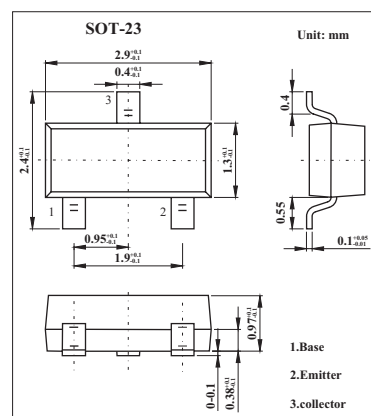


PNP Silicon Epitaxia

2SA1461

■ Features

- High speed switching: $t_{stg}=110\text{ns}$.
- High gain bandwidth product: $f_T=510\text{MHz}$.

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

Parameter	Symbol	Rating	Unit
Collector-base voltage	V_{CBO}	-40	V
Collector-emitter voltage	V_{CEO}	-40	V
Emitter-base voltage	V_{EBO}	-5	V
Collector current	I_C	-200	mA
Maximum Total power dissipation at 25°C ambient temperature	P_T	200	mW
Maximum Junction temperature	T_J	150	$^\circ\text{C}$
Maximum Storage temperature	T_{stg}	-55 to +150	$^\circ\text{C}$

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

Parameter	Symbol	Testconditions	Min	Typ	Max	Unit
Collector cutoff current	I_{CBO}	$V_{CB} = -30\text{V}, I_E = 0$			-100	nA
Emitter cutoff current	I_{EBO}	$V_{EB} = -3\text{V}, I_C = 0$			-100	nA
DC current gain *	h_{FE}	$V_{CE} = -1\text{V}, I_C = -10\text{mA}$	75	180	300	
		$V_{CE} = -1\text{V}, I_C = -100\text{mA}$	25	100		
Collector-emitter saturation voltage *	$V_{CE(sat)}$	$I_C = -50\text{mA}, I_B = -5\text{mA}$		-0.1	-0.4	V
Base-emitter saturation voltage *	$V_{BE(sat)}$	$I_C = -50\text{mA}, I_B = -5\text{mA}$		-0.8	-0.95	V
Gain bandwidth product	f_T	$V_{CE} = -20\text{V}, I_E = 10\text{mA}$	200	510		MHz
Output capacitance	C_{ob}	$V_{CB} = -5\text{V}, I_E = 0, f = 1.0\text{MHz}$		2.5	4.5	pF
Turn-on time	t_{on}	$V_{CC} = -3\text{V},$			70	ns
Storage time	t_{stg}	$I_C = -10\text{mA},$		110	225	ns
Turn-off time	t_{off}	$I_{B1} = -I_{B2} = -1\text{mA}$			300	ns

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

■ h_{FE} Classification

Marking	Y22	Y23	Y24
h_{FE}	75~150	100~200	150~300