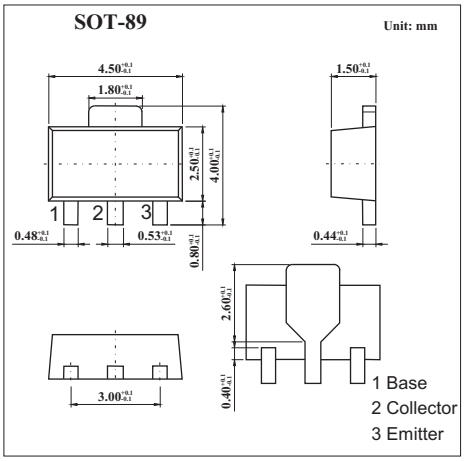
TY Semicondutor®

Product specification

2SB1561-Q



■ Features

- Collector Current Capability I_C=-2A
- Collector Emitter Voltage V_{CEO}=-60V
- Low saturation Voltage typically

  VCE (SAT)=-0.15Vat IC/IB=-1A/-50mA

■ Absolute Maximum Ratings Ta = 25℃

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	-0.5	A
	I_{CP}	-6	
Collector Power Dissipation	P_C	0.5	W
	P_{CM}	2	
Junction Temperature	T_J	150	℃
Storage Temperature range	T_{stg}	-55 to 150	

■ Electrical Characteristics Ta = 25℃

Parameter	Symbol	Testconditons	Min	Typ	Max	Unit
Collecto- base breakdown voltage	V_{CBO}	I_C= -50 μA, 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= -50μA, I_C=0	-6			
Collector-base cut-off current	I_{CBO}	V_{CB}= -50 V , I_E=0			-100	nA
Collector- emittercut-off current	I_{CEO}	V_{CB}= -48 V , I_E=0			-700	
Emitter cut-off current	I_{EBO}	V_{EB}= -5V , I_C=0			-100	
Collector-emitter saturation voltage	$V_{CE(sat)}$	I_C=-1A, I_B=-50mA		-0.15	-0.35	V
Base - emitter saturation voltage	$V_{BE(sat)}$	I_C=-1A, I_B=-50mA			-1.2	
DC current gain	$h_{FE(1)}$	V_{CE}= -2V, I_C= -0.5A	120		270	
	$h_{FE(2)}$	V_{CE}=- 2V, I_C= -1.5A	45			
Output capacitance	Cob	V_{CB}= -10V, I_E= 0A,f=1MHz		23		pF
Transition frequency	f_T	V_{CE}= -2V, I_E= -0.5A,f=100MHz		200		MHz

■ Marking

Marking	BL/QN

2SB1561-Q

■ Typical Characteristics

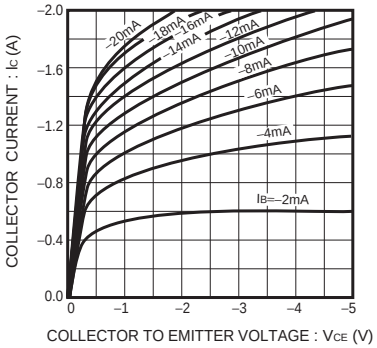


Fig.1 Grounded emitter output characteristics

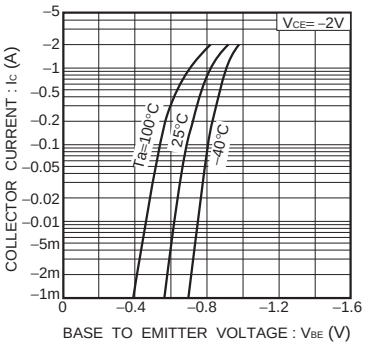


Fig.2 Grounded emitter propagation characteristics

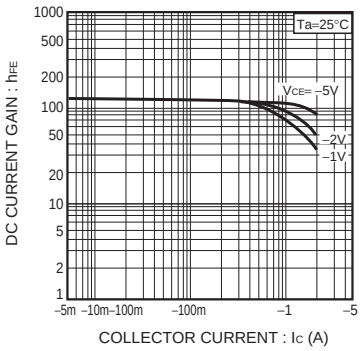


Fig.3 DC current gain vs. collector current (II)

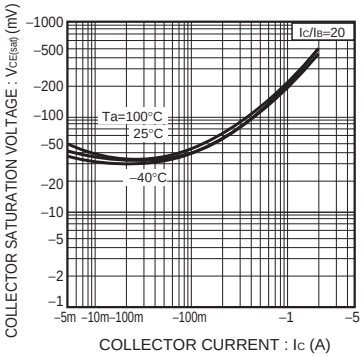


Fig.4 Collector-emitter saturation voltage vs. collector current (I)

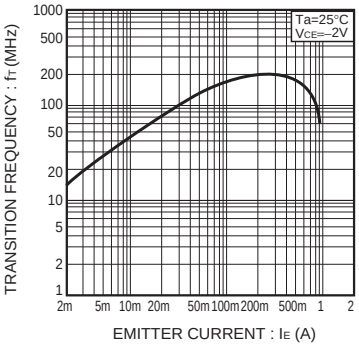


Fig.5 Gain bandwidth product vs. emitter current

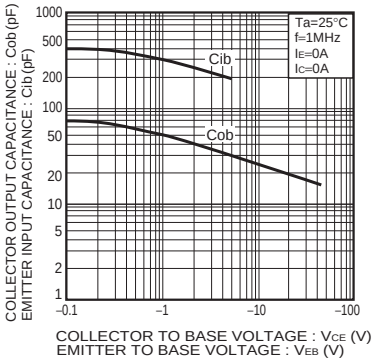


Fig.6 Collector output capacitance vs. collector-base voltage Emitter input capacitance vs. emitter-base voltage

2SB1561-Q

■ Typical Characteristics

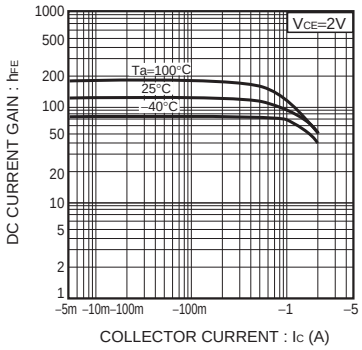


Fig.3 DC current gain vs. collector current (I)

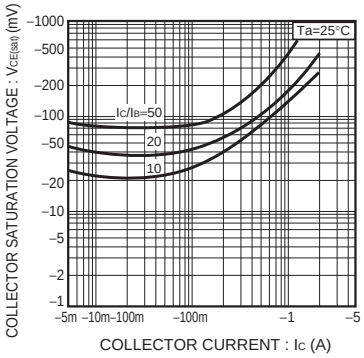


Fig.6 Collector-emitter saturation voltage vs. collector current (II)

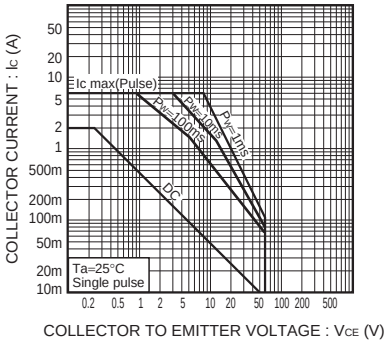


Fig.9 Safe operating area