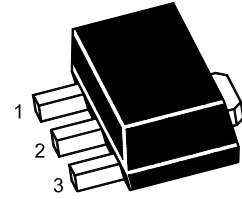


2SB1424U

PNP Silicon Epitaxial Planar Transistor



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

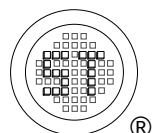
Absolute Maximum Ratings ($T_a = 25^\circ\text{C}$)

Parameter	Symbol	Value	Unit
Collector Base Voltage	$-V_{\text{CBO}}$	20	V
Collector Emitter Voltage	$-V_{\text{CEO}}$	20	V
Emitter Base Voltage	$-V_{\text{EBO}}$	6	V
Collector Current - DC	$-I_{\text{C}}$	3	A
Collector Current - Pulse ¹⁾	$-I_{\text{CP}}$	5	A
Total Power Dissipation	P_{tot}	0.5	W
Junction Temperature	T_{J}	150	$^\circ\text{C}$
Storage Temperature Range	T_{Stg}	- 55 to + 150	$^\circ\text{C}$

¹⁾ Single pulse, $P_{\text{W}} = 10 \text{ ms}$.

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	-
	h_{FE}	180	-	390	-
Collector Base Breakdown Voltage at $-I_{\text{C}} = 50 \mu\text{A}$	$-V_{(\text{BR})\text{CBO}}$	20	-	-	V
Collector Emitter Breakdown Voltage at $-I_{\text{C}} = 1 \text{ mA}$	$-V_{(\text{BR})\text{CEO}}$	20	-	-	V
Emitter Base Breakdown Voltage at $-I_{\text{E}} = 50 \mu\text{A}$	$-V_{(\text{BR})\text{EBO}}$	6	-	-	V
Collector Cutoff Current at $-V_{\text{CB}} = 20 \text{ V}$	$-I_{\text{CBO}}$	-	-	0.1	μA
Emitter Cutoff Current at $-V_{\text{EB}} = 5 \text{ V}$	$-I_{\text{EBO}}$	-	-	0.1	μA
Collector Emitter Saturation Voltage at $-I_{\text{C}} = 2 \text{ A}$, $-I_{\text{B}} = 100 \text{ mA}$	$-V_{\text{CE(sat)}}$	-	-	0.5	V
Transition Frequency at $-V_{\text{CE}} = 2 \text{ V}$, $-I_{\text{E}} = 0.5 \text{ A}$, $f = 100 \text{ MHz}$	f_{T}	-	240	-	MHz
Output Capacitance at $-V_{\text{CB}} = 10 \text{ V}$, $f = 1 \text{ MHz}$	C_{ob}	-	35	-	pF



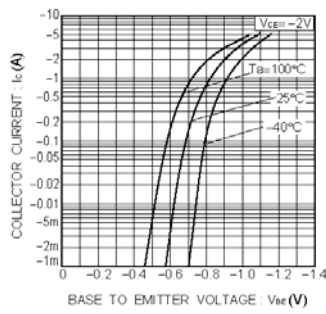


Fig.1 Grounded emitter propagation characteristics

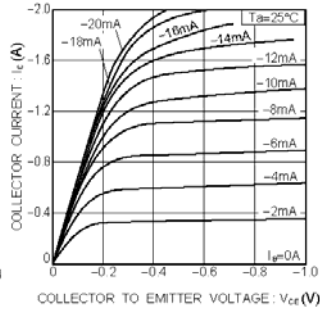


Fig.2 Grounded emitter output characteristics (I)

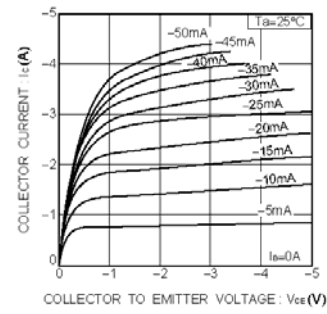


Fig.3 Grounded emitter output characteristics (II)

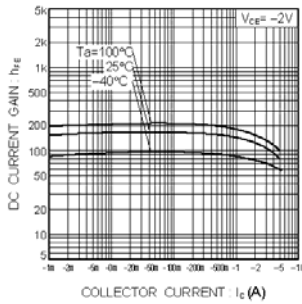


Fig.4 DC current gain vs. collector current

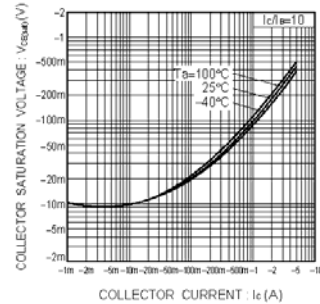


Fig.5 Collector-emitter saturation voltage vs. collector current (I)

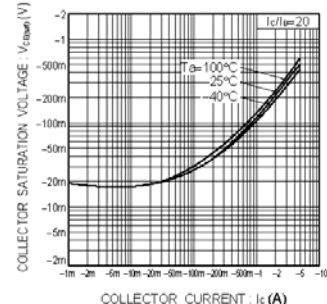


Fig.6 Collector-emitter saturation voltage vs. collector current (II)

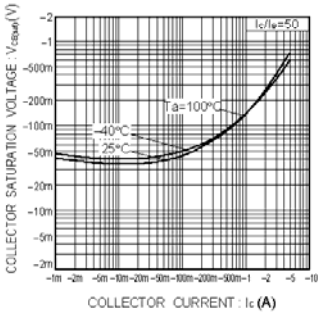


Fig.7 Collector-emitter saturation voltage vs. collector current (III)

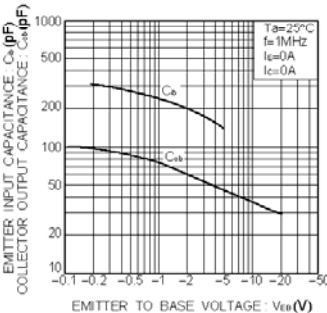


Fig.8 Gain bandwidth product vs. emitter current
Collector output capacitance vs. collector-base voltage

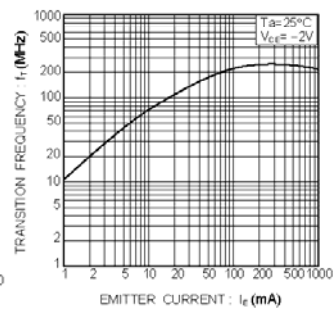
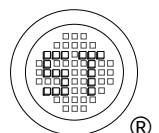
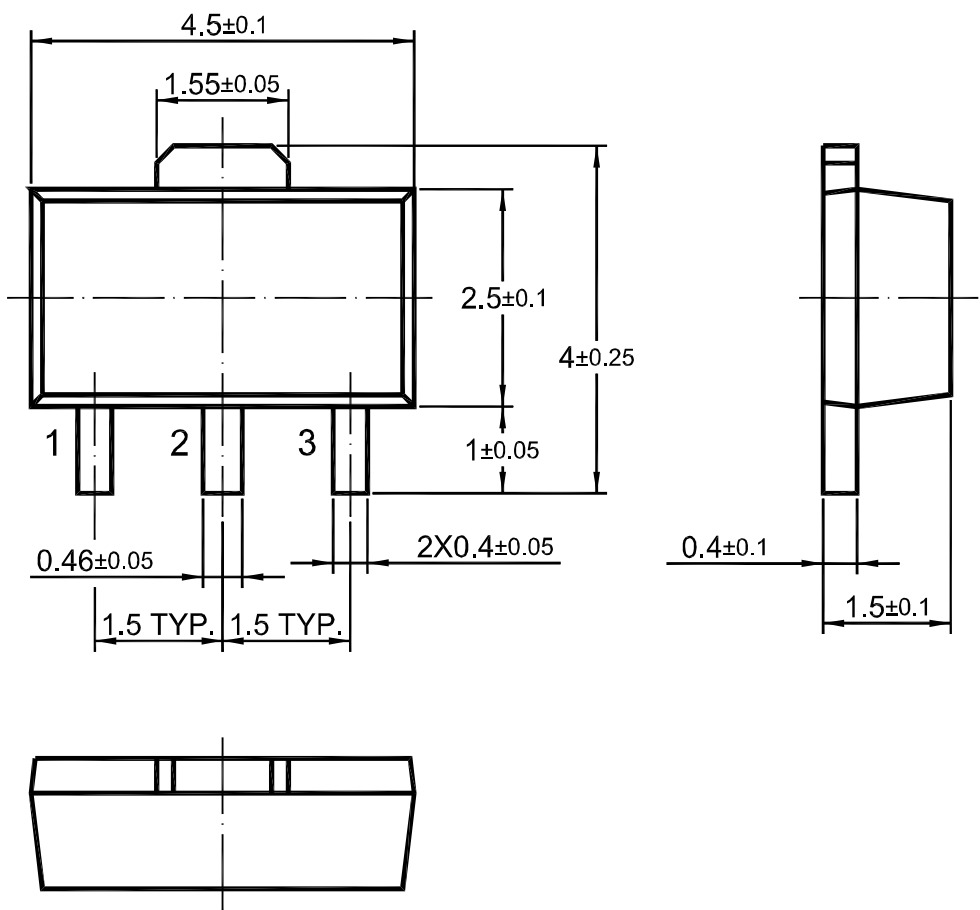


Fig.9 Emitter input capacitance vs. emitter base voltage



2SB1424U

SOT-89 PACKAGE OUTLINE



Dimensions in mm

