

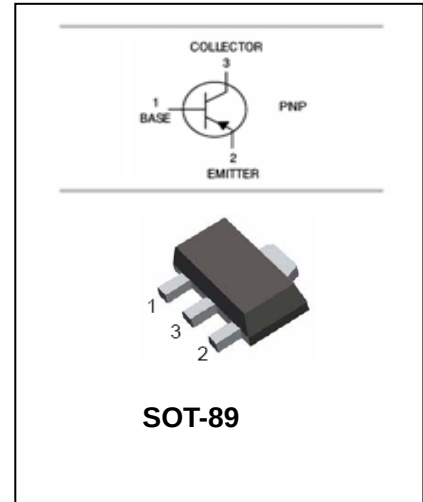
Silicon PNP Epitaxial Planer Type

2SB1424

FEATURES

- LOW $V_{CE(SAT)}$
- Excellent DC current gain characteristics
- Complementary the 2SD2150
- RoHS compliant with Halogen-free

HF



APPLICATIONS

- This device is designed as a general purpose amplifier and switching

ORDERING INFORMATION

Type No.	Marking	Package Code
2SB1424-Q	AEQ	SOT-89
2SB1424-R	AER	SOT-89

MAXIMUM RATING @ $T_a=25^{\circ}\text{C}$ unless otherwise specified

Symbol	Parameter	Value	Unit
V_{CBO}	Collector-Base Voltage	-20	V
V_{CEO}	Collector-Emitter Voltage	-20	V
V_{EBO}	Emitter-Base Voltage	-6	V
I_C	Collector Current –DC -Pulse	-3 -5	A
P_C	Collector power Dissipation	0.5	W
T_J, T_{STG}	Junction and Storage Temperature	-55 to +150	$^{\circ}\text{C}$

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ELECTRICAL CHARACTERISTICS @ Ta=25°C unless otherwise specified

Parameter	Symbol	Test conditions	MIN	TYP	MAX	UNIT
Collector-base breakdown voltage	$V_{(BR)CBO}$	$I_C = -50\mu A$ $I_E = 0$	-20			V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	$I_C = -1mA$ $I_B = 0$	-20			V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	$I_E = -50\mu A$ $I_C = 0$	-6			V
Collector cut-off current	I_{CBO}	$V_{CB} = -20V$ $I_E = 0$			-0.1	μA
Emitter cut-off current	I_{EBO}	$V_{EB} = -5V$, $I_C = 0$			-0.1	μA
DC current gain	h_{FE}	$V_{CE} = -2V$ $I_C = -0.1A$	120		390	
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C = -2A$ $I_B = -0.1A$			-0.5	V
Transition frequency	f_T	$V_{CE} = -2V$, $I_C = -0.5A$, $f = 100MHz$		240		MHz
Output Capacitance	C_{obo}	$V_{CB} = -10V$ $f = 1MHz$ $I_E = 0$	-	35		pF

CLASSIFICATION H_{FE}

Rank	Q	R
Range	120-270	180-390
Marking	AEQ	AER

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TYPICAL CHARACTERISTICS @ $T_a=25^\circ\text{C}$ unless otherwise specified

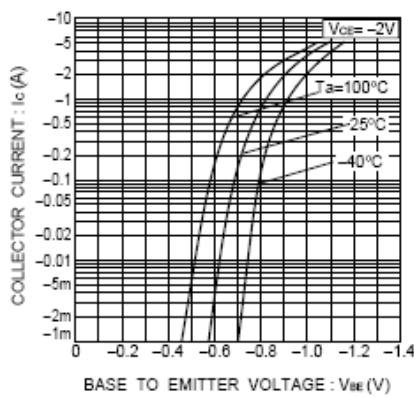


Fig.1 Grounded emitter propagation characteristics

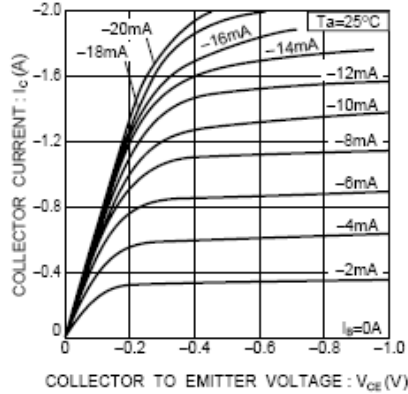


Fig.2 Grounded emitter output characteristics (I)

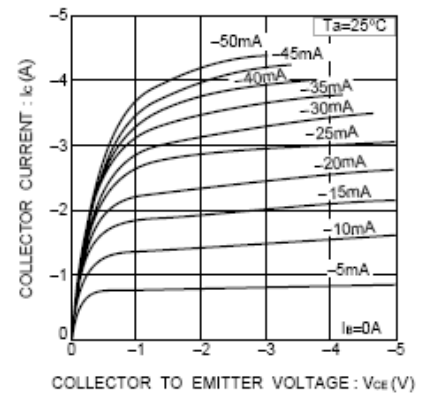


Fig.3 Grounded emitter output characteristics (II)

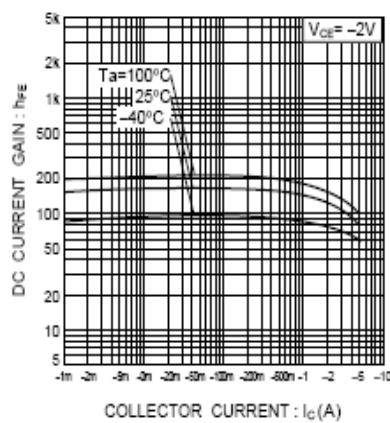


Fig.4 DC current gain vs. collector current

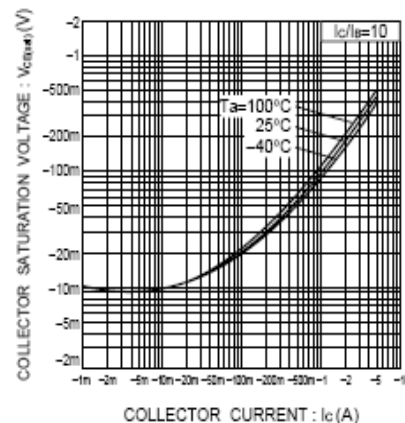


Fig.5 Collector-emitter saturation voltage vs. collector current (I)

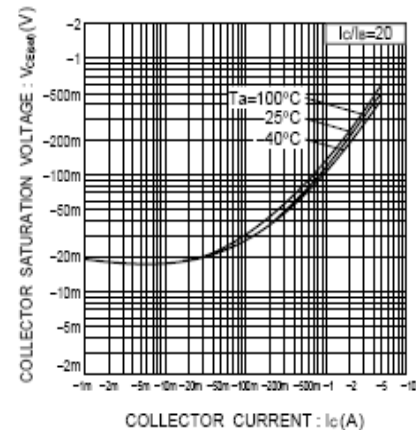


Fig.6 Collector-emitter saturation voltage vs. collector current (II)

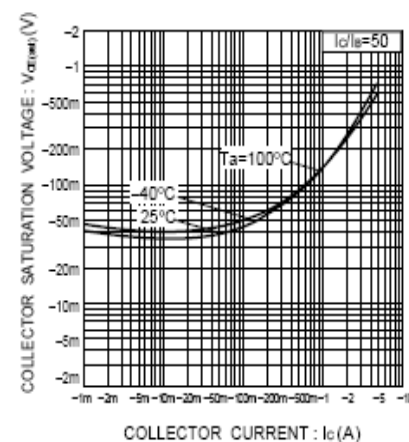


Fig.7 Collector-emitter saturation voltage vs. collector current (III)

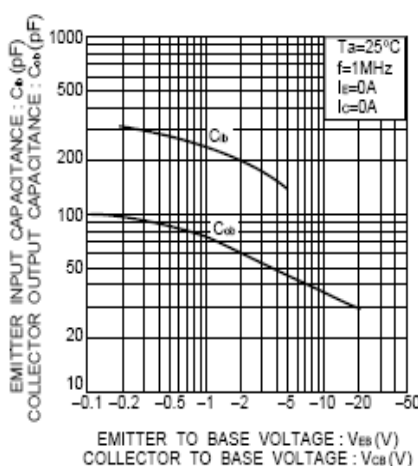


Fig.8 Gain bandwidth product vs. emitter current
Collector output capacitance vs. collector-base voltage

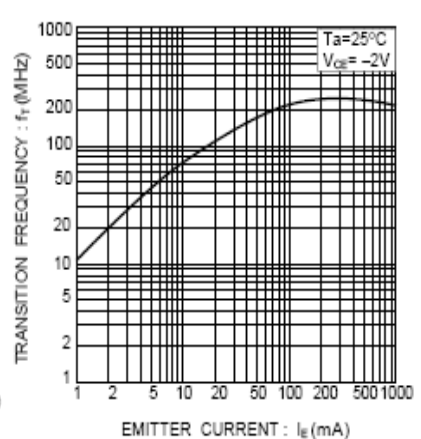


Fig.9 Emitter input capacitance vs. emitter base voltage

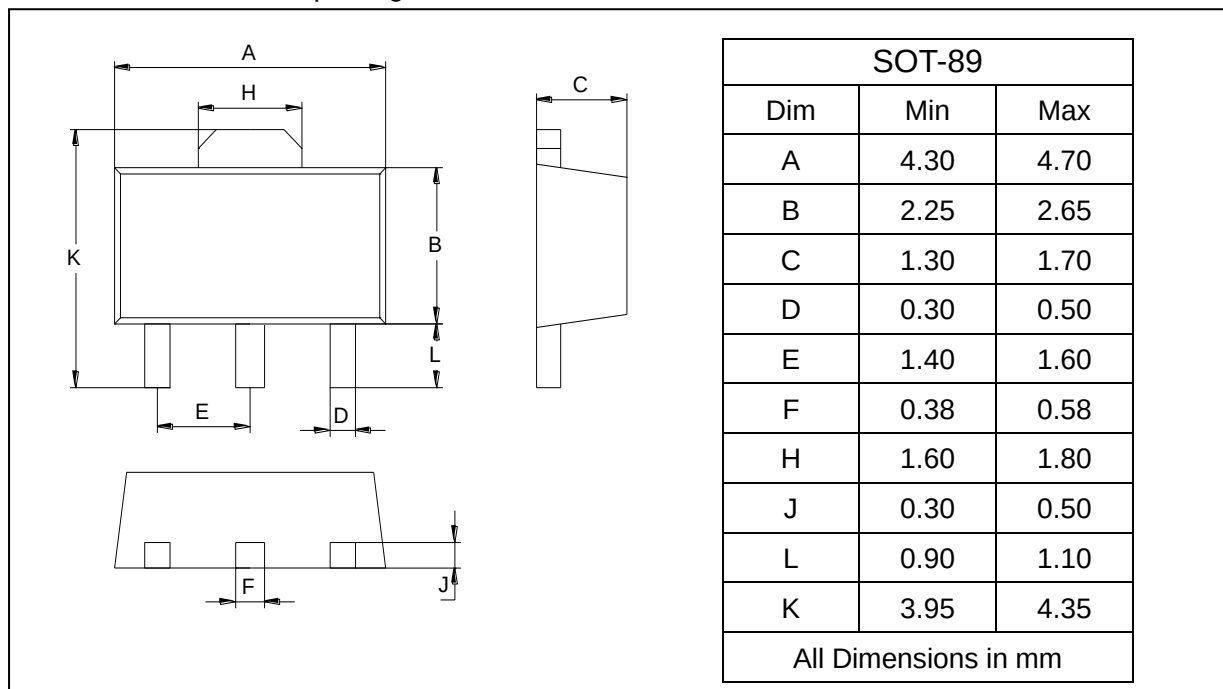
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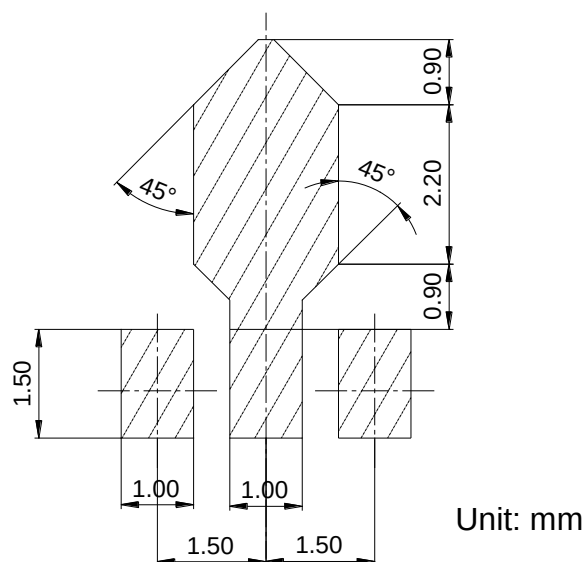
PACKAGE OUTLINE

Plastic surface mounted package

SOT-89



SOLDERING FOOTPRINT



PACKAGE INFORMATION

Device	Package	Shipping
2SB1424	SOT-89	1000pcs / Tape & Reel