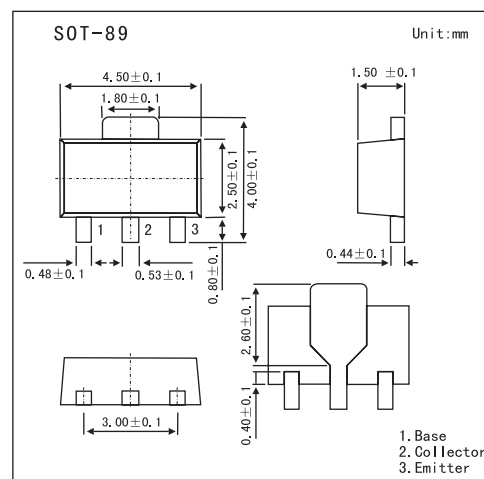


PNP Silicon Epitaxial Transistor

2SB1628

■ Features

- High current capacitance.
- Low collector saturation voltage.

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

Parameter	Symbol	Rating	Unit
Collector to Base Voltage	V_{CB0}	-20	V
Collector to Emitter Voltage	V_{CE0}	-16	V
Emitter to Base Voltage	V_{EB0}	-6	V
Collector Current (DC)	$I_{C(DC)}$	-3	A
Collector Current (pulse) *	$I_{C(Pulse)}$	-5	A
Base Current (DC)	$I_{B(DC)}$	-0.2	A
Base Current (pulse) *	$I_{B(Pulse)}$	-0.4	A
Total Power Dissipation	P_T	2	W
Junction Temperature	T_j	150	$^\circ\text{C}$
Storage temperature	T_{stg}	-55 to +150	$^\circ\text{C}$

* $PW \leq 10 \text{ ms}$, Duty Cycle $\leq 50\%$

2SB1628■ Electrical Characteristics $T_a = 25^\circ\text{C}$

Parameter	Symbol	Testconditions	Min	Typ	Max	Unit
Collector Cut-off Current	I_{CBO}	$V_{CB0} = -20\text{ V}, I_E = 0$			-100	nA
Emitter Cut-off Current	I_{EBO}	$V_{EB0} = -6.0\text{ V}, I_C = 0$			-100	nA
DC Current Gain *	h_{FE1}	$V_{CE} = -2.0\text{ V}, I_C = -0.5\text{ A}$	140	280	560	
	h_{FE2}	$V_{CE} = -2.0\text{ V}, I_C = -3.0\text{ A}$	70			
Base to Emitter Voltage *	V_{BE}	$V_{CE} = -2.0\text{ V}, I_C = -0.05\text{ A}$	-600	-660	-700	mV
Collector Saturation Voltage *	$V_{CE(sat)1}$	$I_C = -2.0\text{ A}, I_B = -0.1\text{ A}$		-240	-350	mV
Collector Saturation Voltage *	$V_{CE(sat)2}$	$I_C = -3.0\text{ A}, I_B = -0.15\text{ A}$		-350	-550	mV
Base Saturation Voltage *	$V_{BE(sat)}$	$I_C = -2.0\text{ A}, I_B = -0.1\text{ A}$		-0.95	-1.2	V
Gain Bandwidth Product	f_T	$V_{CE} = -3.0\text{ V}, I_E = 0.5\text{ A}$		320		MHz
Output Capacitance	C_{ob}	$V_{CB} = -10\text{ V}, I_E = 0, f = 1\text{ MHz}$		45		pF
Turn-on Time	t_{on}	$I_C = -1.0\text{ A}, V_{CC} = -10\text{ V},$ $R_L = 5.0\text{ }\Omega, I_{B1} = -I_{B2} = -0.1\text{ A},$		70		ns
Storage Time	t_{stg}			110		ns
Fall Time	t_f			40		ns

* Pulsed: $PW \leq 350\text{ }\mu\text{s}$, Duty Cycle $\leq 2\%$.■ h_{FE} Classification

Marking	ZX	ZY	ZZ
h_{FE}	140~280	200~400	280~560