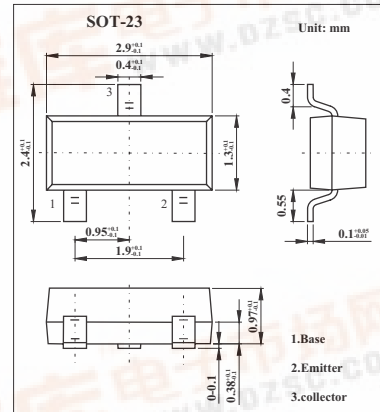


SMD Type Transistors

PNP Silicon Epitaxia
2SA1461

■ Features

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



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

Parameter	Symbol	Rating	Unit
Collector-base voltage	V_{CB0}	-40	V
Collector-emitter voltage	V_{CE0}	-40	V
Emitter-base voltage	V_{EB0}	-5	V
Collector current	I_c	-200	mA
Maximum Total power dissipation at $25^\circ C$ ambient temperature	P_T	200	mW
Maximum Junction temperature	T_j	150	$^\circ C$
Maximum Storage temperature	T_{stg}	-55 to +150	$^\circ C$

■ Electrical Characteristics $T_a = 25^\circ C$

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

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

■ h_{FE} Classification

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

