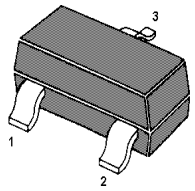
MMBTSC4226

NPN Silicon Epitaxial Planar Transistor

High Frequency Low Noise Amplifier.

The transistor is subdivided into three groups, Q, R and S, according to its DC current gain.



1. Base 2. Emitter 3. Collector

SOT-23 Plastic Package

Description:

The MMBTSC4226 is a low supply voltage transistor designed for VHF, UHF low noise amplifier.

Absolute Maximum Ratings (T_a = 25 °C)

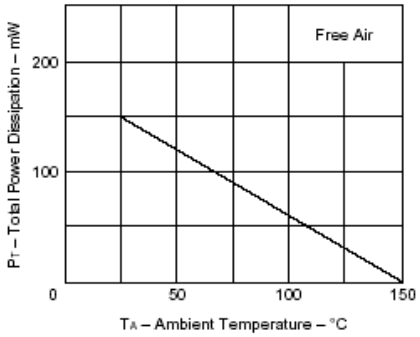
	Symbol	Value	Unit
Collector Base Voltage	V_{CBO}	20	V
Collector Emitter Voltage	V_{CEO}	12	V
Emitter Base Voltage	V_{EBO}	3	V
Collector Current	I_C	100	mA
Total Power Dissipation	P_{tot}	200	mW
Junction Temperature	T_j	150	°C
Storage Temperature Range	T_{stg}	- 65 to + 150	°C

Characteristics at T_{amb}= 25 °C

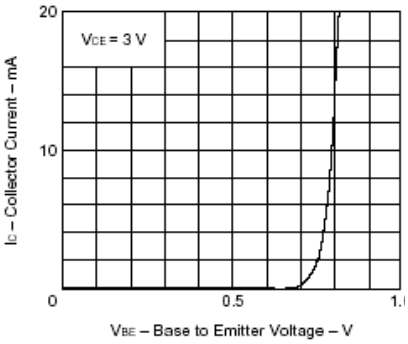
Parameter			Symbol	Min.	Typ.	Max.	Unit
DC Current Gain at V_{CE} = 3 V, I_C = 7 mA	Current Gain Group	Q	h_{FE}	40	-	80	-
		R	h_{FE}	70	-	140	-
		S	h_{FE}	125	-	250	-
Collector Cutoff Current at V_{CB} = 10 V			I_{CBO}	-	-	1	µA
Emitter Cutoff Current at V_{EB} = 1 V			I_{EBO}	-	-	1	µA
Gain Bandwidth Product at V_{CE} = 3 V, I_C = 7 mA			f_T	3	4.5	-	GHz
Feed back Capacitance [1] at V_{CE} = 3 V, f = 1 MHz			C_{re}	-	0.7	1.5	pF

[1] Measured with 3 terminal bridge, Emitter and case should be grounded.

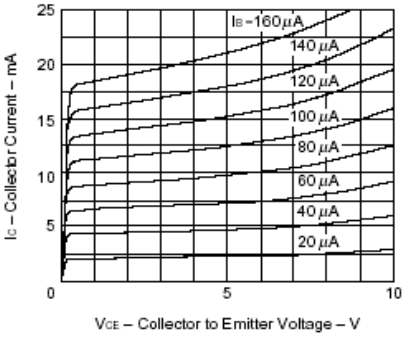
TOTAL POWER DISSIPATION vs. AMBIENT TEMPERATURE



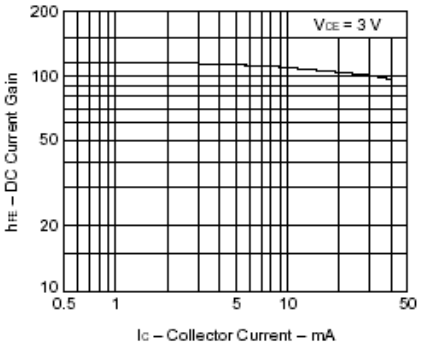
COLLECTOR CURRENT vs. BASE TO EMITTER VOLTAGE



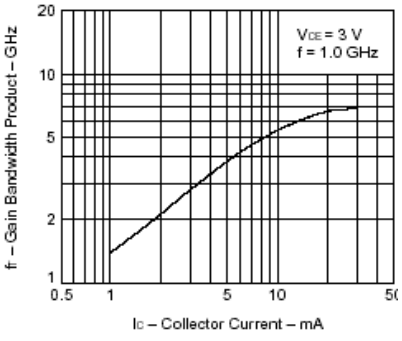
COLLECTOR CURRENT vs. COLLECTOR TO EMITTER VOLTAGE



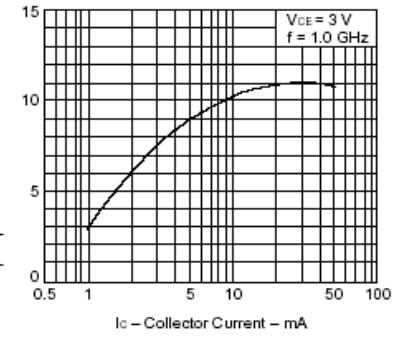
DC CURRENT GAIN vs. COLLECTOR CURRENT



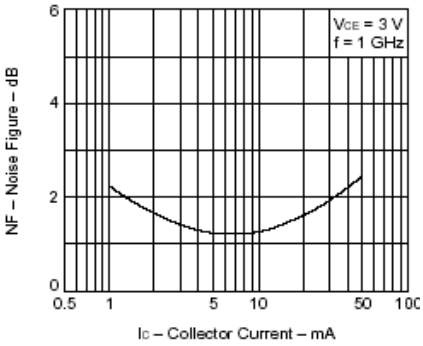
GAIN BANDWIDTH PRODUCT vs. COLLECTOR CURRENT



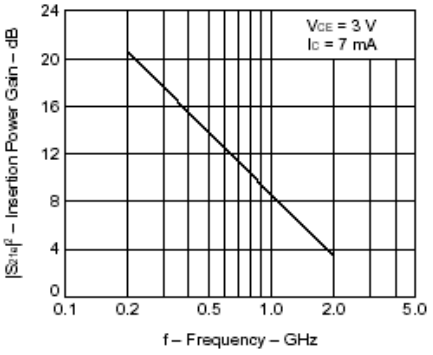
INSERTION POWER GAIN vs. COLLECTOR CURRENT



NOISE FIGURE vs. COLLECTOR CURRENT



INSERTION POWER GAIN vs. FREQUENCY



FEED-BACK CAPACITANCE vs. COLLECTOR TO BASE VOLTAGE