

2SB1631

Silicon PNP epitaxial planar type

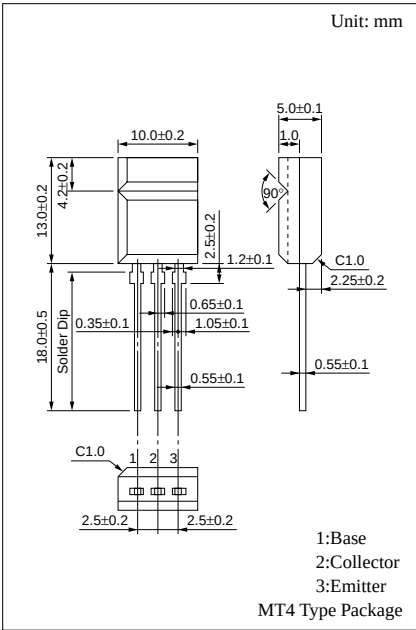
For power amplification

Features

- High forward current transfer ratio h_{FE} which has satisfactory linearity
- Low collector to emitter saturation voltage $V_{CE(sat)}$
- Allowing automatic insertion with radial tapping

Absolute Maximum Ratings ($T_C=25^\circ\text{C}$)

Parameter		Symbol	Ratings	Unit
Collector to base voltage		V_{CBO}	−60	V
Collector to emitter voltage		V_{CEO}	−60	V
Emitter to base voltage		V_{EBO}	−6	V
Peak collector current		I_{CP}	−6	A
Collector current		I_C	−3	A
Base current		I_B	−1	A
Collector power	$T_C=25^{\circ}\text{C}$	P_C	15	W
dissipation	$T_a=25^{\circ}\text{C}$		2	
Junction temperature		T_j	150	$^{\circ}\text{C}$
Storage temperature		T_{stg}	−55 to +150	$^{\circ}\text{C}$

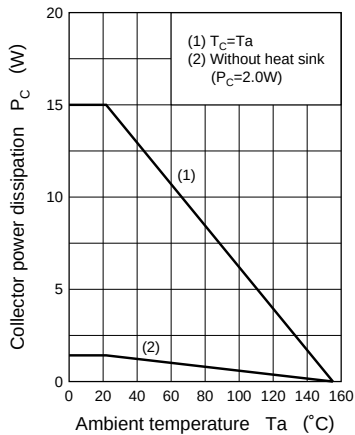
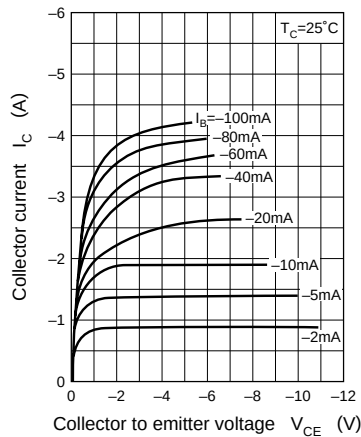
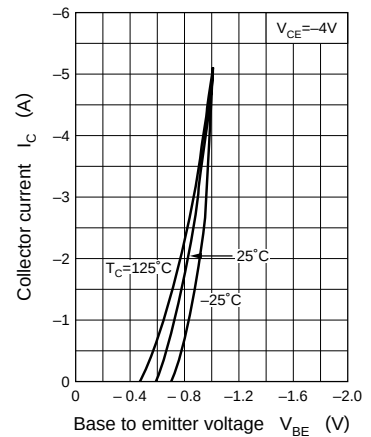
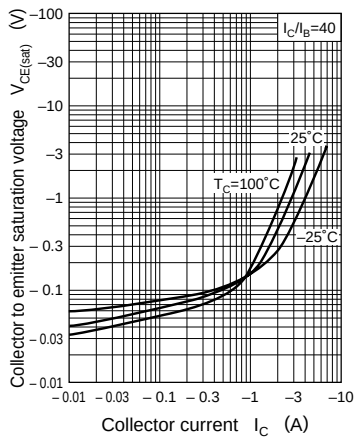
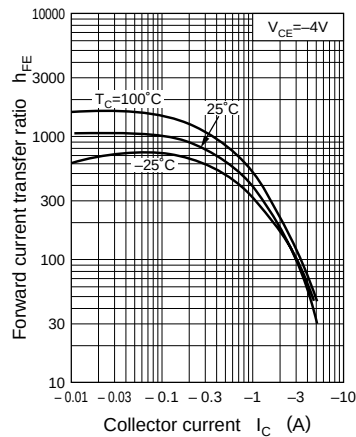
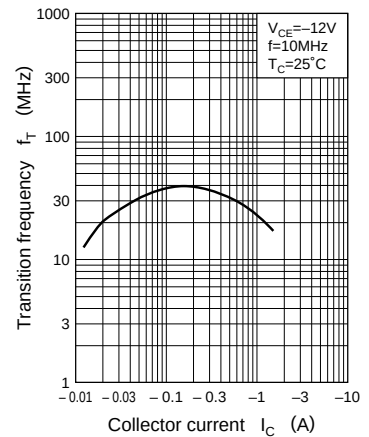
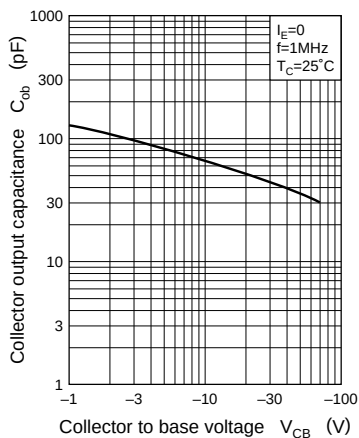
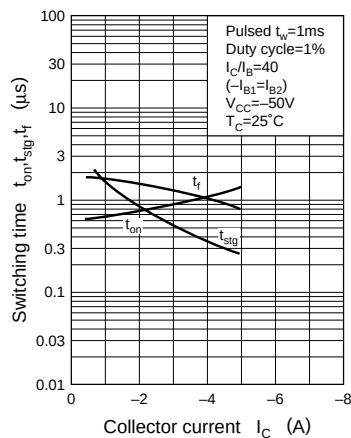


Electrical Characteristics ($T_C=25^\circ\text{C}$)

Parameter	Symbol	Conditions	min	typ	max	Unit
Collector cutoff current	I_{CBO}	$V_{CB} = -60\text{V}, I_E = 0$			-100	μA
	I_{CEO}	$V_{EB} = -40\text{V}, I_C = 0$			-100	μA
Emitter cutoff current	I_{EBO}	$V_{EB} = -6\text{V}, I_C = 0$			-100	μA
Collector to emitter voltage	V_{CEO}	$I_C = -25\text{mA}, I_B = 0$	-60			V
Forward current transfer ratio	h_{FE}^*	$V_{CE} = -4\text{V}, I_C = -0.5\text{A}$	300		700	
Collector to emitter saturation voltage	$V_{CE(sat)}$	$I_C = -2\text{A}, I_B = -0.05\text{A}$			-1	V
Transition frequency	f_T	$V_{CE} = -12\text{V}, I_C = -0.2\text{A}, f = 10\text{MHz}$		30		MHz

* h_{FE} Rank classification

Rank	Q	P
h_{FE}	300 to 500	400 to 700

$P_C - T_a$  $I_C - V_{CE}$  $I_C - V_{BE}$  $V_{CE(sat)} - I_C$  $h_{FE} - I_C$  $f_T - I_C$  $C_{ob} - V_{CB}$  $t_{on}, t_{stg}, t_f - I_C$ 

Area of safe operation (ASO)

