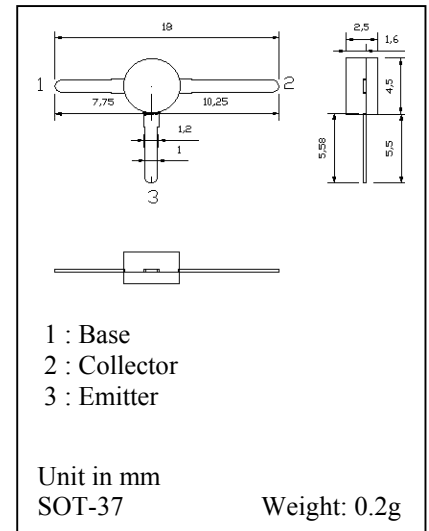


## NPN SILICON HIGH-FREQUENCY TRANSISTOR

... designed for low noise amplifier at VHF, UHF and CATV band.

### MAXIMUM RATINGS (Ta= 25 °C)

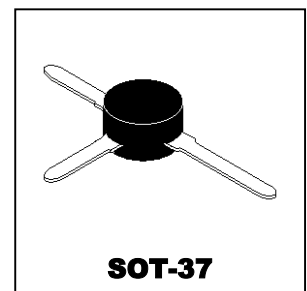
Characteristic	Symbol	Value	Unit
Collector Base Voltage	V <sub>CB0</sub>	20	V
Collector Emitter Voltage	V <sub>CE0</sub>	15	V
Emitter Base Voltage	V <sub>EB0</sub>	3	V
Collector Current	I <sub>C</sub>	100	mA
Collector power Dissipation	P <sub>tot</sub>	250	mW
Junction Temperature	T <sub>JMAX</sub>	150	°C
Operating Junction Temperature Range	T <sub>J</sub>	-45 ~ 70	°C
Storage Temperature Range	T <sub>stg</sub>	-65 ~ 150	°C



### ELECTRICAL CHARACTERISTICS (Ta= 25 °C)

Characteristic	Symbol	Test Condition	Min.	Typ.	Max.	Unit
Collector Cut Off Current	I <sub>CBO</sub>	I <sub>E</sub> = 0, V <sub>CB</sub> = 10V	-	-	100	nA
Emitter Cutoff Current	I <sub>EB0</sub>	I <sub>C</sub> = 0, V <sub>EB</sub> = 1V	-	-	1	μA
Collector Emitter Breakdown Voltage	V <sub>(BR)CEO</sub>	I <sub>C</sub> = 1mA, I <sub>B</sub> = 0	15	-	-	V
DC Current Gain	h <sub>FE</sub>	I <sub>E</sub> = 20mA, V <sub>CB</sub> = 10V	50	120	300	-
Transition Frequency	f <sub>T</sub>	I <sub>C</sub> = 20mA, V <sub>CB</sub> = 10V, f = 300MHz	6	7	-	GHz
Collector Base Capacitance	C <sub>ob</sub>	I <sub>E</sub> = 0, V <sub>CB</sub> = 10V, f = 1MHz	-	0.5	0.9	pF
Noise Figure	N <sub>F</sub>	I <sub>E</sub> = 5mA, V <sub>CB</sub> = 10V, f = 800MHz	-	1.3	2.0	dB
Power Gain	G <sub>PS</sub>	I <sub>E</sub> = 20mA, V <sub>CE</sub> = 10V, f = 800MHz	13.6	15	-	dB

**NPN SILICON  
HIGH FREQUENCY  
TRANSISTOR**



### Classification of h<sub>FE</sub>

Class	K	H	F	E
h <sub>FE</sub>	50 to 300	50 to 100	80 to 160	125 to 250

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