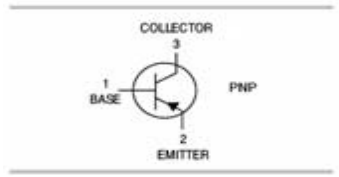
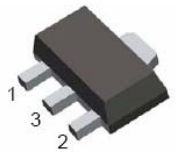
Low $V_{CE(sat)}$ Transistor(-20V,-3A) 2SB1424

FEATURES

Lead-free

- Low $V_{CE(SAT)}$=-0.2V(Typ.)
  (I_C/I_B=-2A/-0.1mA).
- Excellent DC current gain characterisitics.
- Complementary the 2SD2150.





SOT-89

APPLICATIONS

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

ORDERING INFORMATION

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

MAXIMUM RATING @ Ta=25℃ 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	℃

Low $V_{CE(sat)}$ Transistor(-20V,-3A) 2SB1424

ELECTRICAL CHARACTERISTICS @ Ta=25℃ unless otherwise specified

Parameter	Symbol	Test conditions	MIN		MAX	UNIT
Collector-base breakdown voltage	$V_{(BR)CBO}$	I_C=-50μA 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=-50μA 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=-100μA	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

TYPICAL CHARACTERISTICS @ Ta=25℃ unless otherwise specified

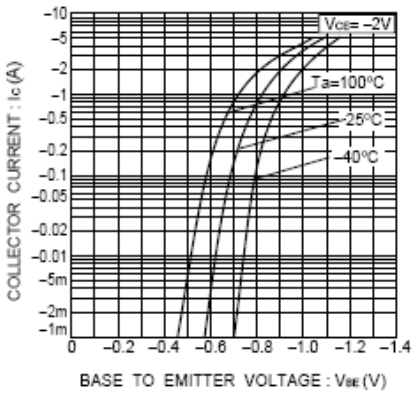


Fig.1 Grounded emitter propagation characteristics

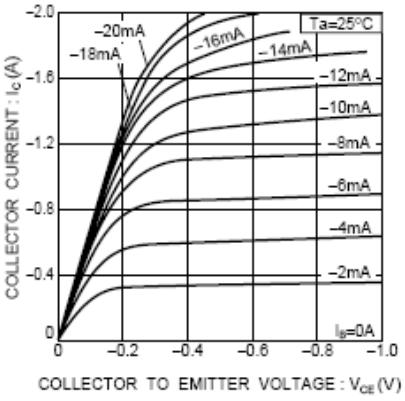


Fig.2 Grounded emitter output characteristics (Ⅰ)

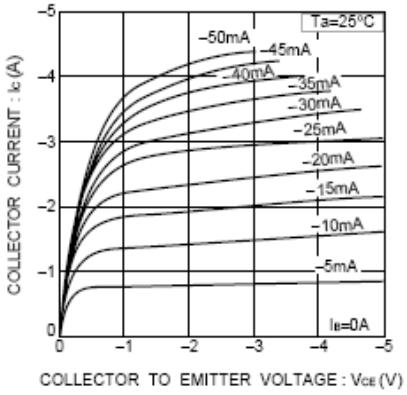


Fig.3 Grounded emitter output characteristics (Ⅱ)

Low $V_{CE(sat)}$ Transistor(-20V,-3A) 2SB1424

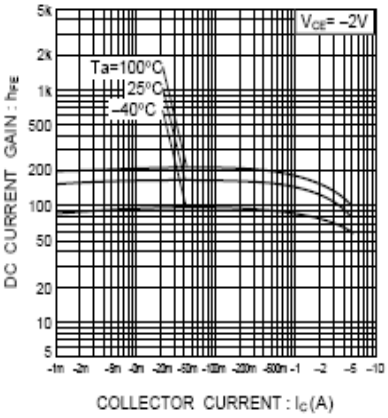


Fig.4 DC current gain vs. collector current

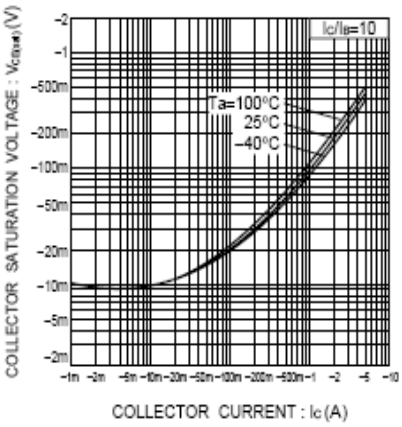


Fig.5 Collector-emitter saturation voltage vs. collector curren (Ⅰ)

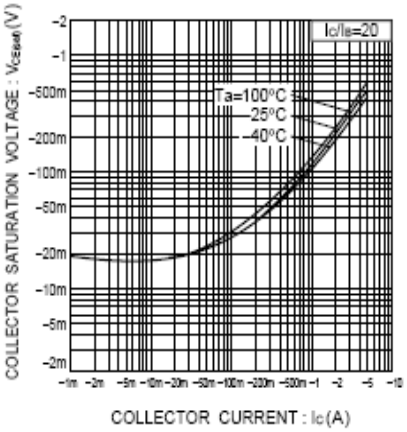


Fig.6 Collector-emitter saturation voltage vs. collector current (Ⅱ)

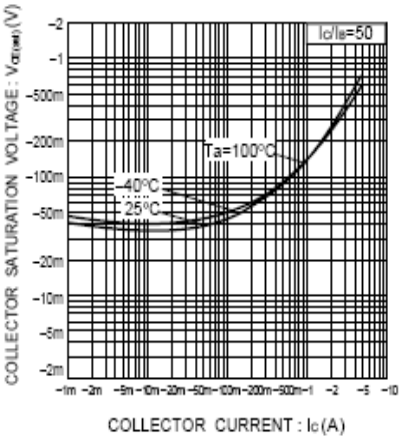


Fig.7 Collector-emitter saturation voltage vs. collector current (Ⅲ)

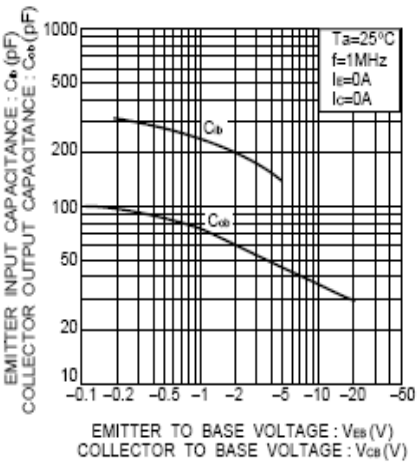


Fig.8 Gain bandwidth product vs. emitter current
Collector output capacitance vs. collector-base voltage

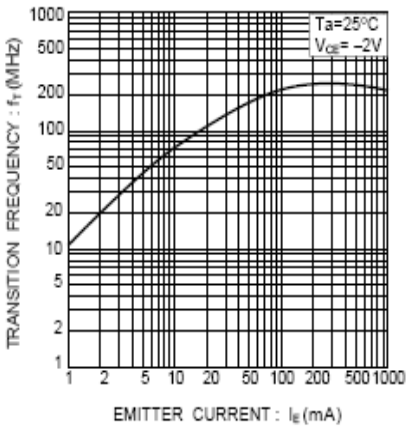
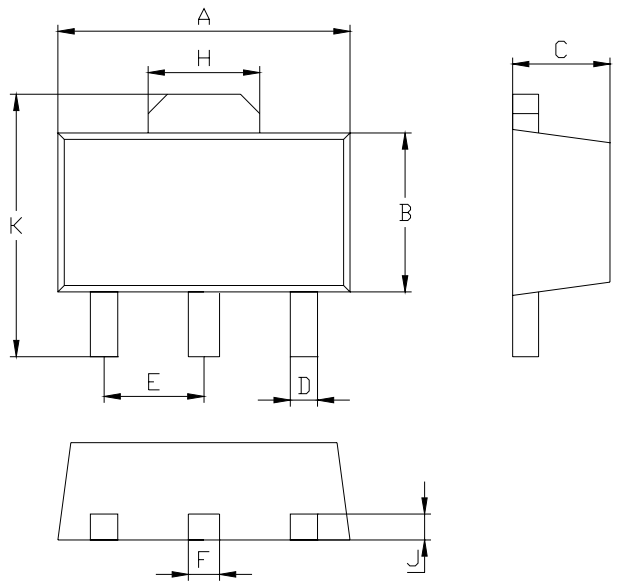


Fig.9 Emitter input capacitance vs. emitter base voltage

Low $V_{CE(sat)}$ Transistor(-20V,-3A) 2SB1424

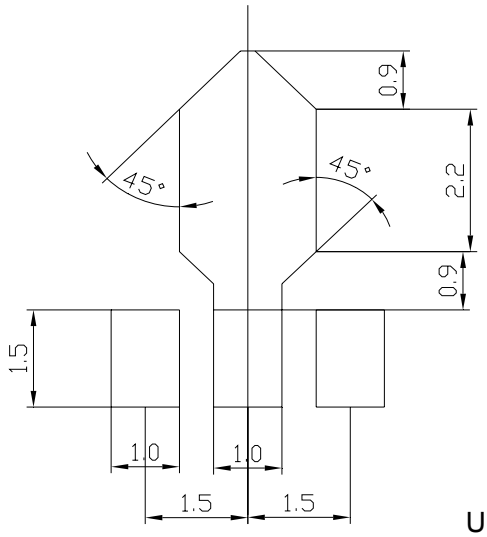
PACKAGE OUTLINE

Plastic surface mounted package SOT-89



SOT-89		
Dim	Min	Max
A	4.5	4.7
B	2.3	2.7
C	1.5Typical	
D	0.35	0.55
E	1.4	1.6
F	0.4	0.6
H	1.55	1.75
J	0.4Typical	
K	4.15	4.25
All Dimensions in mm		

SOLDERING FOOTPRINT



Unit:mm

PACKAGE INFORMATION

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