

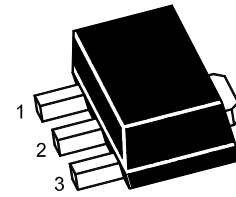
2SA2071U-AH

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

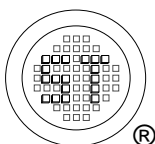
Absolute Maximum Ratings ($T_a = 25^\circ\text{C}$)

Parameter	Symbol	Value	Unit
Collector Base Voltage	$-V_{\text{CBO}}$	60	V
Collector Emitter Voltage	$-V_{\text{CEO}}$	60	V
Emitter Base Voltage	$-V_{\text{EBO}}$	6	V
Collector Current	$-I_{\text{C}}$	3	A
Peak Pulse Collector Current (8.3 ms)	$-I_{\text{CP}}$	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 $-V_{\text{CE}} = 2 \text{ V}$, $-I_{\text{C}} = 100 \text{ mA}$	h_{FE}	120	-	270	-
Collector Base Cutoff Current at $-V_{\text{CB}} = 40 \text{ V}$	$-I_{\text{CBO}}$	-	-	1	μA
Emitter Base Cutoff Current at $-V_{\text{EB}} = 4 \text{ V}$	$-I_{\text{EBO}}$	-	-	1	μA
Collector Base Breakdown Voltage at $-I_{\text{C}} = 100 \mu\text{A}$	$-V_{(\text{BR})\text{CBO}}$	60	-	-	V
Collector Emitter Breakdown Voltage at $-I_{\text{C}} = 1 \text{ mA}$	$-V_{(\text{BR})\text{CEO}}$	60	-	-	V
Emitter Base Breakdown Voltage at $-I_{\text{E}} = 100 \mu\text{A}$	$-V_{(\text{BR})\text{EBO}}$	6	-	-	V
Collector Emitter Saturation Voltage at $-I_{\text{C}} = 2 \text{ A}$, $-I_{\text{B}} = 200 \text{ mA}$	$-V_{\text{CE}(\text{sat})}$	-	-	0.5	V
Transition Frequency at $-V_{\text{CE}} = 10 \text{ V}$, $I_{\text{E}} = 10 \text{ mA}$, $f = 10 \text{ MHz}$	f_{T}	-	180	-	MHz
Collector Output Capacitance at $-V_{\text{CB}} = 10 \text{ V}$, $f = 1 \text{ MHz}$	C_{ob}	-	50	-	pF
Turn-on Time at $-V_{\text{CC}} = 25 \text{ V}$, $-I_{\text{C}} = 3 \text{ A}$, $-I_{\text{B1}} = 300 \text{ mA}$, $I_{\text{B2}} = 300 \text{ mA}$	t_{on}	-	20	-	ns
Storage Time at $-V_{\text{CC}} = 25 \text{ V}$, $-I_{\text{C}} = 3 \text{ A}$, $-I_{\text{B1}} = 300 \text{ mA}$, $I_{\text{B2}} = 300 \text{ mA}$	t_{stg}	-	150	-	ns
Fall Time at $-V_{\text{CC}} = 25 \text{ V}$, $-I_{\text{C}} = 3 \text{ A}$, $-I_{\text{B1}} = 300 \text{ mA}$, $I_{\text{B2}} = 300 \text{ mA}$	t_{f}	-	20	-	ns



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Certificate No. 16073300

ISO 14001:2004
Certificate No. 7116

ISO 9001:2008
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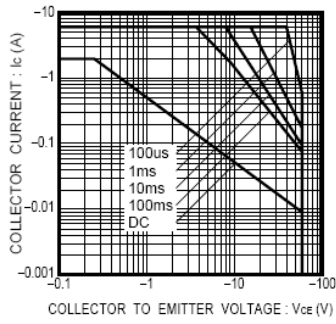


Fig.1 Safe Operating Area

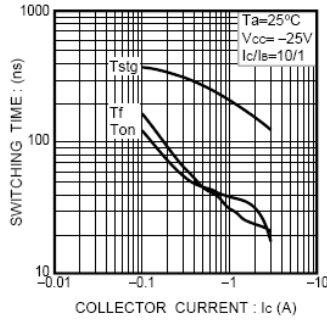


Fig.2 Switching Time

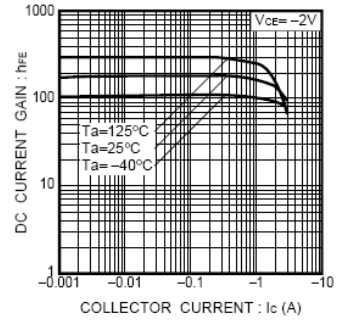


Fig.3 DC Current Gain vs. Collector Current (I)

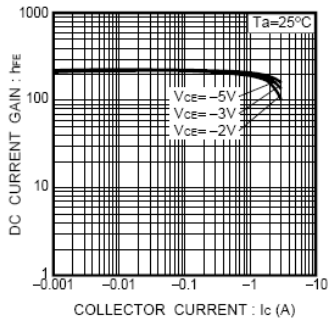


Fig.4 DC Current Gain vs. Collector Current (II)

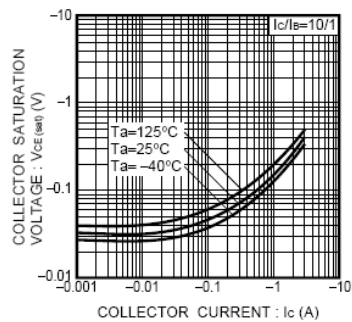


Fig.5 Collector-Emitter Saturation Voltage vs. Collector Current (I)

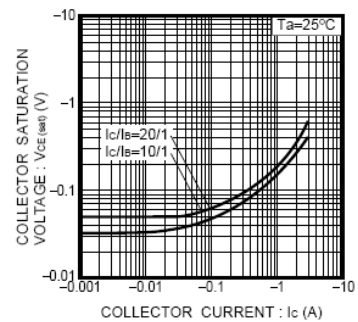


Fig.6 Collector-Emitter Saturation Voltage vs. Collector Current (II)

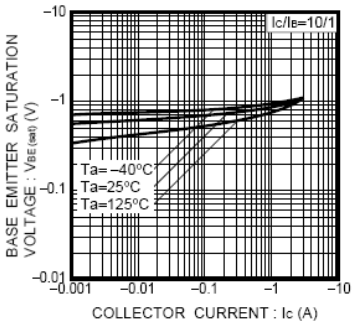


Fig.7 Base-Emitter Saturation Voltage vs. Collector Current

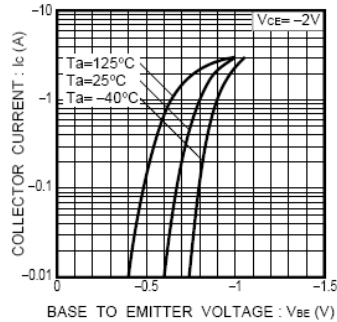


Fig.8 Grounded Emitter Propagation Characteristics

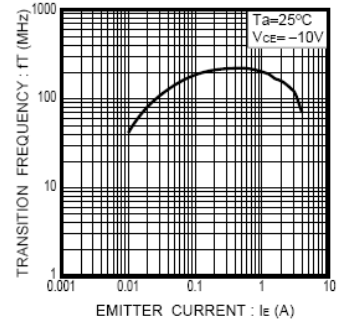


Fig.9 Transition Frequency

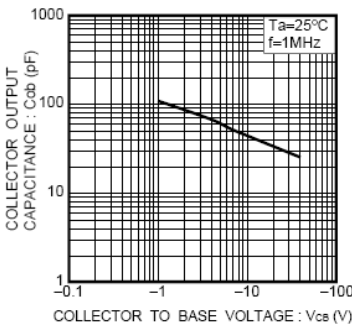
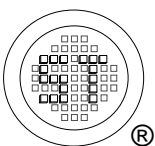


Fig.10 Collector Output Capacitance

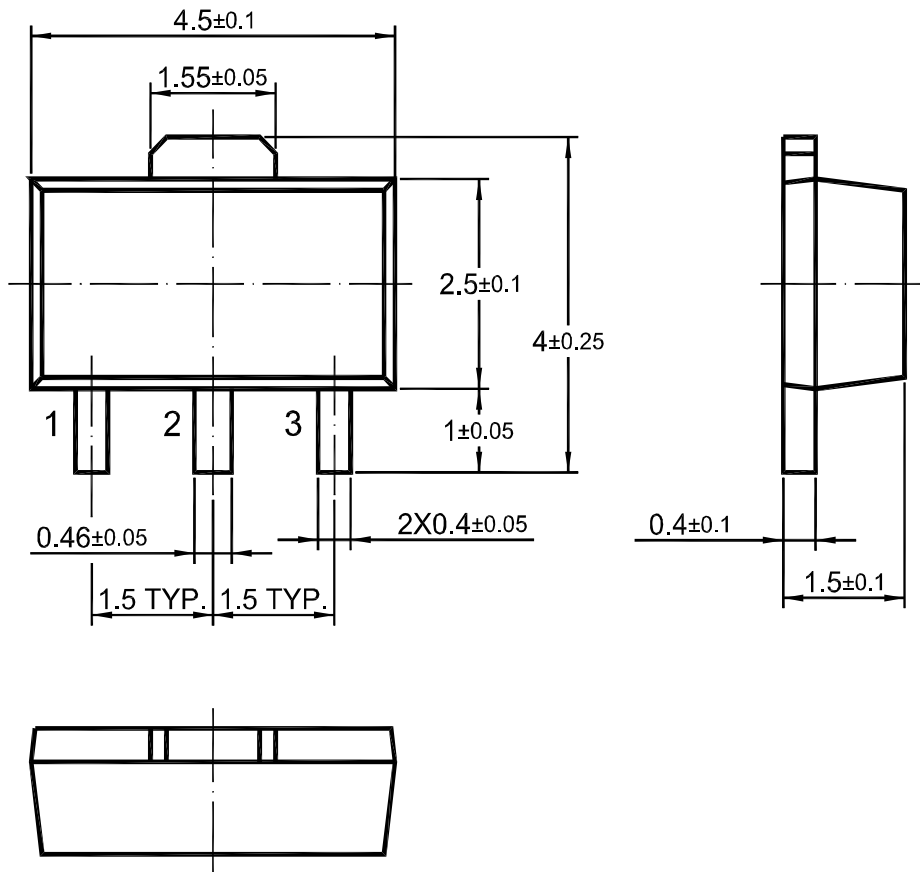


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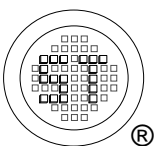


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SOT-89 PACKAGE OUTLINE



Dimensions in mm



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