

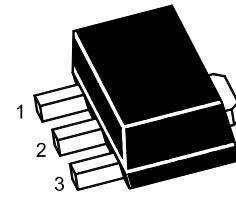
2SA2071U-AH

PNP Silicon Epitaxial Planar Transistor

Low frequency amplifier and high speed switching

Features

- AEC-Q101 Qualified and PPAP Capable
- Halogen and Antimony Free(HAF), RoHS compliant



1.Base 2.Collector 3.Emitter
SOT-89 Plastic Package

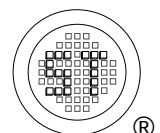
Absolute Maximum Ratings ($T_a = 25^\circ\text{C}$)

Parameter	Symbol	Value	Unit
Collector Base Voltage	$-V_{CBO}$	60	V
Collector Emitter Voltage	$-V_{CEO}$	60	V
Emitter Base Voltage	$-V_{EBO}$	6	V
Collector Current	$-I_C$	3	A
Peak Pulse Collector Current (8.3 ms)	$-I_{CP}$	6	A
Collector Power Dissipation	P_C	0.5 2 ¹⁾	W
Junction Temperature	T_j	150	$^\circ\text{C}$
Storage Temperature Range	T_{stg}	- 55 to + 150	$^\circ\text{C}$

¹⁾ Mounted on a 40 X 40 X 0.7 mm ceramic substrate.

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

Parameter	Symbol	Min.	Typ.	Max.	Unit
DC Current Gain at $-V_{CE} = 2\text{ V}$, $-I_C = 100\text{ mA}$	h_{FE}	120	-	270	-
Collector Base Cutoff Current at $-V_{CB} = 40\text{ V}$	$-I_{CBO}$	-	-	1	μA
Emitter Base Cutoff Current at $-V_{EB} = 4\text{ V}$	$-I_{EBO}$	-	-	1	μA
Collector Base Breakdown Voltage at $-I_C = 100\text{ }\mu\text{A}$	$-V_{(BR)CBO}$	60	-	-	V
Collector Emitter Breakdown Voltage at $-I_C = 1\text{ mA}$	$-V_{(BR)CEO}$	60	-	-	V
Emitter Base Breakdown Voltage at $-I_E = 100\text{ }\mu\text{A}$	$-V_{(BR)EBO}$	6	-	-	V
Collector Emitter Saturation Voltage at $-I_C = 2\text{ A}$, $-I_B = 200\text{ mA}$	$-V_{CE(sat)}$	-	-	0.5	V
Transition Frequency at $-V_{CE} = 10\text{ V}$, $I_E = 10\text{ mA}$, $f = 10\text{ MHz}$	f_T	-	180	-	MHz
Collector Output Capacitance at $-V_{CB} = 10\text{ V}$, $f = 1\text{ MHz}$	C_{ob}	-	50	-	pF
Turn-on Time at $-V_{CC} = 25\text{ V}$, $-I_C = 3\text{ A}$, $-I_{B1} = 300\text{ mA}$, $I_{B2} = 300\text{ mA}$	t_{on}	-	20	-	ns
Storage Time at $-V_{CC} = 25\text{ V}$, $-I_C = 3\text{ A}$, $-I_{B1} = 300\text{ mA}$, $I_{B2} = 300\text{ mA}$	t_{stg}	-	150	-	ns
Fall Time at $-V_{CC} = 25\text{ V}$, $-I_C = 3\text{ A}$, $-I_{B1} = 300\text{ mA}$, $I_{B2} = 300\text{ mA}$	t_f	-	20	-	ns



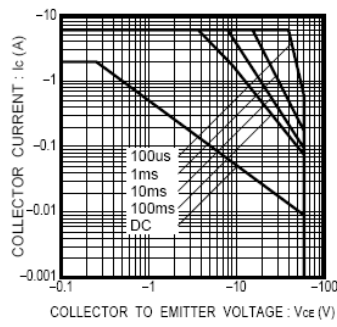


Fig.1 Safe Operating Area

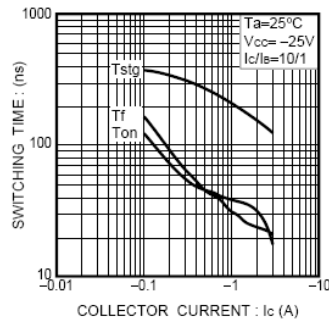


Fig.2 Switching Time

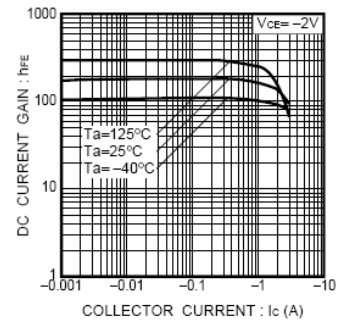


Fig.3 DC Current Gain vs. Collector Current (I)

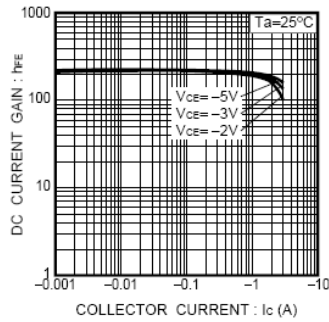


Fig.4 DC Current Gain vs. Collector Current (II)

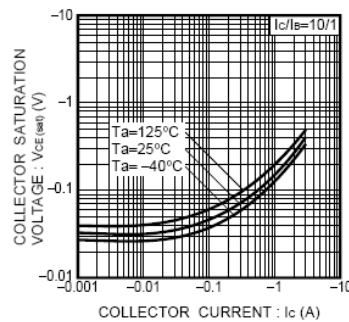


Fig.5 Collector-Emitter Saturation Voltage vs. Collector Current (I)

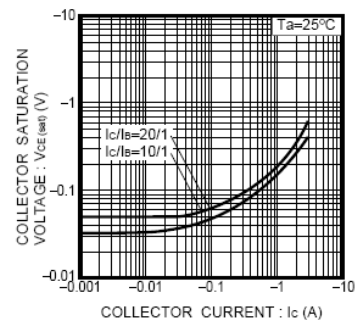


Fig.6 Collector-Emitter Saturation Voltage vs. Collector Current (II)

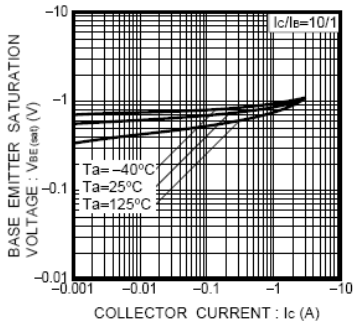


Fig.7 Base-Emitter Saturation Voltage vs. Collector Current

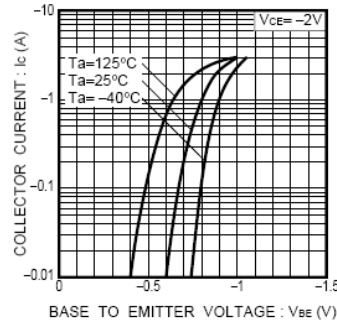


Fig.8 Grounded Emitter Propagation Characteristics

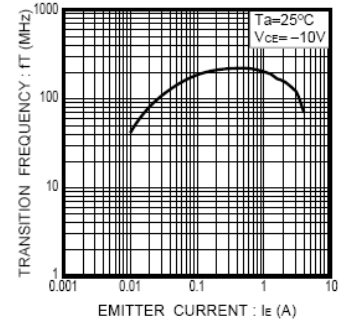


Fig.9 Transition Frequency

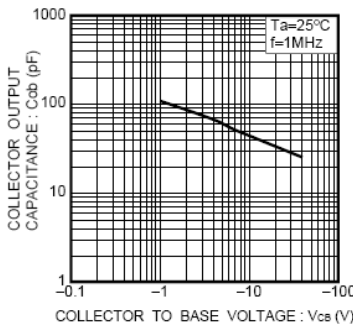
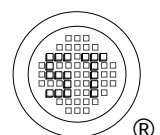
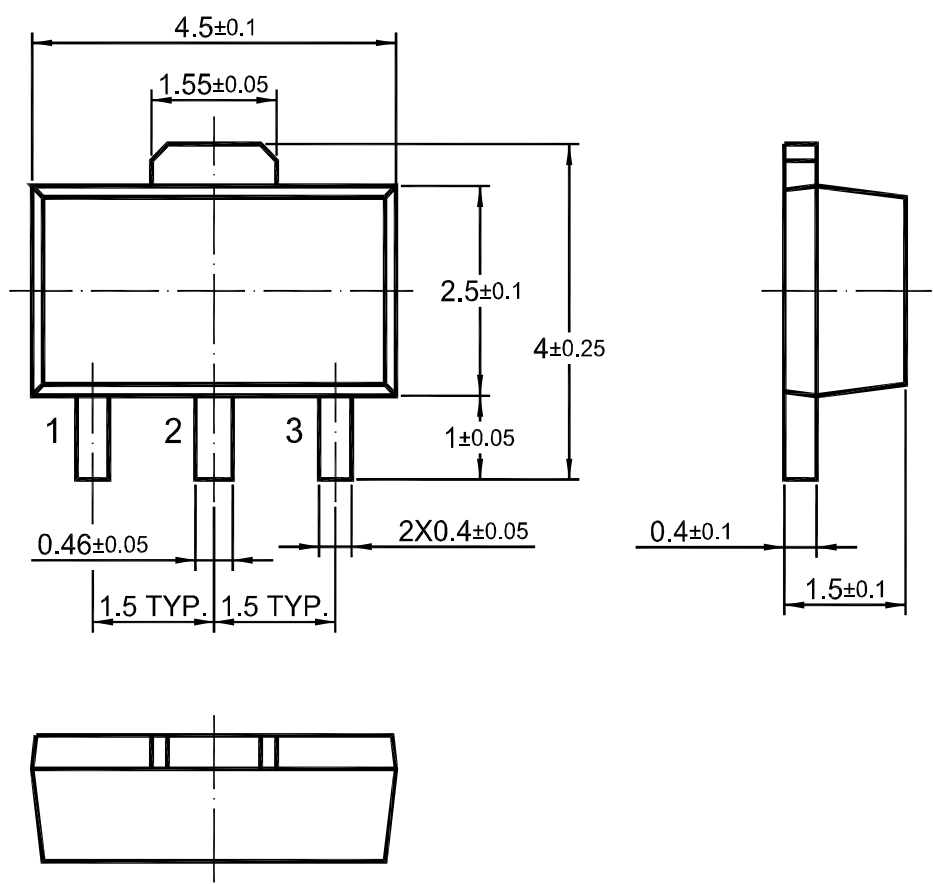


Fig.10 Collector Output Capacitance



SOT-89 PACKAGE OUTLINE



Dimensions in mm

