOL	UNIT	Condition	Min	Type	Max
Collector-Base Breakdown Voltage	$V_{(BR)CBO}$	V	$I_C=100\mu A, I_E=0$	20	—	—
Collector-Emitter Breakdown Voltage	$V_{(BR)CEO}$		$I_C=1mA, I_B=0$	12	—	—
Emitter-Base Breakdown Voltage	$V_{(BR)EBO}$		$I_E=100\mu A, I_C=0$	3	—	—
Collector-Base cut-off current	I_{CBO}	uA	$V_{CB}=10V, I_E=0$	—	—	1
Emitter-Base cut-off current	I_{EBO}		$V_{EB}=1.0V, I_C=0$	—	—	1
DC Current Gain	h_{FE}	—	$I_C=7mA, V_{CE}=3.0V$	40	—	250
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$	V	$I_C=100mA, I_B=10mA$	—	—	0.5
Base-Emitter Saturation Voltage	$V_{BE(sat)}$	V	$I_C=100mA, I_B=10mA$	—	—	1.2
Insertion Power Gain	$ S_{21e} ^2$	dB	$V_{CE}=3V, I_C=7mA, f=1GHz$	7	—	—
Noise Figure	NF		$V_{CE}=3V, I_C=7mA, f=1GHz$	—	—	2.5
Feed back Capacitance	C_{re}	pF	$V_{CE}=3V, I_E=0, f=1MHz$	—	—	1.5

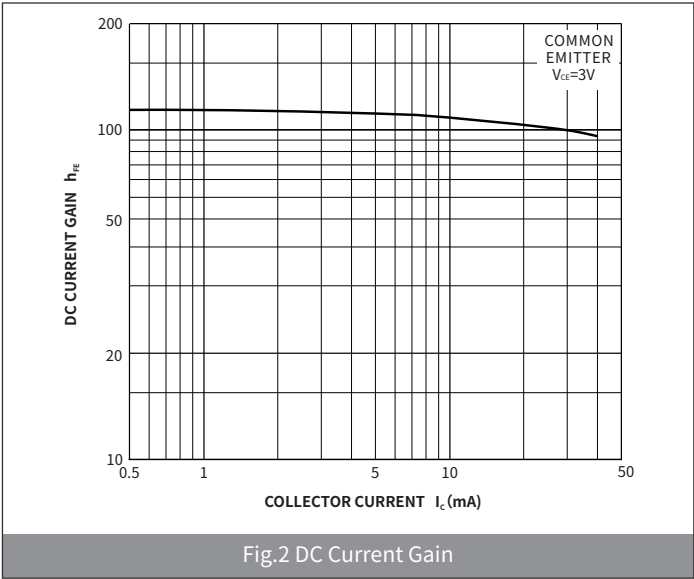
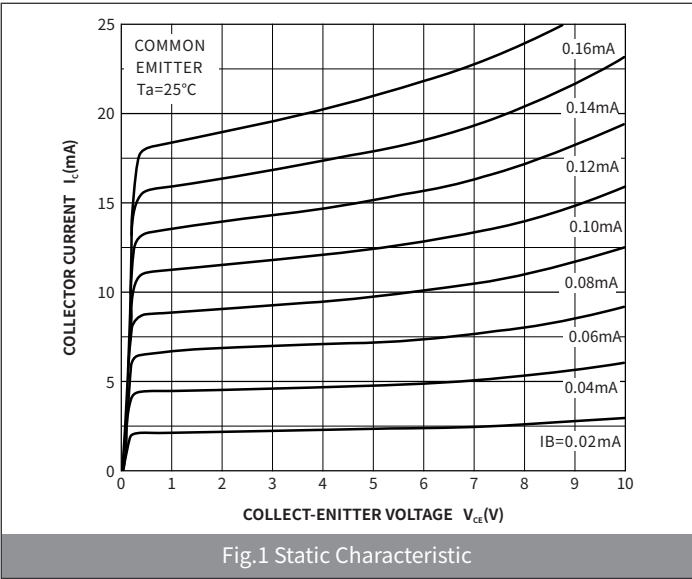
Small-signal Characteristics

ITEM	SYMBOL	Condition	UNIT	Min	Typ	Max
Transition frequency	f_T	$I_C=7mA, V_{CE}=3V$	GHz	3	—	—

Classification Of h_{FE}

RANK	L	M	H
Range	40-80	70-140	125-250

Ratings And Characteristics Curves (Ta=25°C Unless otherwise specified)



● Ratings And Characteristics Curves (Ta=25°C Unless otherwise specified)

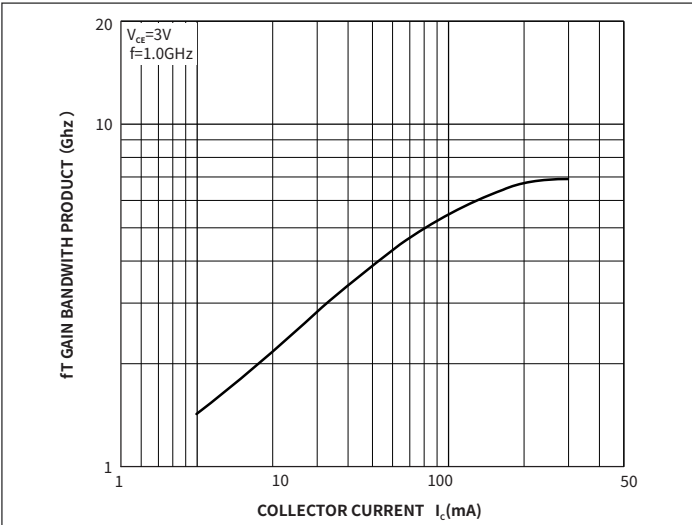


Fig.3 Gain Bandwidth Product vs. Collector Current

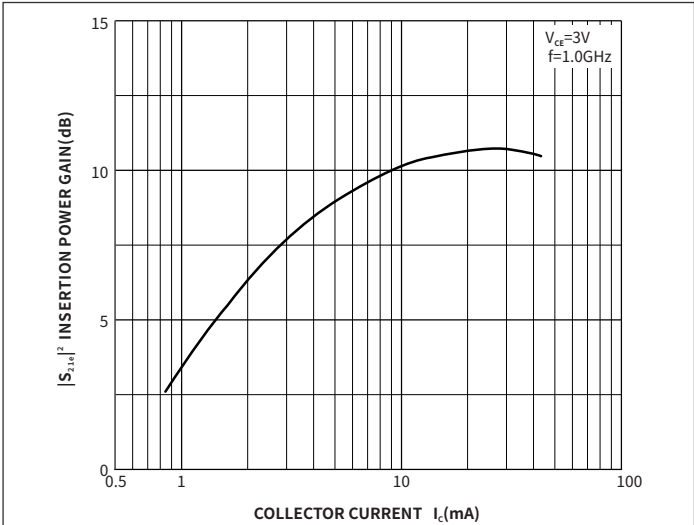


Fig.4 Insertion Power Gain vs. Collector Current

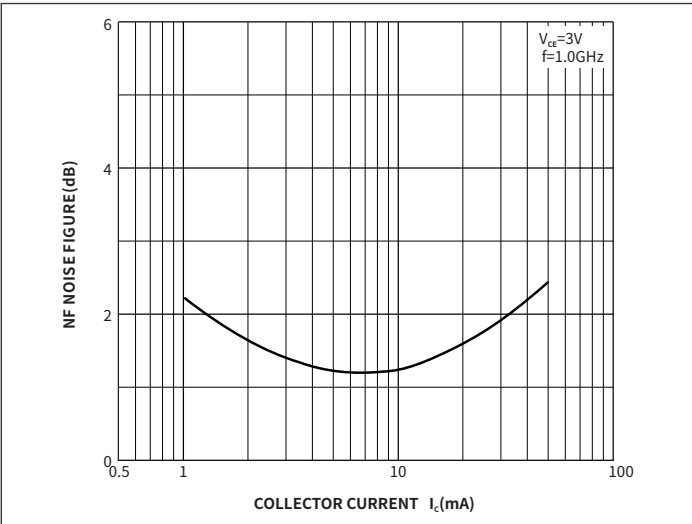


Fig.5 Noise Figure vs. Collector Current

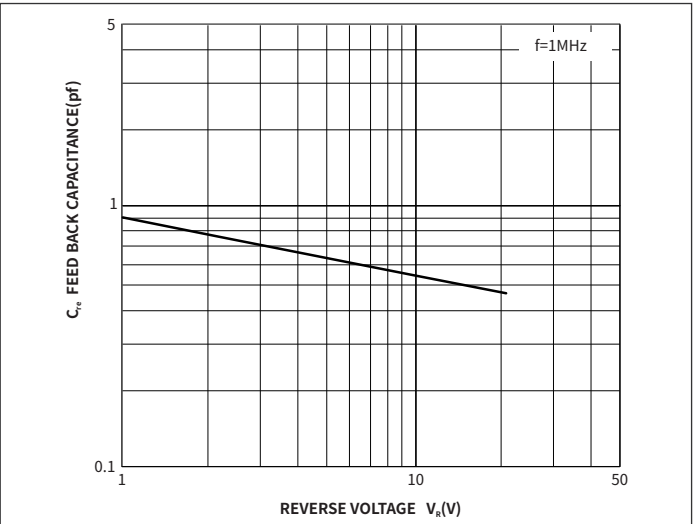


Fig.6 Feed Back Capacitance vs. Collector To Base Voltage

● Package Outline Dimensions (SOT-323)

Symbol	Dimensions			
	Millimeters		Inches	
	Min.	Max.	Min.	Max.
A	0.80	1.10	0.031	0.043
A1	-	0.10	-	0.004
A2	0.90	1.00	0.035	0.039
b	0.30	0.40	0.012	0.020
c	0.10	0.25	0.004	0.010
D	1.80	2.20	0.071	0.087
E	1.15	1.35	0.045	0.053
E1	2.00	2.2	0.079	0.086
e	0.650TYP		0.026TYP	
e1	1.20	1.40	0.047	0.055
L	0.525REF		0.021REF	
L1	0.15	0.45	0.006	0.018
θ	-	8°	-	8°

● Suggested Pad Layout

Symbol	Dimensions			
	Millimeters		Inches	
	Min.	Max.	Min.	Max.
J	0.65	0.75	0.026	0.030
K	0.85	0.95	0.033	0.037
M	1.85	1.95	0.073	0.077
N	1.25	1.35	0.049	0.053