

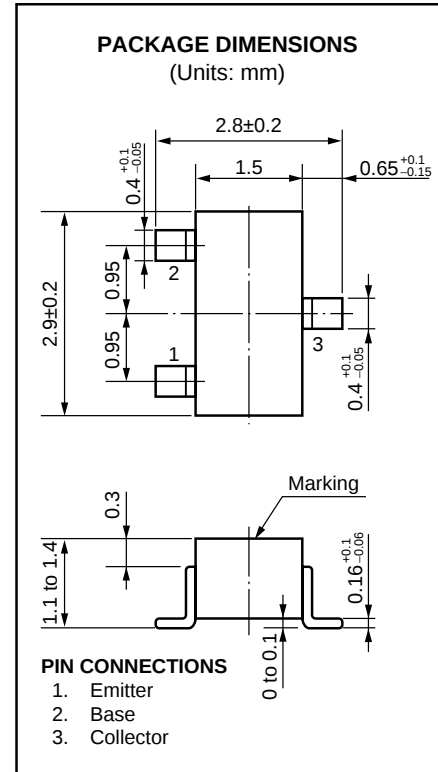
HIGH FREQUENCY LOW NOISE AMPLIFIER
NPN SILICON EPITAXIAL TRANSISTOR
MINI MOLD

FEATURES

- NF 1.5 dB TYP. @ $f = 1.0$ GHz
- MAG 14 dB TYP. @ $f = 1.0$ GHz

ABSOLUTE MAXIMUM RATINGS ($T_A = 25^\circ\text{C}$)

Collector to Base Voltage	V_{CB0}	25	V
Collector to Emitter Voltage	V_{CE0}	12	V
Emitter to Base Voltage	V_{EB0}	3.0	V
Collector Current	I_C	70	mA
Total Power Dissipation	P_T	250	mW
Junction Temperature	T_j	150	$^\circ\text{C}$
Storage Temperature	T_{stg}	-65 to +150	$^\circ\text{C}$

ELECTRICAL CHARACTERISTICS ($T_A = 25^\circ\text{C}$)

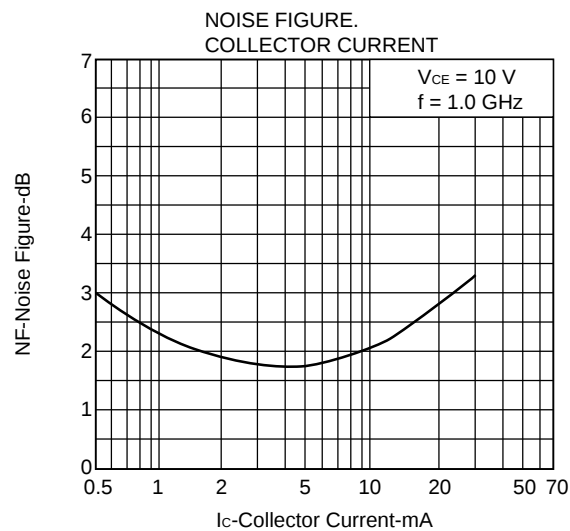
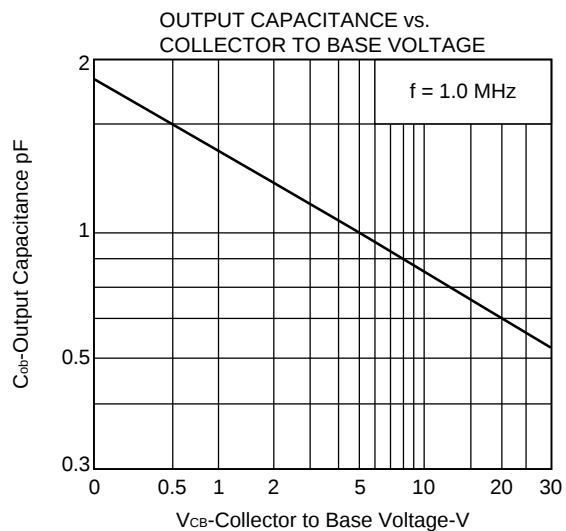
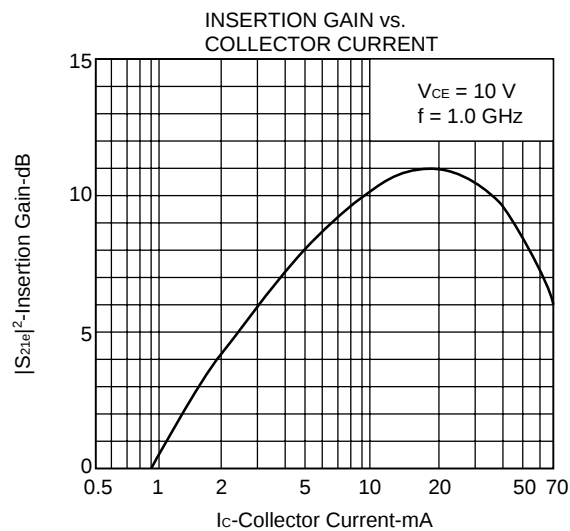
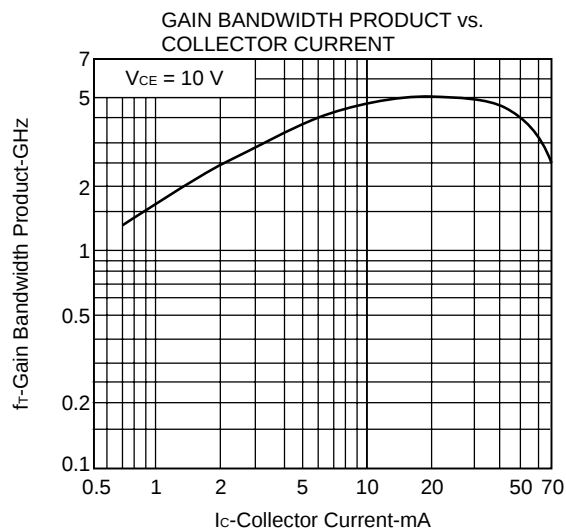
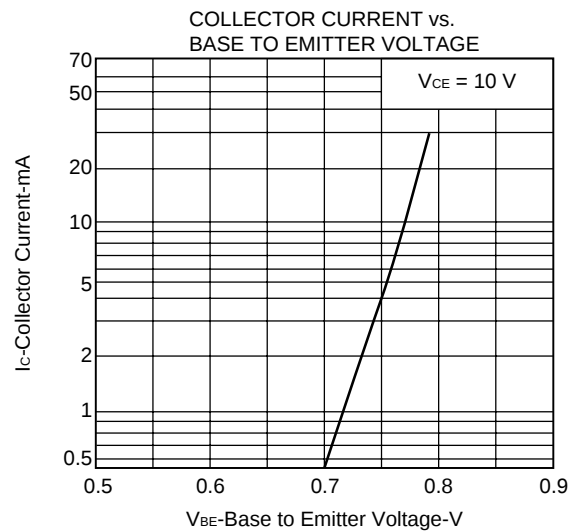
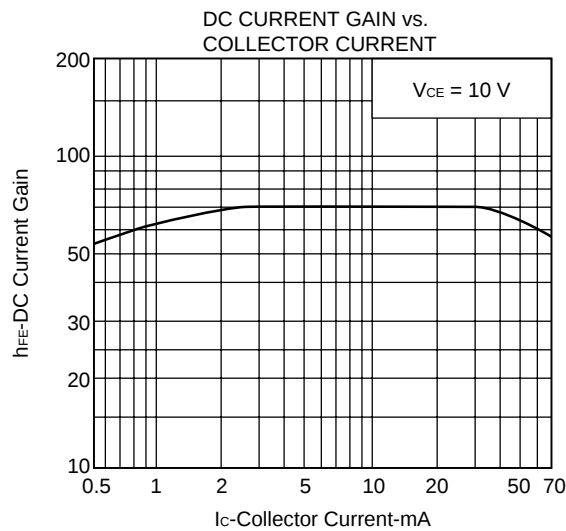
CHARACTERISTIC	SYMBOL	MIN.	TYP.	MAX.	UNIT	TEST CONDITIONS
Collector Cutoff Current	I_{CBO}			0.1	μA	$V_{CB} = 15\text{ V}, I_E = 0$
Emitter Cutoff Current	I_{EBO}			0.1	μA	$V_{EB} = 2.0\text{ V}, I_C = 0$
DC Current Gain	h_{FE}	40		200		$V_{CE} = 10\text{ V}, I_C = 20\text{ mA}$
Gain Bandwidth Product	f_T		4.5		GHz	$V_{CE} = 10\text{ V}, I_C = 20\text{ mA}$
Output Capacitance	C_{ob}		0.75	1.0	pF	$V_{CB} = 10\text{ V}, I_E = 0, f = 1.0\text{ MHz}$
Insertion Power Gain	$ S_{21E} ^2$	9	11		dB	$V_{CE} = 10\text{ V}, I_C = 20\text{ mA}, f = 1.0\text{ GHz}$
Noise Figure	NF		1.5	3.0	dB	$V_{CE} = 10\text{ V}, I_C = 5\text{ mA}, f = 1.0\text{ GHz}$
Maximum Available Gain	MAG		14		dB	$V_{CE} = 10\text{ V}, I_C = 20\text{ mA}, f = 1.0\text{ GHz}$

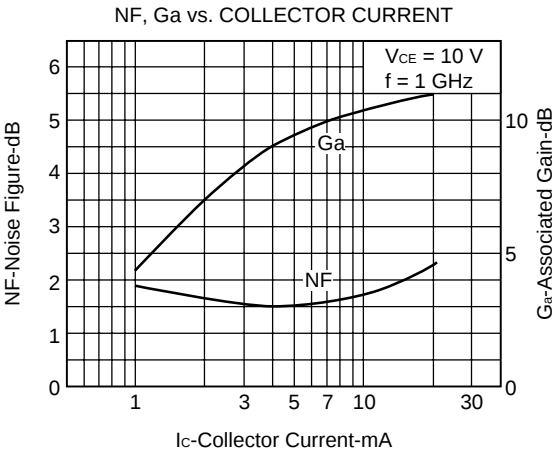
 h_{FE} Classification

Class	E/P *	F/Q *
Marking	R2	R3
h_{FE}	40 to 120	100 to 200

* Old Specification / New Specification

TYPICAL CHARACTERISTICS (T_A = 25 °C)





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Special: Transportation equipment (automobiles, trains, ships, etc.), traffic control systems, anti-disaster systems, anti-crime systems, safety equipment and medical equipment (not specifically designed for life support)

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Anti-radioactive design is not implemented in this product.