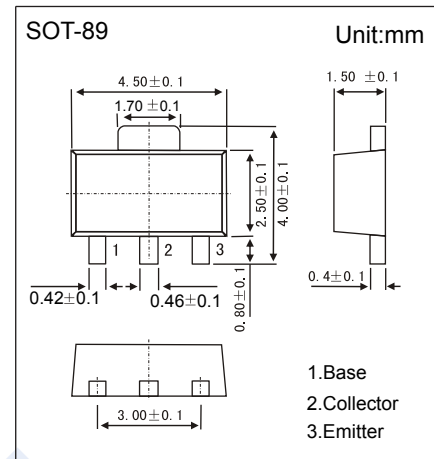


PNP Transistors

2SB1561

■ Features

- Collector Current Capability $I_C = -2A$
- Collector Emitter Voltage $V_{CEO} = -60V$
- Complements the 2SD2391

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

Parameter	Symbol	Rating	Unit
Collector - Base Voltage	V_{CBO}	-60	V
Collector - Emitter Voltage	V_{CEO}	-60	
Emitter - Base Voltage	V_{EBO}	-6	
Collector Current - Continuous	I_C	-2	A
Collector Current - Pulse	I_{CP}	-6	
Collector Power Dissipation (Note.1)	P_D	0.5	W
		2	
Junction Temperature	T_J	150	$^\circ C$
Storage Temperature range	T_{stg}	-55 to 150	

Note.1: When mounted on a 40X40X0.7mm ceramic board.

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

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Collector- base breakdown voltage	V_{CBO}	$I_C = -100 \mu A, I_E = 0$	-60			V
Collector- emitter breakdown voltage	V_{CEO}	$I_C = -1 mA, I_B = 0$	-60			
Emitter - base breakdown voltage	V_{EBO}	$I_E = -100 \mu A, I_C = 0$	-6			
Collector-base cut-off current	I_{CBO}	$V_{CB} = -50V, I_E = 0$			-0.1	μA
Emitter cut-off current	I_{EBO}	$V_{EB} = -5V, I_C = 0$			-0.1	
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C = -1 A, I_B = -50mA$			-0.35	V
Base - emitter saturation voltage	$V_{BE(sat)}$	$I_C = -1 A, I_B = -50mA$			-1.2	
DC current gain	h_{FE}	$V_{CE} = -2V, I_C = -0.5 A$	120		270	
		$V_{CE} = -2V, I_C = -1.5 A$	45			
Collector output capacitance	C_{ob}	$V_{CB} = -10V, I_E = 0, f = 1MHz$		23		pF
Transition frequency	f_T	$V_{CE} = -2V, I_E = -0.5 A, f = 100MHz$		200		MHz

■ Marking

Marking	BL/QN
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PNP Transistors

2SB1561

■ Typical Characteristics

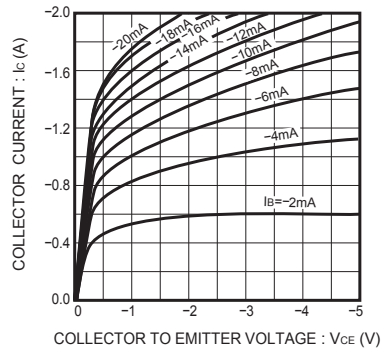


Fig.1 Grounded emitter output characteristics

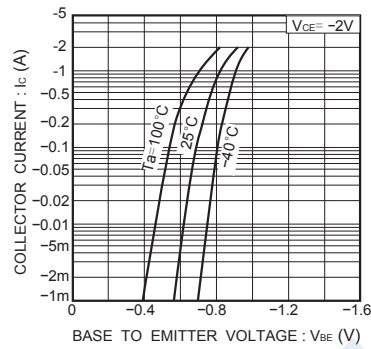


Fig.2 Grounded emitter propagation characteristics

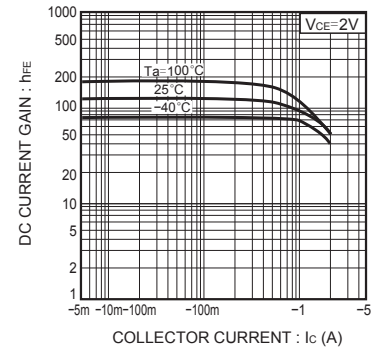


Fig.3 DC current gain vs. collector current (I)

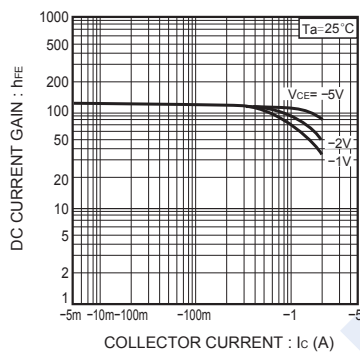


Fig.4 DC current gain vs. collector current (II)

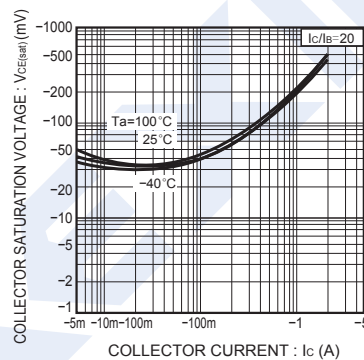


Fig.5 Collector-emitter saturation voltage vs. collector current (I)

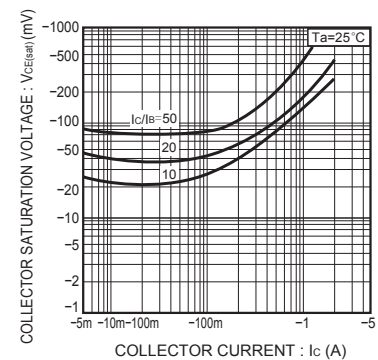


Fig.6 Collector-emitter saturation voltage vs. collector current (II)

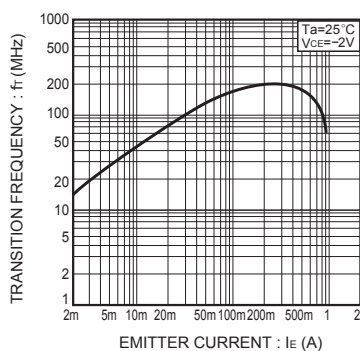


Fig.7 Gain bandwidth product vs. emitter current

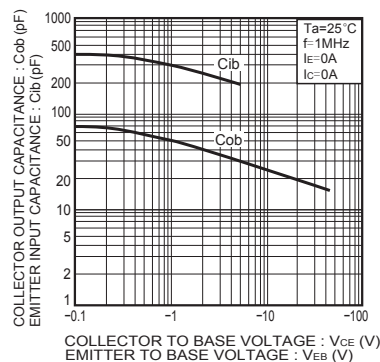


Fig.8 Collector output capacitance vs. collector-base voltage
Emitter input capacitance vs. emitter-base voltage

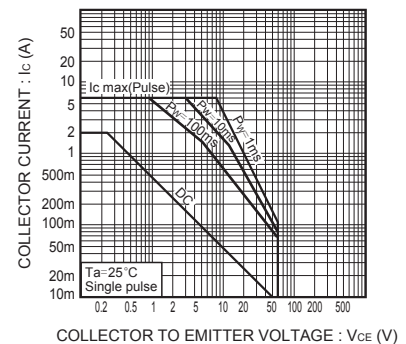


Fig.9 Safe operating area