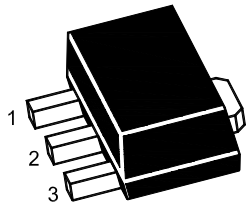
2N2907AU

PNP Silicon Epitaxial Planar Transistor

for switching and AF amplifier applications.

The transistor is subdivided into one group according to its DC current gain.



1.Base 2.Collector 3.Emitter

SOT-89 Plastic Package

Absolute Maximum Ratings (T_a = 25℃)

Parameter	Symbol	Value	Unit
Collector Base Voltage	$-V_{CBO}$	60	V
Collector Emitter Voltage	$-V_{CEO}$	60	V
Emitter Base Voltage	$-V_{EBO}$	5	V
Collector Current	$-I_C$	600	mA
Peak Collector Current	$-I_{CM}$	800	mA
Power Dissipation	P_{tot}	750	mW
Thermal Resistance, Junction to Ambient Air	$R_{\theta JA}$	166	℃/W
Storage Temperature Range	T_J, T_{stg}	- 55 to + 150	℃

Characteristics at T_a = 25℃

Parameter	Symbol	Min.	Max.	Unit
DC Current Gain at $-I_C$ = 0.1 mA, $-V_{CE}$ = 10 V at $-I_C$ = 1 mA, $-V_{CE}$ = 10 V at $-I_C$ = 10 mA, $-V_{CE}$ = 10 V at $-I_C$ = 150 mA, $-V_{CE}$ = 10 V at $-I_C$ = 500 mA, $-V_{CE}$ = 10 V	h_{FE}	 75 100 100 100 50	 - - - 300 -	 - - - - -
Emitter Cut-off Current at $-V_{EB}$ = 5 V	$-I_{EBO}$	-	50	nA
Collector Cut-off Current at $-V_{CB}$ = 50 V	$-I_{CBO}$	-	50	nA
Collector Cut-off Current at $-V_{CB}$ = 50 V, T_A = 100℃	$-I_{CBO}$	-	50	µA
Collector Base Breakdown Voltage at $-I_C$ = 100 µA	$-V_{(BR)CBO}$	60	-	V
Collector Emitter Breakdown Voltage at $-I_C$ = 10 mA	$-V_{(BR)CEO}$	60	-	V
Emitter Base Breakdown Voltage at $-I_E$ = 100 µA	$-V_{(BR)EBO}$	5	-	V
Collector Saturation Voltage at $-I_C$ = 150 mA, $-I_B$ = 15 mA at $-I_C$ = 500 mA, $-I_B$ = 50 mA	$-V_{CE(sat)}$	 - -	 0.4 1.6	V
Base Saturation Voltage at $-I_C$ = 150 mA, $-I_B$ = 15 mA at $-I_C$ = 500 mA, $-I_B$ = 50 mA	$-V_{BE(sat)}$	 - -	 1.3 2.6	V
Gain Bandwidth Product at $-I_C$ = 50 mA , $-V_{CE}$ = 20 V, f = 100 MHz	f_T	200	-	MHz
Collector Output Capacitance at $-V_{CB}$ = 10 V, f = 1 MHz	C_{ob}	-	8	pF
Input Capacitance at $-V_{EB}$ = 2 V, f = 1 MHz	C_{ib}	-	30	pF
Turn-on Time at $-V_{CC}$ = 30 V, $-I_C$ = 150 mA, $-I_{B1}$ = 15 mA	t_{on}	-	45	ns
Delay Time at $-V_{CC}$ = 30 V, $-I_C$ = 150 mA, $-I_{B1}$ = 15 mA	t_d	-	10	ns
Rise Time at $-V_{CC}$ = 30 V, $-I_C$ = 150 mA, $-I_{B1}$ = 15 mA	t_r	-	40	ns
Turn-off Time at $-V_{CC}$ = 6 V, $-I_C$ = 150 mA, $-I_{B1}$ = $-I_{B2}$ = 15 mA	t_{off}	-	100	ns
Storage Time at $-V_{CC}$ = 6 V, $-I_C$ = 150 mA, $-I_{B1}$ = $-I_{B2}$ = 15 mA	t_s	-	80	ns
Fall Time at $-V_{CC}$ = 6 V, $-I_C$ = 150 mA, $-I_{B1}$ = $-I_{B2}$ = 15 mA	t_f	-	30	ns

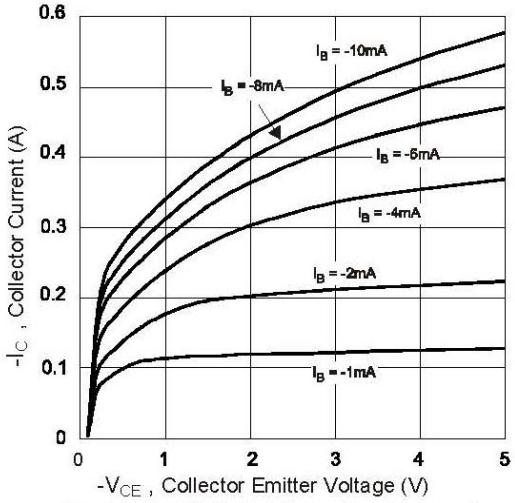


Fig. 1 Typical Collector Current as a Fun on of Collector Emitter Voltage

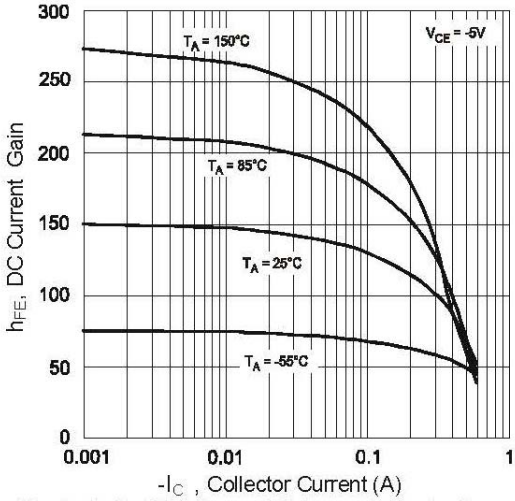


Fig. 2 Typical DC Current Gain vs. Collector Current

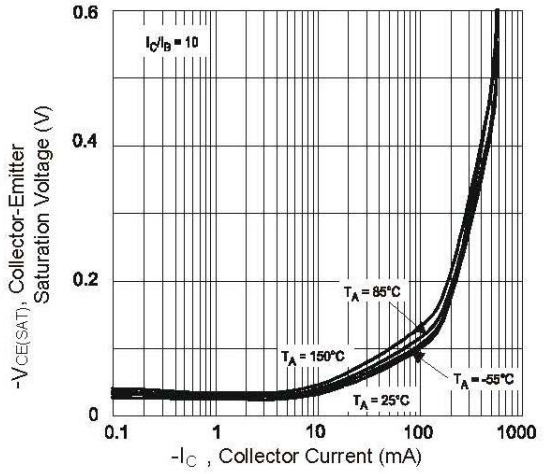


Fig.3 Typical Collector-Emitter Saturation Voltage vs. Collector Current

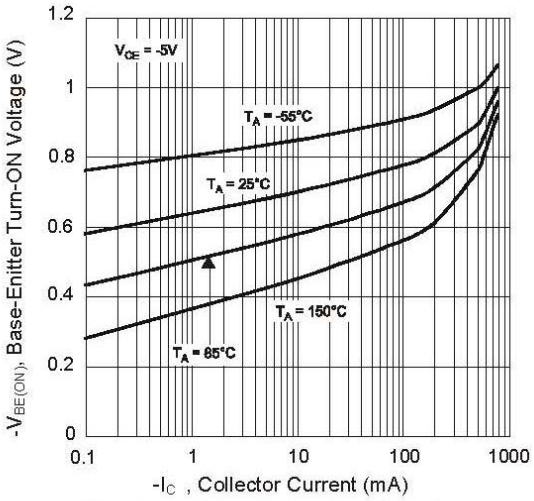


Fig.4 Typical Base-Emitter Turn-On Voltage vs. Collector Current

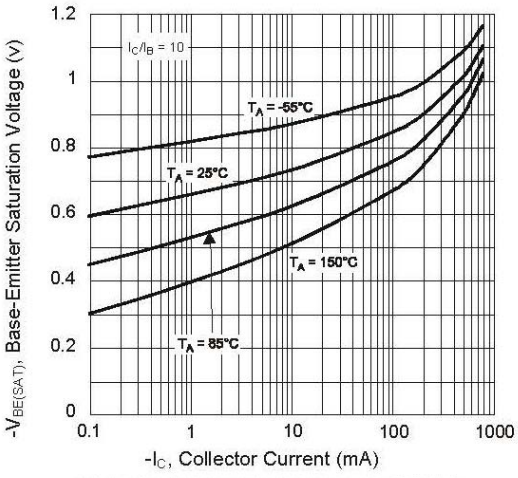


Fig.5 Typical Base-Emitter Saturation Voltage vs. Collector Current

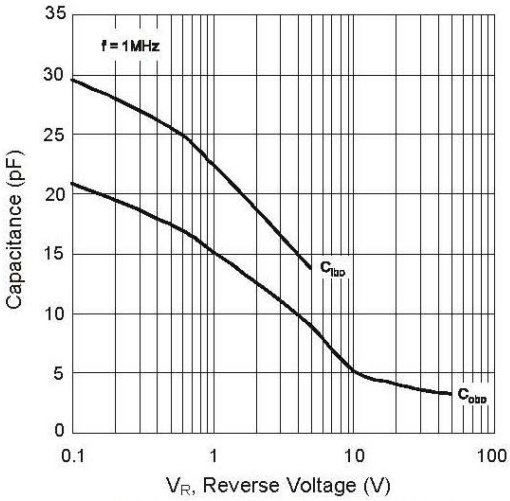
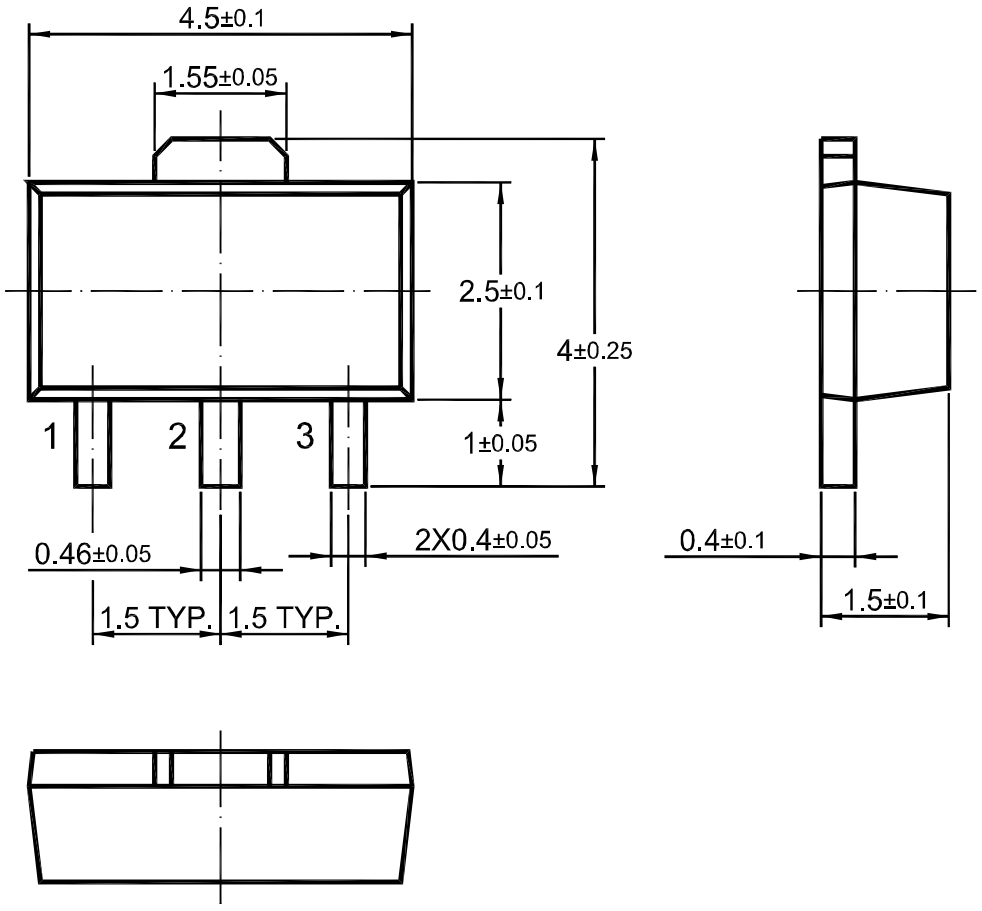


Fig.7 Typical Capacitance Characteristics

SOT-89 PACKAGE OUTLINE



Dimensions in mm