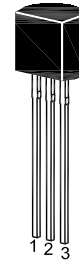


2SA928-AH

PNP Silicon Epitaxial Planar Power Transistor

Features

- AEC-Q101 Qualified
- The transistor is subdivided into two groups, O and Y, according to its DC current gain.
- Halogen and Antimony Free(HAF), RoHS compliant



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

Applications

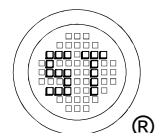
- For audio power amplifier

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

Parameter	Symbol	Value	Unit
Collector Base Voltage	$-V_{CB0}$	30	V
Collector Emitter Voltage	$-V_{CE0}$	30	V
Emitter Base Voltage	$-V_{EB0}$	5	V
Collector Current	$-I_C$	2	A
Power Dissipation	P_{tot}	1	W
Junction Temperature	T_j	150	$^\circ\text{C}$
Storage Temperature Range	T_{stg}	- 55 to + 150	$^\circ\text{C}$

Thermal Characteristics

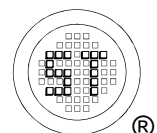
Parameter	Symbol	Max.	Unit
Thermal Resistance from Junction to Ambient	$R_{\theta JA}$	125	$^\circ\text{C/W}$



2SA928-AH

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

Parameter	Symbol	Min.	Typ.	Max.	Unit	
DC Current Gain at $-V_{CE} = 2\text{ V}$, $-I_C = 500\text{ mA}$	Current Gain Group O	h_{FE}	100	-	200	-
	Y	h_{FE}	160	-	320	-
Collector Base Cutoff Current at $-V_{CB} = 30\text{ V}$	$-I_{CBO}$	-	-	100	nA	
Emitter Base Cutoff Current at $-V_{EB} = 5\text{ V}$	$-I_{EBO}$	-	-	100	nA	
Collector Base Breakdown Voltage at $-I_C = 100\text{ }\mu\text{A}$	$-V_{(BR)CBO}$	30	-	-	V	
Collector Emitter Breakdown Voltage at $-I_C = 10\text{ mA}$	$-V_{(BR)CEO}$	30	-	-	V	
Emitter Base Breakdown Voltage at $-I_E = 1\text{ mA}$	$-V_{(BR)EBO}$	5	-	-	V	
Collector Emitter Saturation Voltage at $-I_C = 1.5\text{ A}$, $-I_B = 30\text{ mA}$ at $-I_C = 2\text{ A}$, $-I_B = 200\text{ mA}$	$-V_{CE(sat)}$	-	-	2	V	
		-	-	2	V	
Base Emitter Voltage at $-V_{CE} = 2\text{ V}$, $-I_C = 500\text{ mA}$	$-V_{BE}$	-	-	1	V	
Gain Bandwidth Product at $-V_{CE} = 5\text{ V}$, $-I_C = 50\text{ mA}$	f_T	-	120	-	MHz	
Collector Output Capacitance at $-V_{CB} = 10\text{ V}$, $f = 1\text{ MHz}$	C_{ob}	-	30	-	pF	



Electrical Characteristics Curves

Fig 1. Power Derating Curve

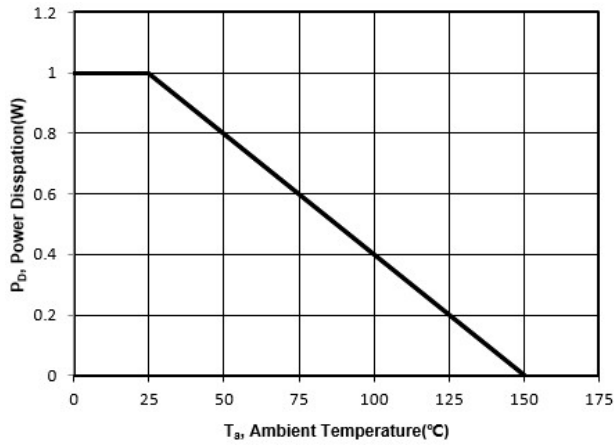


Fig. 2 Output Characteristics Curve

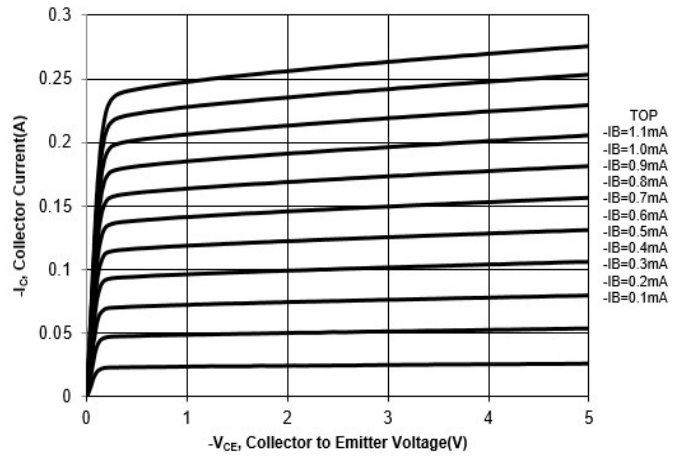


Fig. 3 Collector Current vs. Base-Emitter Voltage

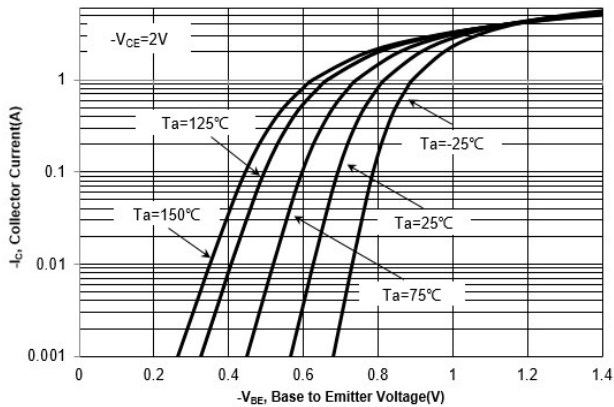
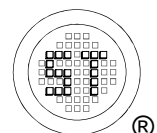
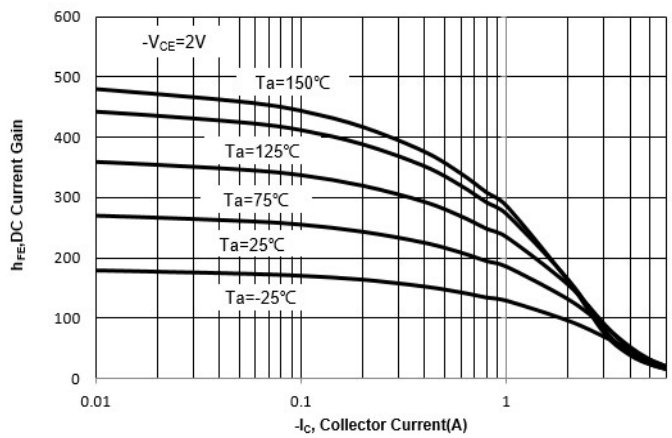


Fig. 4 DC Current Gain vs. Collector Current



Electrical Characteristics Curves

Fig. 5 $V_{BE(sat)}$ vs. Collector Current

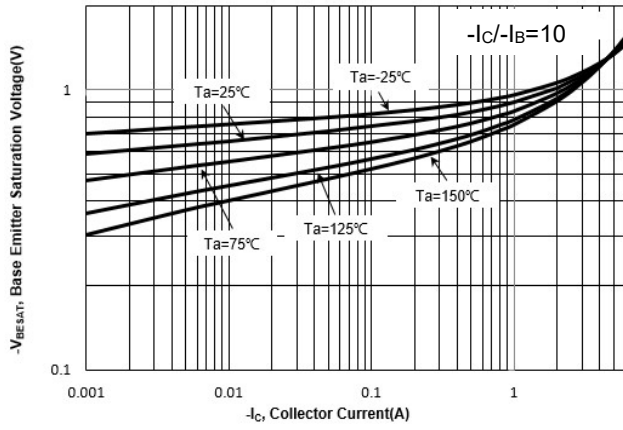


Fig. 6 $V_{CE(sat)}$ vs. Collector Current

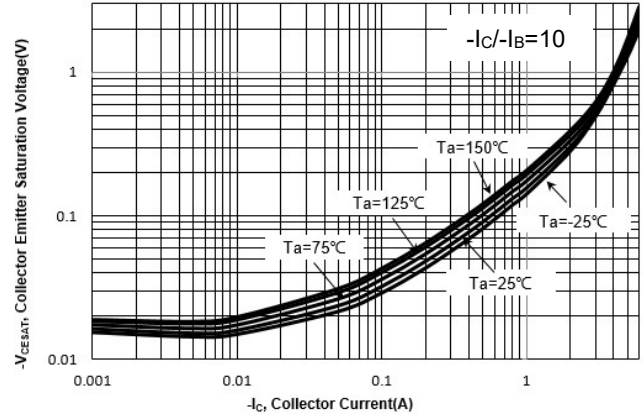
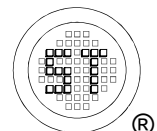
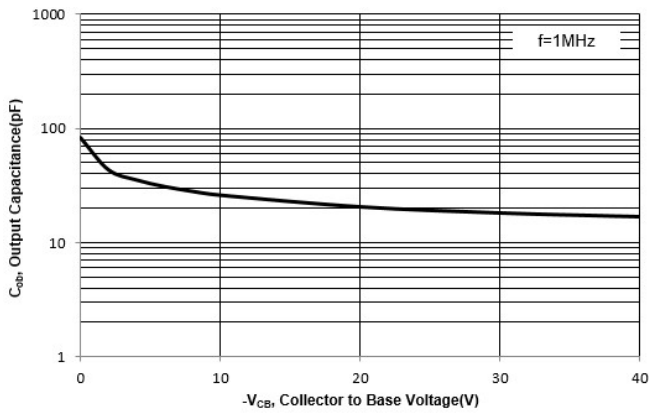
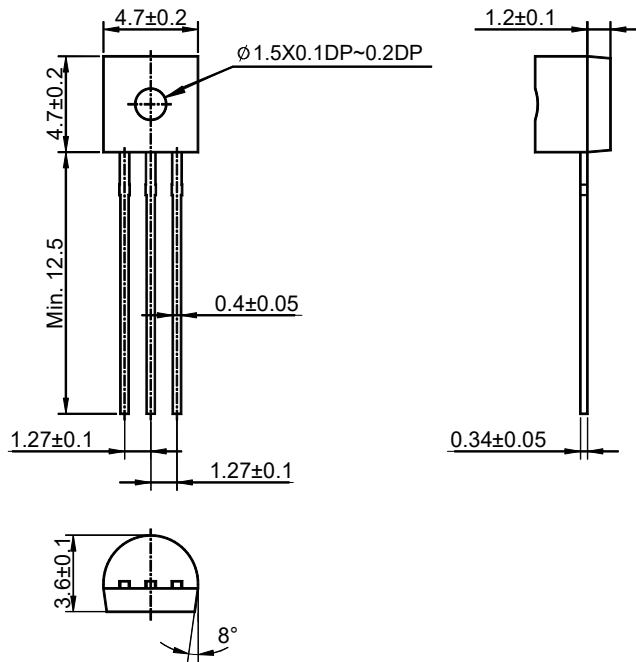


Fig. 7 Output Capacitance

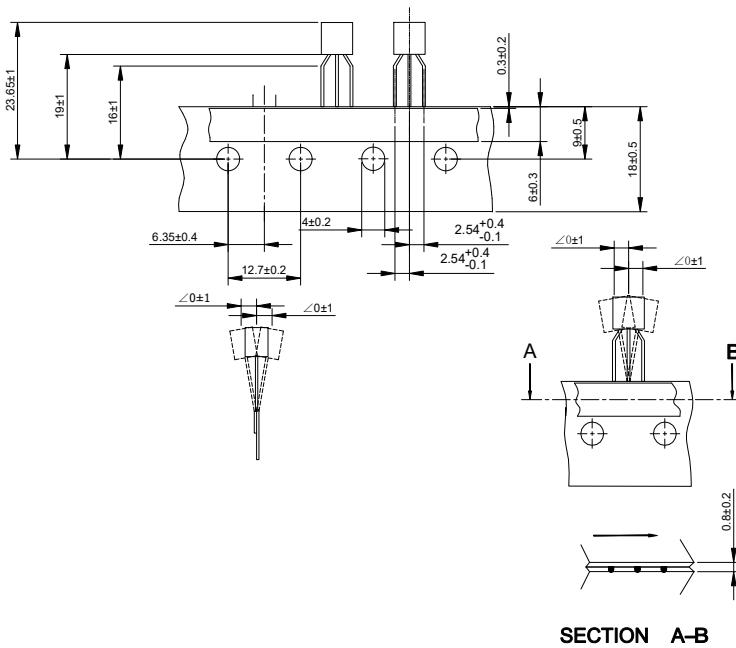


2SA928-AH

TO-92 Package Outline (Dimensions in millimeters)



TO-92 Ammo-Pack Outline (Dimensions in millimeters)



Packing information

Package	Bulk Packing			Ammo-Packing	
	Per Bag Qty	Per Box Qty	Per Carton Qty	Per Box Qty	Per Carton Qty
TO-92	1,000	5,000	50,000	4,000	20,000

