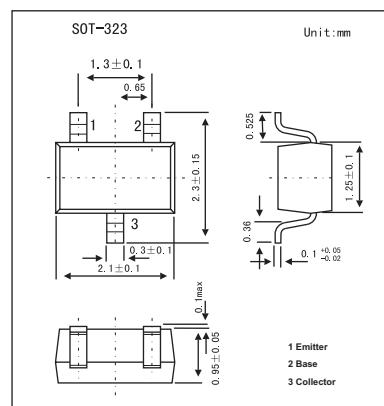


## PNP Silicon Epitaxial Transistor

### 2SB1475

#### ■ Features

- Super miniature package.
- High DC current  $I_C(DC) = 500\text{mA}$  max.
- Low  $V_{CE(sat)}$ :  $V_{CE(sat)} = -60\text{mV}$  at  $-100\text{mA}$



#### ■ Absolute Maximum Ratings $T_a = 25^\circ\text{C}$

Parameter	Symbol	Rating	Unit
Collector to base voltage	$V_{CBO}$	-25	V
Collector to emitter voltage	$V_{CEO}$	-16	V
Emitter to base voltage	$V_{EBO}$	-6	V
Collector current	$I_C$	-500	mA
Total power dissipation	$P_T$	150	mW
Junction temperature	$T_j$	150	$^\circ\text{C}$
Storage temperature range	$T_{stg}$	-55 to +150	$^\circ\text{C}$

#### ■ Electrical Characteristics $T_a = 25^\circ\text{C}$

Parameter	Symbol	Testconditons	Min	Typ	Max	Unit
Collector cutoff current	$I_{CBO}$	$V_{CB} = -16\text{ V}$ , $I_E = 0$			-100	nA
Emitter cutoff current	$I_{EBO}$	$V_{EB} = -6.0\text{ V}$ , $I_C = 0$			-100	nA
DC current gain *	$h_{FE}$	$V_{CE} = -1.0\text{ V}$ , $I_C = -100\text{ mA}$	110	200	400	
Collector saturation voltage *	$V_{CE(sat)}$	$I_C = -100\text{ mA}$ , $I_B = -10\text{ mA}$		-60	-120	mV
		$I_C = -500\text{ mA}$ , $I_B = -20\text{ mA}$		-250	-400	mV
Base saturation voltage *	$V_{BE(sat)}$	$I_C = -2\text{A}$ , $I_B = -0.1\text{A}$		-0.95	-1.2	V
Base-emitter voltage *	$V_{BE}$	$V_{CE} = -1.0\text{ V}$ , $I_C = -10\text{ mA}$		-0.66	-0.7	V
Gain bandwidth product	$f_T$	$V_{CE} = -3.0\text{ V}$ , $I_E = 100\text{ mA}$	50			MHz
Output capacitance	$C_{ob}$	$V_{CB} = -10\text{ V}$ , $I_E = 0$ , $f = 1.0\text{ MHz}$			15	pF

\* Pulsed: PW  $\leq 350\text{ }\mu\text{s}$ , duty cycle  $\leq 2\%$

#### ■ hFE Classification

Marking	B42	B43	B44
$h_{FE}$	110~240	190~320	270~400