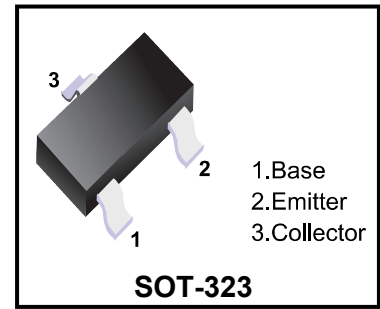


NPN Silicon Epitaxial Planar Transistor

For VHF, UHF low noise amplifier



Absolute Maximum Ratings (Ta=25°C)

Parameter	Symbol	Value	Unit
Collector Base Voltage	V_{CBO}	20	V
Collector Emitter Voltage	V_{CEO}	12	V
Emitter Base Voltage	V_{EBO}	3	V
Collector Current	I_C	100	mA
Power Dissipation	P_{tot}	150	mW
Junction Temperature	T_j	150	°C
Storage Temperature Range	T_{stg}	- 65 to + 150	°C

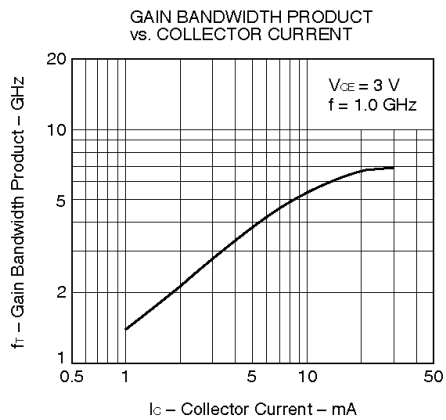
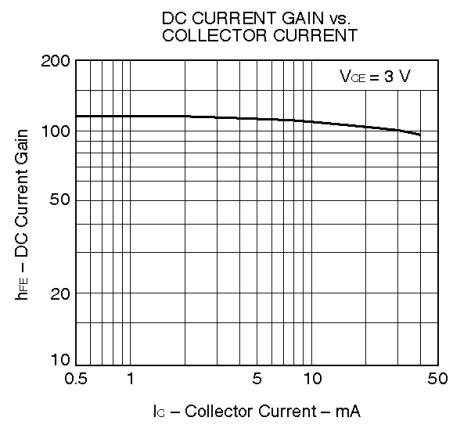
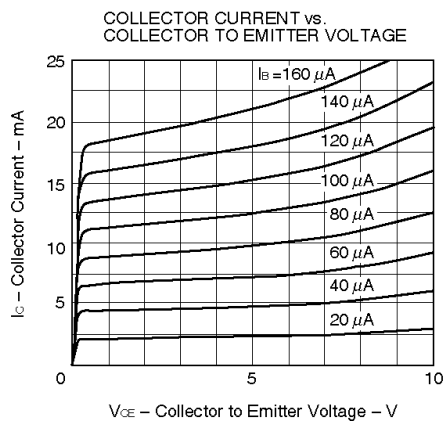
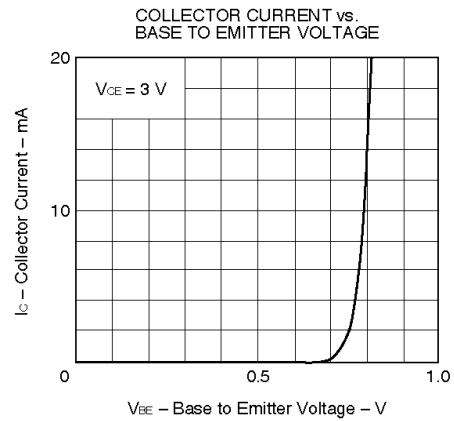
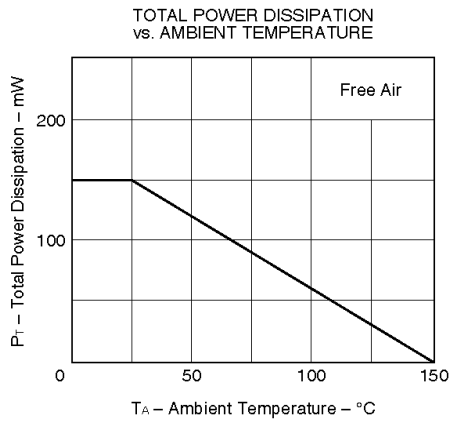
Characteristics at Ta = 25 °C

Parameter	Symbol	Min.	Max.	Unit
DC Current Gain at $V_{CE} = 3\text{ V}$, $I_C = 7\text{ mA}$ Current Gain Group Q R S	h_{FE}	40	80	-
	h_{FE}	70	140	-
	h_{FE}	125	250	-
Collector Base Cutoff Current at $V_{CB} = 10\text{ V}$	I_{CBO}	-	1	μA
Emitter Base Cutoff Current at $V_{EB} = 1\text{ V}$	I_{EBO}	-	1	μA
Collector Base Breakdown Voltage at $I_C = 10\ \mu\text{A}$	$V_{(BR)CBO}$	20	-	V
Collector Emitter Breakdown Voltage at $I_C = 1\text{ mA}$	$V_{(BR)CEO}$	12	-	V
Emitter Base Breakdown Voltage at $I_E = 10\ \mu\text{A}$	$V_{(BR)EBO}$	3	-	V
Collector Emitter Saturation Voltage at $I_C = 10\text{ mA}$, $I_B = 5\text{ mA}$	$V_{CE(sat)}$	-	0.5	V
Transition Frequency at $V_{CE} = 3\text{ V}$, $I_C = 7\text{ mA}$	f_T	3	-	GHz
Feed Back Capacitance at $V_{CB} = 3\text{ V}$, $f = 1\text{ MHz}$	C_{re}	-	1.5	pF
Noise Figure at $V_{CE} = 3\text{ V}$, $I_C = 7\text{ mA}$, $f = 1\text{ GHz}$	NF	-	2.5	dB

Classification of h_{FE}

RANK	MMBTSC4226QW	MMBTSC4226RW	MMBTSC4226SW
MARKING	R23	R24	R25
h_{FE}	40~80	70~140	125~250

Typical Characteristics



Ordering information

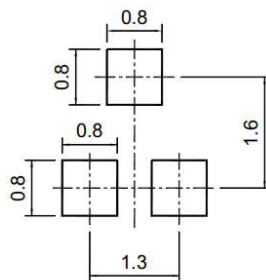
Package	Packing Description	Base Quantity	Packing Quantity
SOT-323	Tape/Reel, 7" reel	3000pcs/Reel	24000PCS/Box 120000PCS/Carton

Package Dimensions

SOT-323

Dim.	Millimeter (mm)		mil	
	Min.	Max.	Min.	Max.
A	0.8	1.1	32	43
A1	0.1		4	
bp	0.3	0.4	12	16
C	0.10	0.25	4	10
D	1.8	2.2	71	87
E	1.15	1.35	45	53
E	1.3		51	
E1	0.65		26	
HE	2.0	2.2	79	87
Lp	0.15	0.45	6	18
Q	0.13	0.23	5.1	9
v	0.2		8	
W	0.2		8	

The recommended mounting pad size



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