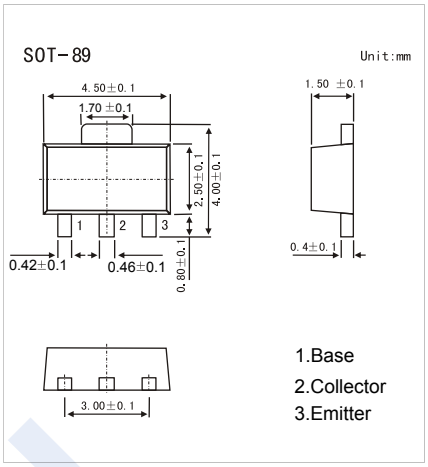
PNP Transistors

2SA1681



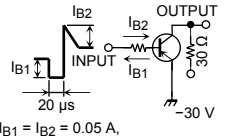
■ Features

- Low saturation voltage
- High speed switching time
- Small flat package
- PC = 1.0 to 2.0 W (mounted on a ceramic substrate)
- Complementary to 2SC4409

■ Absolute Maximum Ratings Ta = 25℃

Parameter	Symbol	Rating	Unit
Collector - Base Voltage	V_{CBO}	-60	V
Collector - Emitter Voltage	V_{CEO}	-50	
Emitter - Base Voltage	V_{EBO}	-6	
Collector Current - Continuous	I_C	-2	A
Base Current	I_B	-0.2	
Collector Power Dissipation	P_C	500	mW
Junction Temperature	T_J	150	℃
Storage Temperature range	T_{stg}	-55 to 150	

■ Electrical Characteristics Ta = 25℃

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Collector- base breakdown voltage	V_{CBO}	I_C= -100 uA, I_E=0	-60			V
Collector- emitter breakdown voltage	V_{CEO}	I_C= -1mA, I_B=0	-50			
Emitter - base breakdown voltage	V_{EBO}	I_E= -100 uA, I_C=0	-6			
Collector-base cut-off current	I_{CBO}	V_{CB}= -60 V , I_E=0			-0.1	uA
Emitter cut-off current	I_{EBO}	V_{EB}= -6V , I_C=0			-0.1	
Collector-emitter saturation voltage	$V_{CE(sat)}$	I_C=-1 A, I_B=-50 mA			-0.5	V
Base - emitter saturation voltage	$V_{BE(sat)}$	I_C=-1 A, I_B=-50 mA			-1.2	
DC current gain	$h_{FE(1)}$	V_{CE}= -2V, I_C= -100 mA	120		400	
	$h_{FE(2)}$	V_{CE}= -2V, I_C= -1.5 A	40			
Turn-on time	t_{on}			0.1		us
Storage time	t_{stg}			0.3		
Fall time	t_f			0.1		
Collector output capacitance	C_{ob}	V_{CB}= -10V,I_E=0, f=1MHz		23		pF
Transition frequency	f_T	V_{CE}= -2V, I_C= -100 mA		100		MHz

$-I_{B1} = I_{B2}$ = 0.05 A,
DUTY CYCLE ≤ 1%

■ Marking

Marking	L*A

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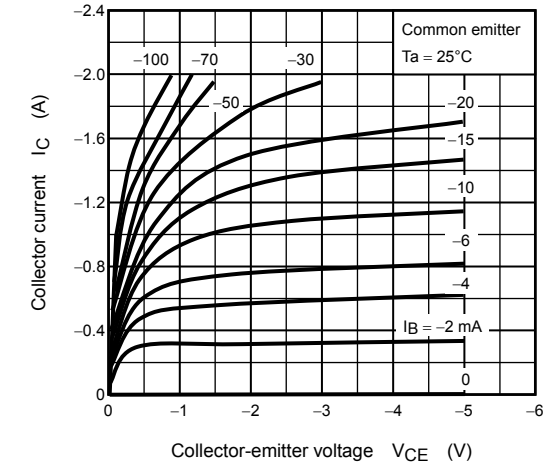
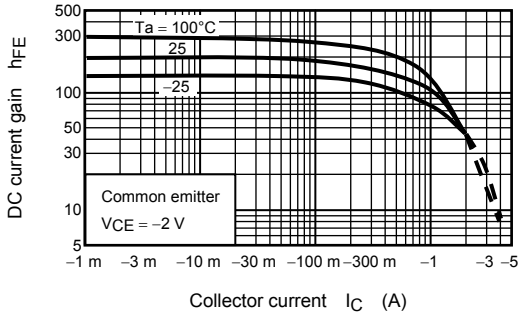
■ Typical Characterisitics

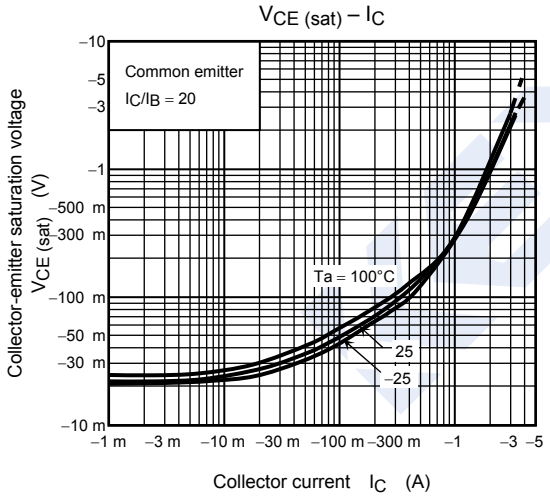
$I_C - V_{CE}$



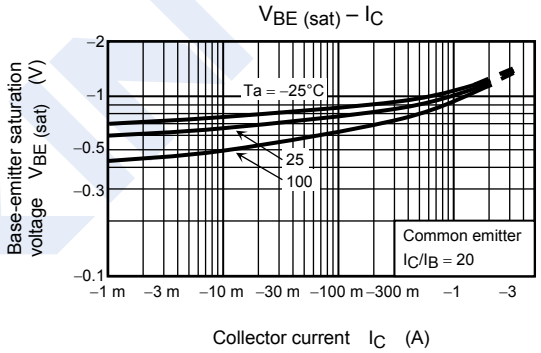
$h_{FE} - I_C$



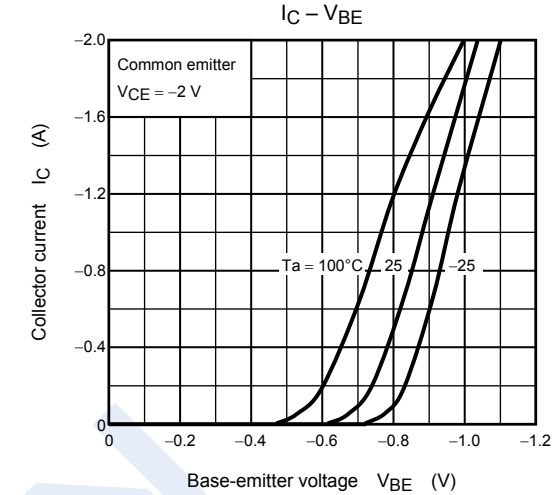
$V_{CE\ (sat)} - I_C$



$V_{BE\ (sat)} - I_C$



$I_C - V_{BE}$



Safe Operating Area