



## 2SB1424

## PNP SILICON TRANSISTOR

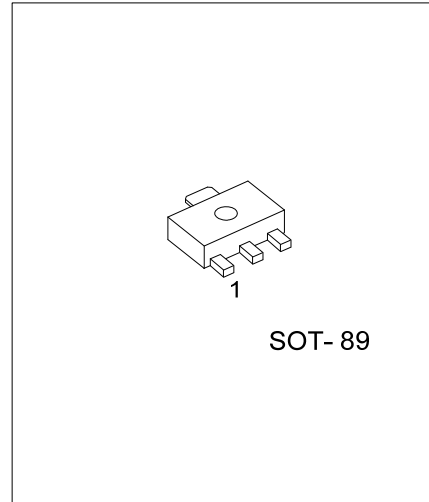
### LOW $V_{CE(SAT)}$ TRANSISTOR

#### DESCRIPTION

As the UTC PNP silicon transistor, the **2SB1424** is the epitaxial planar type transistor which has very low  $V_{CE(SAT)}$  (Collector-emitter saturation voltage).

#### FEATURES

- \* Very good DC current gain
- \* Very low  $V_{CE(SAT)} = -0.2V @ I_C/I_B = (-2A)/(-0.1A)$



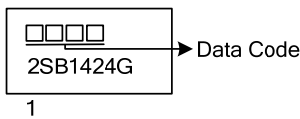
#### ORDERING INFORMATION

Order Number	Package	Pin Assignment			Packing
		1	2	3	
2SB1424G-x-AB3-R	SOT-89	B	C	E	Tape Reel

Note: Pin Assignment: B: Base C: Collector E: Emitter

<p>2SB1424G-x-AB3-R</p> <ul style="list-style-type: none"> <li>(1) Packing Type</li> <li>(2) Package Type</li> <li>(3) Rank</li> <li>(4) Green Package</li> </ul>	<ul style="list-style-type: none"> <li>(1) R: Tape Reel</li> <li>(2) AB3: SOT-89</li> <li>(3) x: refer to Classification of <math>h_{FE}</math></li> <li>(4) G: Halogen Free and Lead Free</li> </ul>
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#### MARKING



■ ABSOLUTE MAXIMUM RATING (  $T_A=25^\circ\text{C}$ , unless otherwise specified )

PARAMETER		SYMBOL	RATINGS	UNIT
Collector-Base Voltage		$V_{CB0}$	-20	V
Collector-Emitter Voltage		$V_{CEO}$	-20	V
Emitter-Base Voltage		$V_{EBO}$	-6	V
Collector Current	DC	$I_C$	-3	A
	Pulse(Note 2)		-5	
Collector Dissipation		$P_C$	0.5	W
Junction Temperature		$T_J$	150	$^\circ\text{C}$
Storage Temperature		$T_{STG}$	-55 ~ +150	$^\circ\text{C}$

Notes: 1. Absolute maximum ratings are those values beyond which the device could be permanently damaged.

Absolute maximum ratings are stress ratings only and functional device operation is not implied.

2. Pulse test: Pulse Width=10ms

■ ELECTRICAL CHARACTERISTICS (  $T_A=25^\circ\text{C}$ , unless otherwise specified )

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Collector-Base Breakdown Voltage	$BV_{CB0}$	$I_C=-50\mu\text{A}$ , $I_E=0$	-20			V
Collector-Emitter Breakdown Voltage	$BV_{CEO}$	$I_C=-1\text{mA}$ , $I_B=0$	-20			V
Emitter-Base Breakdown Voltage	$BV_{EBO}$	$I_E=-50\mu\text{A}$ , $I_C=0$	-6			V
Collector Cutoff Current	$I_{CBO}$	$V_{CB}=-20\text{V}$			-0.1	$\mu\text{A}$
Emitter Cutoff Current	$I_{EBO}$	$V_{EB}=-5\text{V}$			-0.1	$\mu\text{A}$
<b>ON CHARACTERISTICS</b>						
DC Current Gain	$h_{FE}$	$V_{CE}=-2\text{V}$ , $I_C=-0.1\text{A}$	120		390	
Collector-Emitter Saturation Voltage	$V_{CE(SAT)}$	$I_C/I_B = (-2\text{A})/(-0.1\text{A})$			-0.5	V
<b>SMALL-SIGNAL CHARACTERISTICS</b>						
Current Gain Bandwidth Product	$f_T$	$V_{CE}=-2\text{V}$ , $I_E=0.5\text{A}$ , $f=100\text{MHz}$		240		MHz
Output Capacitance	$C_{ob}$	$V_{CB}=-10\text{V}$ , $I_E=0$ , $f=1\text{MHz}$		35		pF

■ CLASSIFICATION OF  $h_{FE1}$

RANK	Q	R
RANGE	120-270	180-390

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