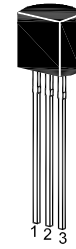


2N5088 / 2N5089

NPN Silicon Epitaxial Planar Transistor

for switching and AF amplifier applications.

The transistor is subdivided into one group according to its DC current gain. As complementary type the PNP transistor 2N5086 and 2N5087 are recommended.



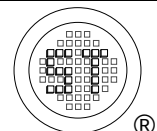
1. Emitter 2. Base 3. Collector
TO-92 Plastic Package

Absolute Maximum Ratings ($T_a = 25^\circ\text{C}$)

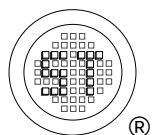
Parameter	Symbol	Value	Unit
Collector Base Voltage	V_{CBO}	35	V
Collector Emitter Voltage	V_{CEO}	30	V
Emitter Base Voltage	V_{EBO}	4.5	V
Collector Current	I_C	50	mA
Power Dissipation	P_{tot}	500	mW
Junction Temperature	T_j	150	$^\circ\text{C}$
Storage Temperature Range	T_{stg}	- 55 to + 150	$^\circ\text{C}$

Characteristics at $T_a = 25^\circ\text{C}$

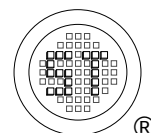
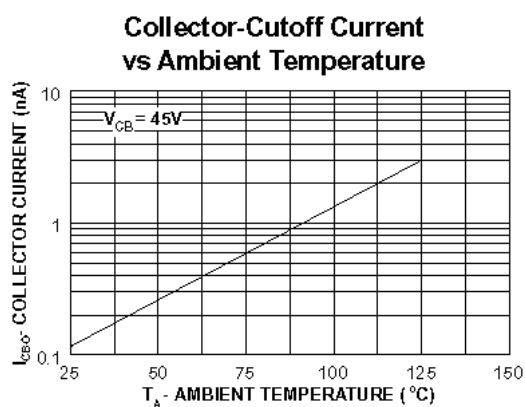
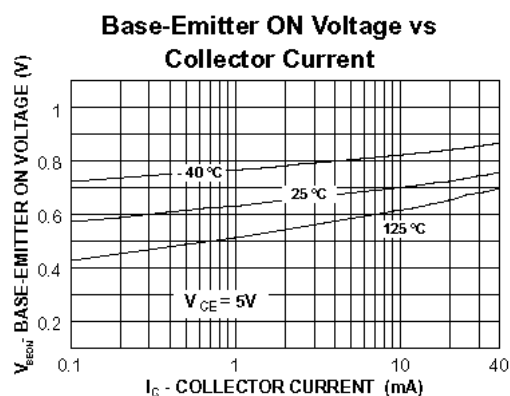
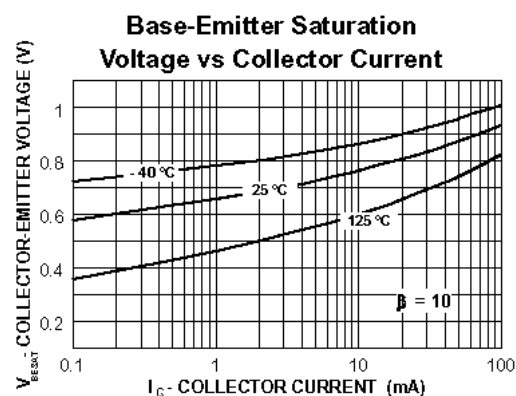
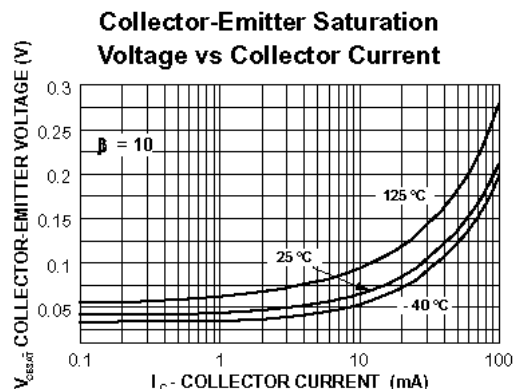
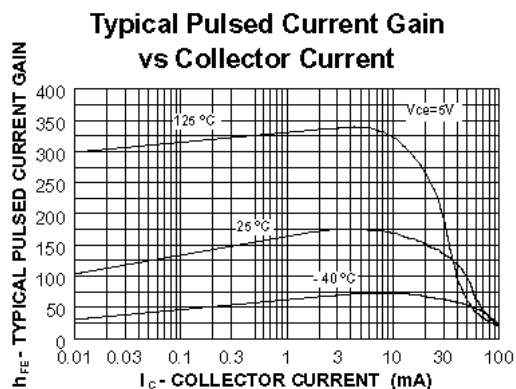
Parameter	Symbol	Min.	Max.	Unit
DC Current Gain at $V_{CE} = 5\text{ V}$, $I_C = 0.1\text{ mA}$	h_{FE}	300	900	-
	h_{FE}	400	1200	-
at $V_{CE} = 5\text{ V}$, $I_C = 1\text{ mA}$	h_{FE}	300	-	-
	h_{FE}	400	-	-
at $V_{CE} = 5\text{ V}$, $I_C = 10\text{ mA}$	h_{FE}	300	-	-
	h_{FE}	400	-	-
Collector Base Cutoff Current at $V_{CB} = 35\text{ V}$	I_{CBO}	-	50	nA
Emitter Base Cutoff Current at $V_{EB} = 4.5\text{ V}$	I_{EBO}	-	50	nA
Collector Base Breakdown Voltage at $I_C = 100\text{ }\mu\text{A}$	$V_{(BR)CBO}$	35	-	V
Collector Emitter Breakdown Voltage at $I_C = 1\text{ mA}$	$V_{(BR)CEO}$	30	-	V
Emitter Base Breakdown Voltage at $I_E = 10\text{ }\mu\text{A}$	$V_{(BR)EBO}$	4.5	-	V
Collector Emitter Saturation Voltage at $I_C = 10\text{ mA}$, $I_B = 1\text{ mA}$	$V_{CE(sat)}$	-	0.5	V
Base Emitter Voltage at $V_{CE} = 5\text{ V}$, $I_C = 10\text{ mA}$	$V_{BE(on)}$	-	0.8	V
Gain Bandwidth Product at $V_{CE} = 5\text{ V}$, $I_C = 0.5\text{ mA}$	f_T	50	-	MHz
Collector Output Capacitance at $V_{CB} = 10\text{ V}$, $f = 1\text{ MHz}$	C_{ob}	-	4	pF



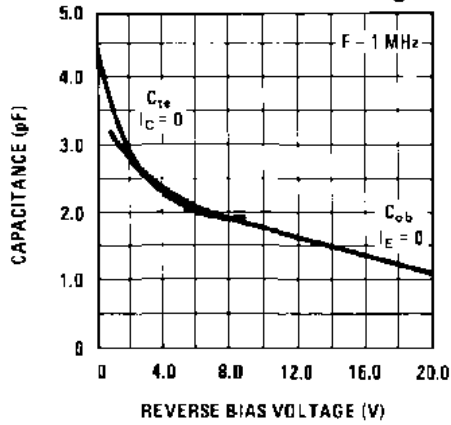
Dated : 16/08/2016 Rev:



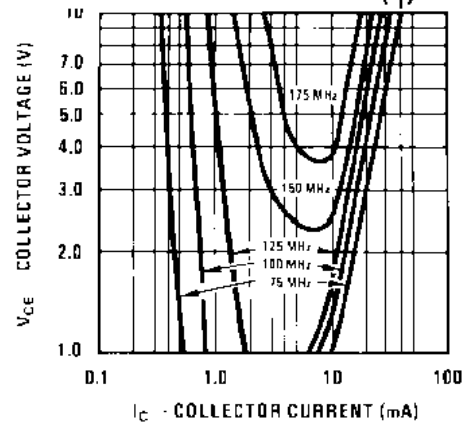
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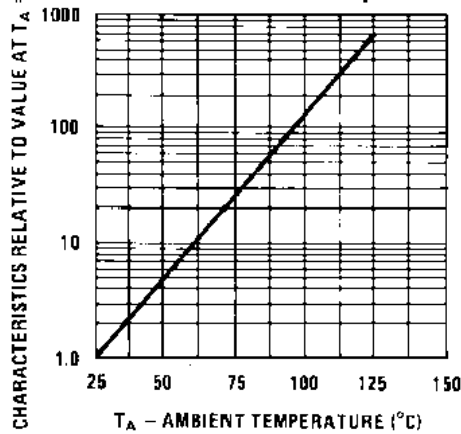
Input / Output Capacitance
vs. Reverse Bias Voltage



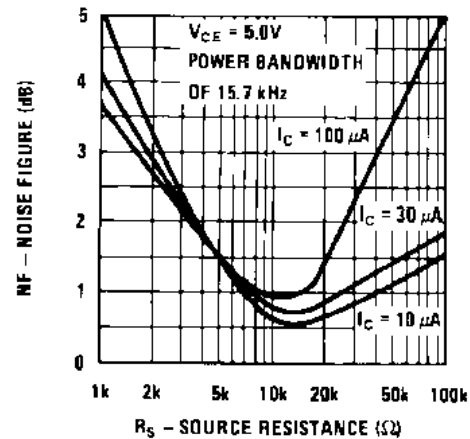
Contours of Constant Gain
Bandwidth Product (f_T)



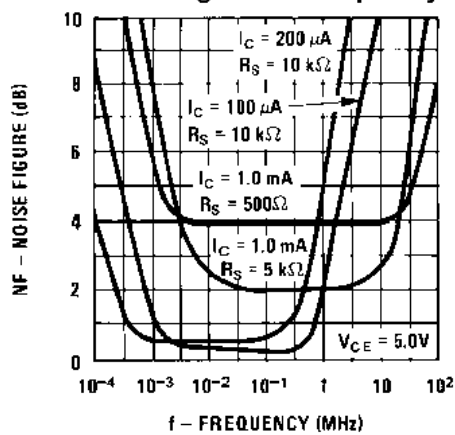
Normalized Collector Cutoff
Current vs. Ambient Temperature



Wideband Noise Figure
vs. Source Resistance



Noise Figure vs. Frequency



Contours of Constant
Narrow Band Noise Figure

