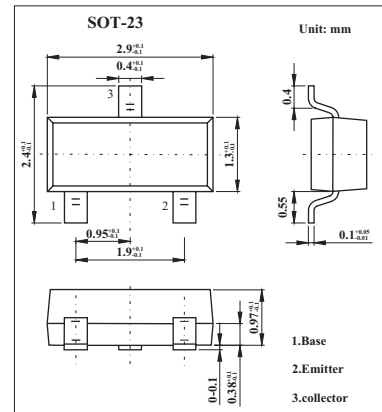


2SA1162

■ Features

- High voltage and high current: $V_{CE0} = -50\text{ V}$, $I_c = \approx 150\text{ mA}$ (max)
- Low noise: $NF = 1\text{ dB}$ (typ.), 10 dB (max)
- Small package



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

Parameter	Symbol	Rating	Unit
Collector-base voltage	V_{CBO}	-50	V
Collector-emitter voltage	V_{CEO}	-50	V
Emitter-base voltage	V_{EBO}	-5	V
Collector current	I_c	-150	mA
Base current	I_B	-30	mA
Collector power dissipation	P_C	150	mW
Junction temperature	T_j	125	$^\circ\text{C}$
Storage temperature range	T_{stg}	-55 to +125	$^\circ\text{C}$

■ Electrical Characteristics $T_a = 25^\circ\text{C}$

Parameter	Symbol	Testconditons	Min	Typ	Max	Unit
Collector cut-off current	I_{CBO}	$V_{CB} = -50\text{ V}$, $I_E = 0$			-0.1	$\mu\text{ A}$
Emitter cut-off current	I_{EBO}	$V_{EB} = -5\text{ V}$, $I_c = 0$			-0.1	$\mu\text{ A}$
DC current gain	h_{FE}	$V_{CE} = -6\text{ V}$, $I_c = -2\text{ mA}$	70		400	
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_c = -100\text{ mA}$, $I_B = -10\text{ mA}$		-0.1	-0.3	V
Collector output capacitance	C_{ob}	$V_{CB} = -10\text{ V}$, $I_E = 0$, $f = 1\text{ MHz}$		4	7	pF
Noise figure	NF	$V_{CE} = -6\text{ V}$, $I_c = -0.1\text{ mA}$, $f = 1\text{ kHz}$, $R_g = 10\text{ k}\Omega$		1.0	10	dB
Transition frequency	f_T	$V_{CE} = -10\text{ V}$, $I_c = -1\text{ mA}$	80			MHz

■ h_{FE} Classification

Marking	SO	SY	SR
Rank	O	Y	GR
h_{FE}	70~140	120~240	200~400

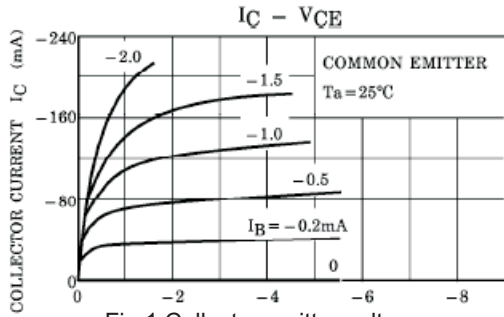


Fig.1 Collector emitter voltage

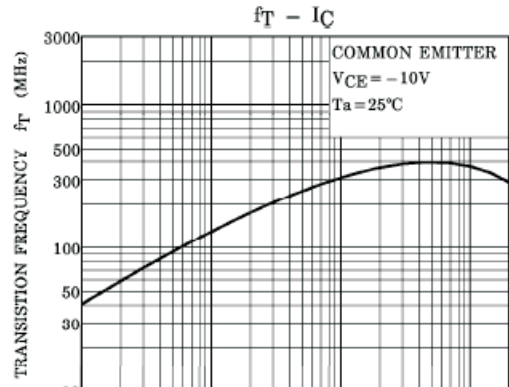


Fig.2 Collector current

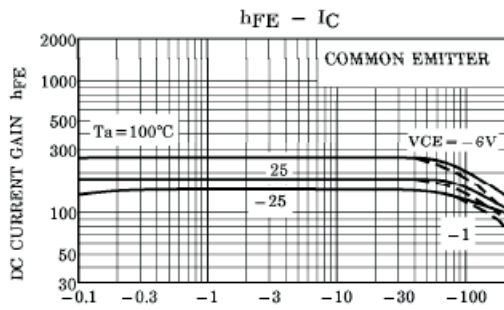


Fig.3 Collector current

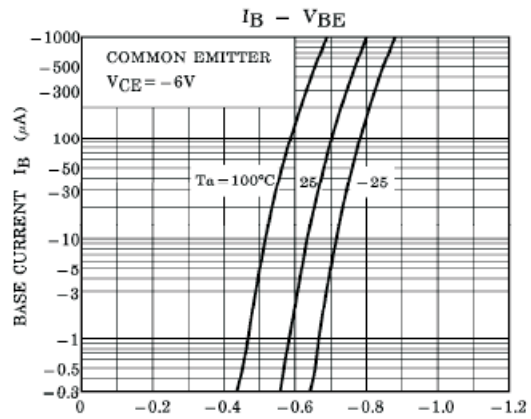


Fig.5 Base emitter voltage

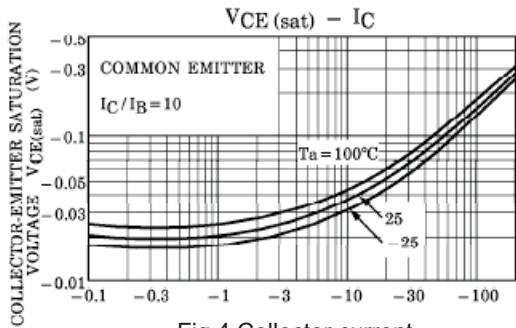


Fig.4 Collector current

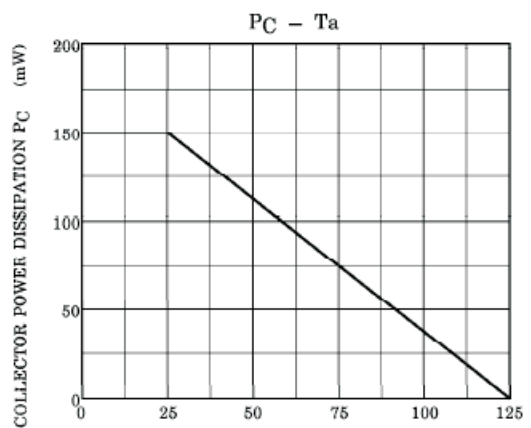


Fig.7 Ambient temperature

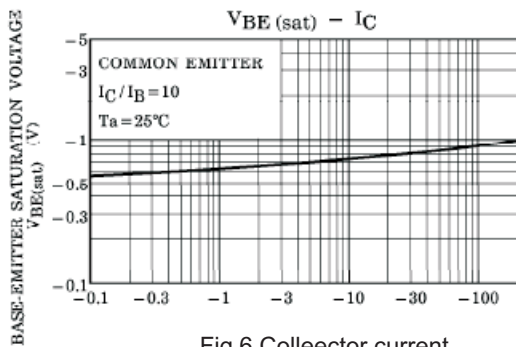


Fig.6 Collector current