

Silicon Epitaxial Planar Transistor

STA124S

FEATURES

- Suitable for low voltage large current drivers.
- Complementary To STD123S.
- High DC current gain and large current capability.

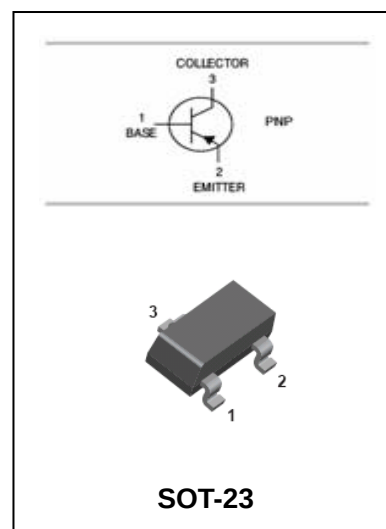


APPLICATIONS

- High Collector Current.

ORDERING INFORMATION

Type No.	Marking	Package Code
STA124S	124	SOT-23



MAXIMUM RATING @ Ta=25°C unless otherwise specified

Symbol	Parameter	Value	Units
V_{CBO}	Collector-Base Voltage	-15	V
V_{CEO}	Collector-Emitter Voltage	-12	V
V_{EBO}	Emitter-Base Voltage	-6.5	V
I_C	Collector Current -Continuous	-1	A
P_C	Collector Dissipation	350	mW
T_J, T_{stg}	Junction and Storage Temperature	-55 to +150	°C

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

Parameter	Symbol	Test conditions	MIN	TYP	MAX	UNIT
Collector-base breakdown voltage	$V_{(BR)CBO}$	$I_C=-50\mu\text{A}, I_E=0$	-15			V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	$I_C=-1\text{mA}, I_B=0$	-12			V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	$I_E=-50\mu\text{A}, I_C=0$	-6.5			V
Collector cut-off current	I_{CBO}	$V_{CB}=-15\text{V}, I_E=0$			-0.1	μA
Emitter cut-off current	I_{EBO}	$V_{EB}=-6\text{V}, I_C=0$			-0.1	μA
DC current gain	h_{FE}	$V_{CE}=-1\text{V}, I_C=-100\text{mA}$	200		450	
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C=-500\text{mA}, I_B=-50\text{mA}$		-0.2	-0.4	V
Transition frequency	f_T	$V_{CE}=-5\text{V}, I_C=-50\text{mA}$		260		MHz
Collector output capacitance	C_{ob}	$V_{CB}=-10\text{V}, I_E=0, f=1\text{MHz}$		5		pF

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

Fig. 1 $P_C - T_a$

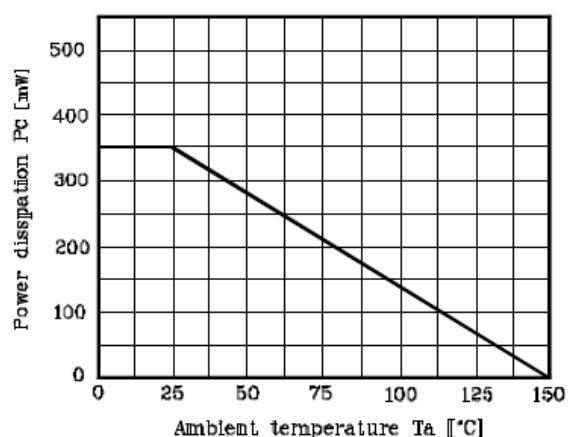
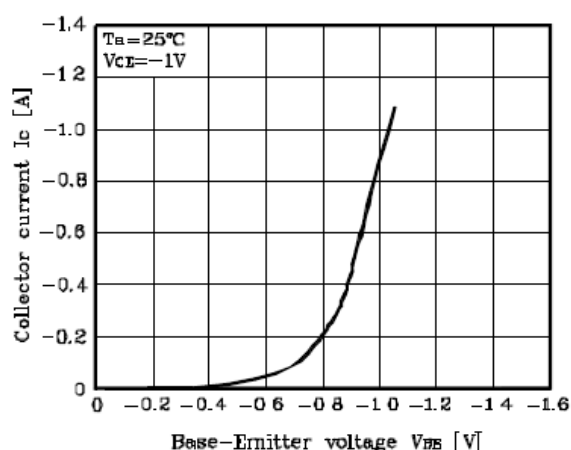


Fig. 2 $I_C - V_{BE}$



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Fig. 3 $h_{FE}-I_C$

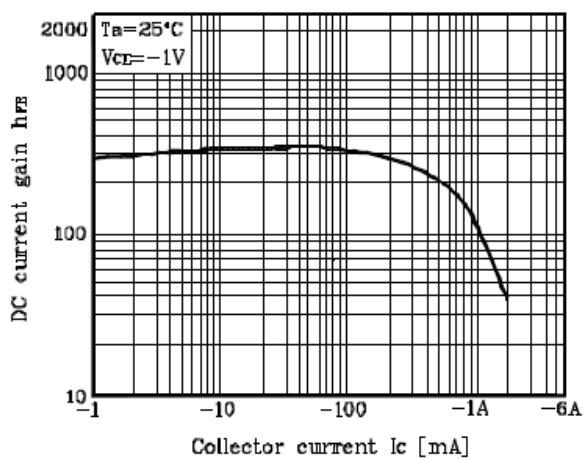
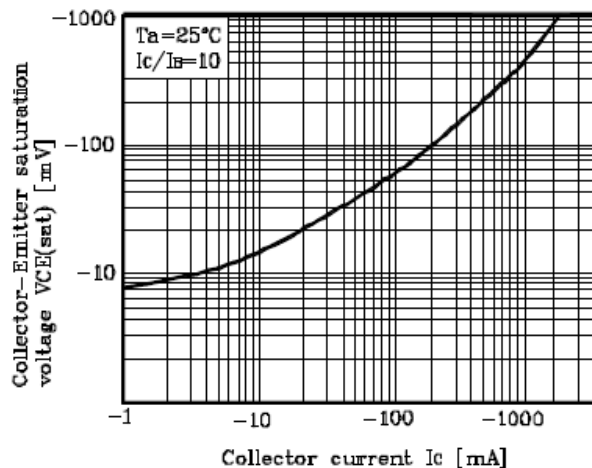


Fig. 4 $V_{CE(sat)}-I_C$



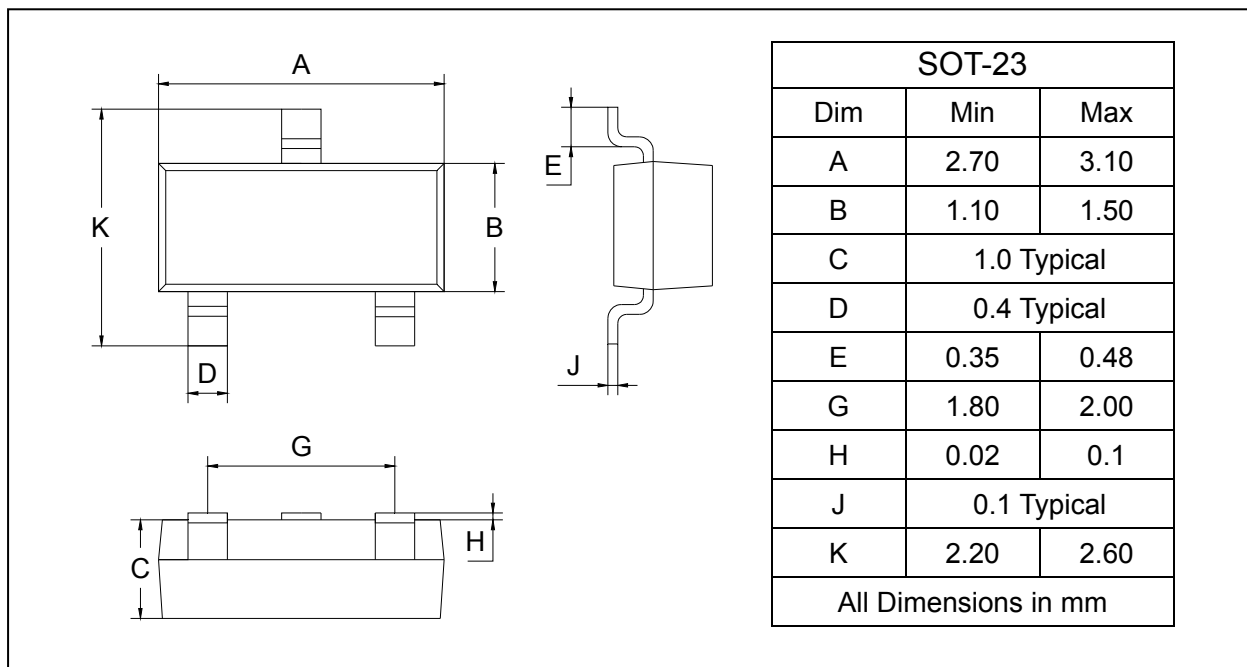
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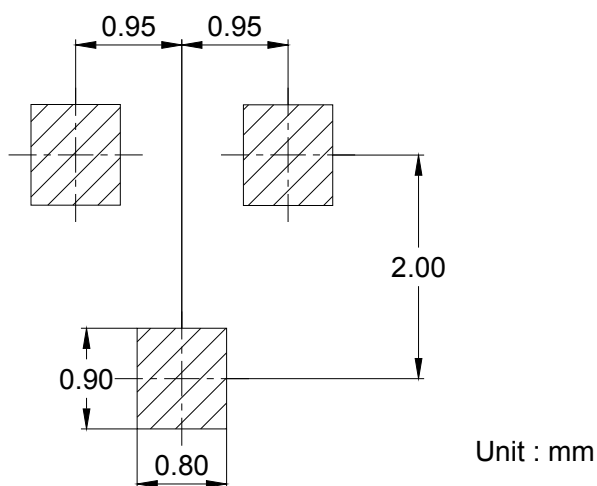
PACKAGE OUTLINE

Plastic surface mounted package

SOT-23



SOLDERING FOOTPRINT



PACKAGE INFORMATION

Device	Package	Shipping
STA124S	SOT-23	3000/Tape&Reel