

2SB1181F5

Transistor, PNP

Features

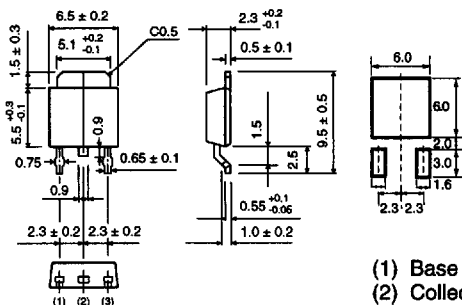
- available in CPT F5 (SC-63) package
- package marking: B1181★□, where ★ is h_{FE} code and □ is lot number
- high breakdown voltage and large current capability: $V_{CEO} = -80$ V, $I_C = -1$ A
- good h_{FE} linearity
- low collector saturation voltage
- complementary pair with 2SD1733

Applications

- power amplifier

Dimensions (Units : mm)

2SB1181F5 (CPT F5)



Absolute maximum ratings ($T_a = 25^\circ\text{C}$)

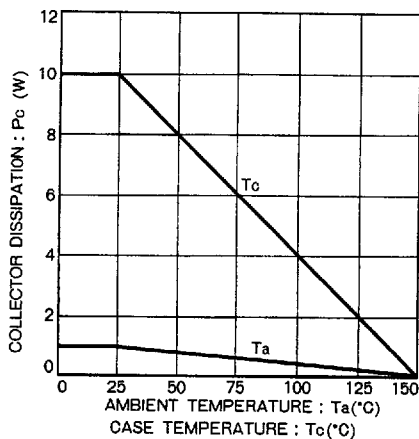
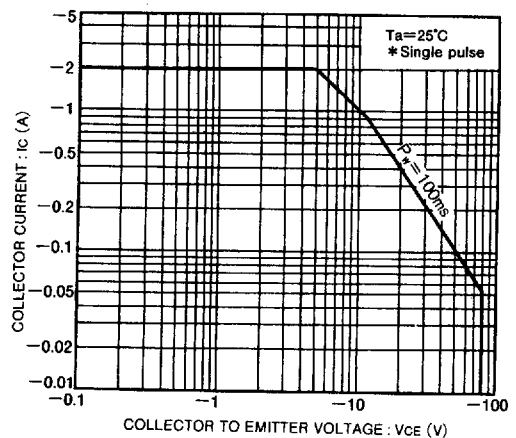
Parameter	Symbol	Limits	Unit	Conditions
Collector-to-base voltage	V_{CBO}	-80	V	
Collector-to-emitter voltage	V_{CEO}	-80	V	
Emitter-to-base voltage	V_{EBO}	-5	V	
Collector current	I_C	-1	A	DC
		-2		Single pulse, $P_W = 100$ ms
Collector dissipation	P_C	1	W	$T_a = 25^\circ\text{C}$
		10		$T_C = 25^\circ\text{C}$
Junction temperature	T_j	150	$^\circ\text{C}$	
Storage temperature	T_{stg}	-55 ~ +150	$^\circ\text{C}$	

Electrical characteristics (unless otherwise noted, $T_a = 25^\circ\text{C}$)

Parameter	Symbol	Min	Typical	Max	Unit	Conditions
Collector-to-base breakdown voltage	BV_{CBO}	-80			V	$I_C = -50\ \mu\text{A}$
Collector-to-emitter breakdown voltage	BV_{CEO}	-80			V	$I_C = -1\ \text{mA}$
Emitter-to-base breakdown voltage	BV_{EBO}	-5			V	$I_E = -50\ \mu\text{A}$
Collector cutoff current	I_{CBO}			-1	μA	$V_{CB} = -60\ \text{V}$
Emitter cutoff current	I_{EBO}			-1	μA	$V_{EB} = -4\ \text{V}$
DC current gain	h_{FE}	82		390		$V_{CE} = -3\ \text{V}$, $I_C = -100\ \text{mA}$
Collector-to-emitter saturation voltage	$V_{CE(sat)}$			-0.4	V	$I_C/I_B = -500\ \text{mA}/-50\ \text{mA}$
Transition frequency	f_T		100		MHz	$V_{CE} = -10\ \text{V}$, $I_E = 50\ \text{mA}$, $f = 30\ \text{MHz}$
Output capacitance	C_{ob}		25		pF	$V_{CB} = -10\ \text{V}$, $I_E = 0\ \text{A}$, $f = 1\ \text{MHz}$

 h_{FE} rankings

Item	P	Q	R
h_{FE}	82 ~ 180	120 ~ 270	180 ~ 390

Electrical characteristic curves**Figure 1****Figure 2**

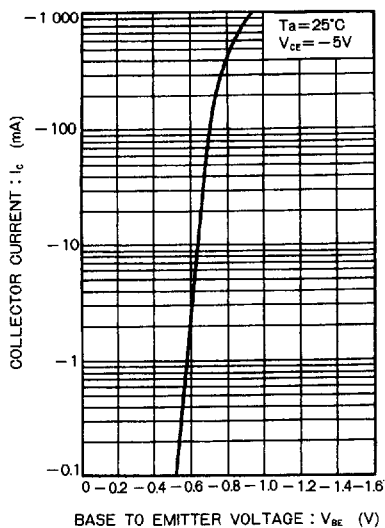


Figure 3

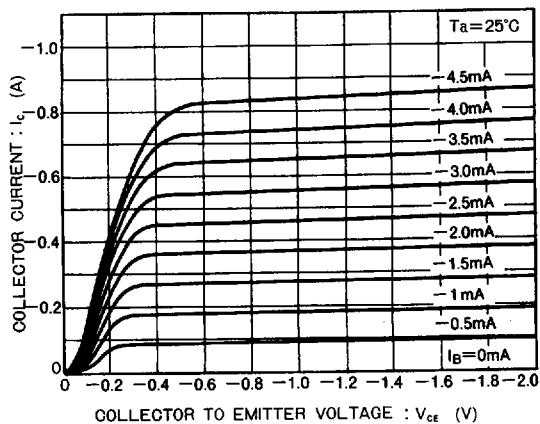


Figure 4

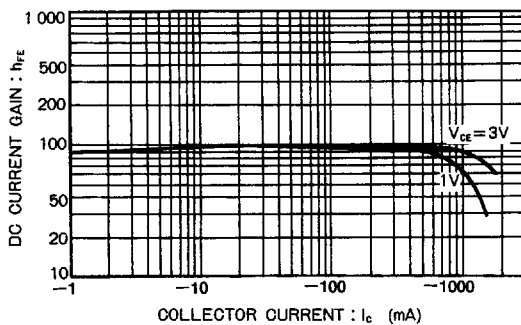


Figure 5

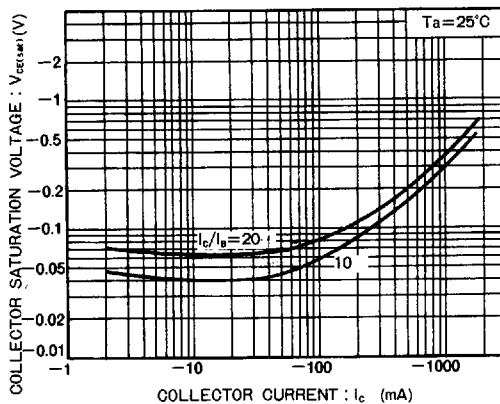
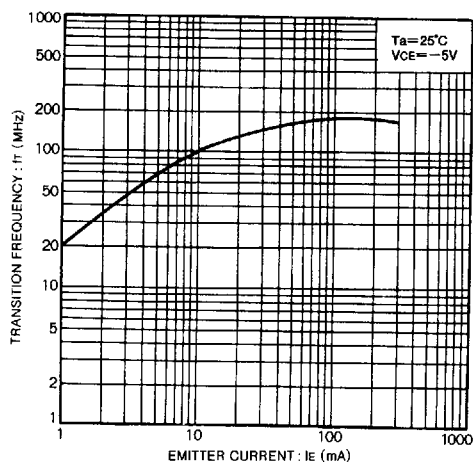
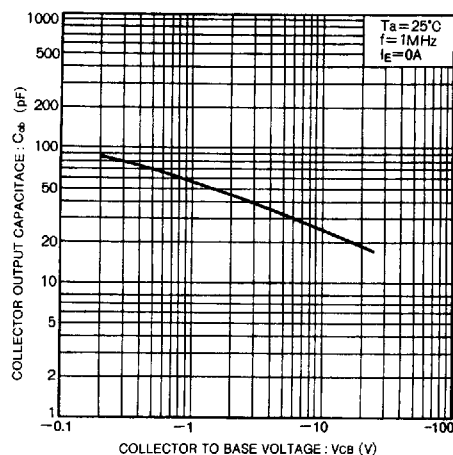
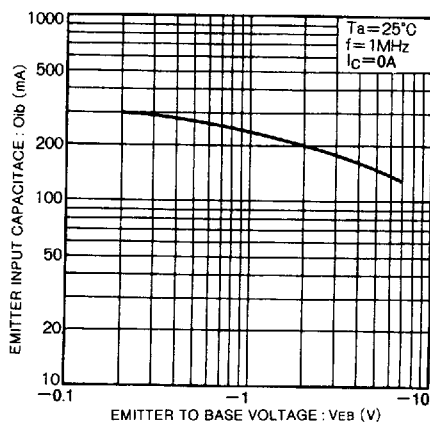


Figure 6


Figure 7

Figure 8

Figure 9

Ordering information

Package	Tape
Code	TL
Basic order quantity	2500
2SB1181F5	★
★ = Standard, ☆ = Semi-standard, * = Special order	