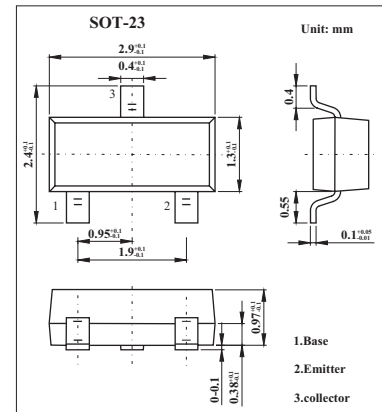


Silicon NPN Epitaxial Type Transistor

2SC2712

■ Features

- High voltage and high current: $V_{CE0} = 50\text{ V}$, $I_C = 150\text{ mA}$ (max)
- Excellent hFE linearity : $h_{FE}(I_C = 0.1\text{ mA})/h_{FE}(I_C = 2\text{ mA}) = 0.95$ (typ.)
- High hFE: $h_{FE} = 70\sim 700$
- Low noise: $NF = 1\text{ dB}$ (typ.), 10 dB (max)



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

Parameter	Symbol	Rating	Unit
Collector-base voltage	V_{CB0}	60	V
Collector-emitter voltage	V_{CE0}	50	V
Emitter-base voltage	V_{EB0}	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	Testconditions	Min	Typ	Max	Unit
Collector cut-off current	I_{CB0}	$V_{CB} = 60\text{ V}$, $I_E = 0$			0.1	$\mu\text{ A}$
Emitter cut-off current	I_{EB0}	$V_{EB} = 5\text{ V}$, $I_C = 0$			0.1	$\mu\text{ A}$
DC current gain	h_{FE}	$V_{CE} = 6\text{ V}$, $I_C = 2\text{ mA}$	70		700	
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C = 100\text{ mA}$, $I_B = 10\text{ mA}$		0.1	0.25	V
Collector output capacitance	C_{ob}	$V_{CB} = 10\text{ V}$, $I_E = 0$, $f = 1\text{ MHz}$		2	3.5	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	10	dB
Transition frequency	f_T	$V_{CE} = 10\text{ V}$, $I_C = 1\text{ mA}$	80			MHz

■ hFE Classification

Marking	LO	LY	LG	LL
Rank	O	Y	GR	BL
hFE	70~140	120~240	200~400	350~700

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■ Typical Characteristics

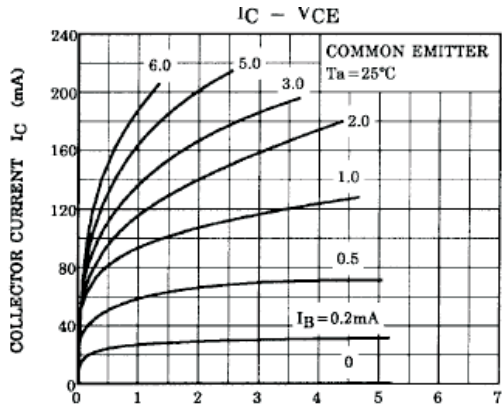


Fig.1 Collector Emitter Voltage

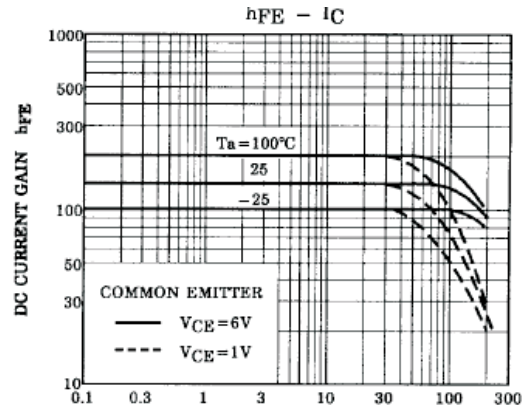


Fig.2 Collector Current

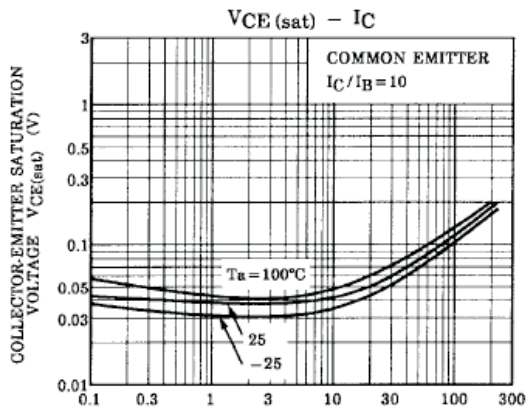


Fig.3 Collector Current

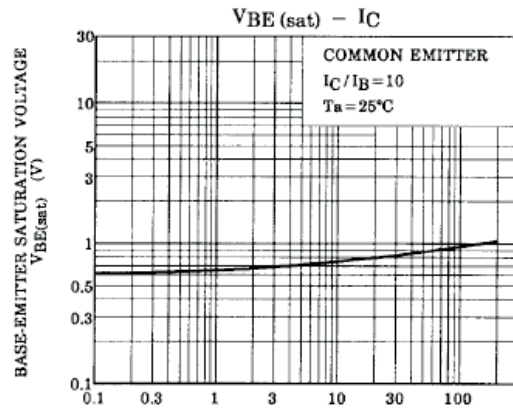


Fig.4 Collector Current

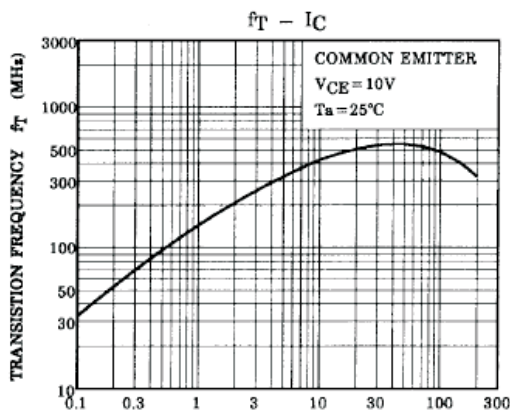


Fig.5 Collector Current

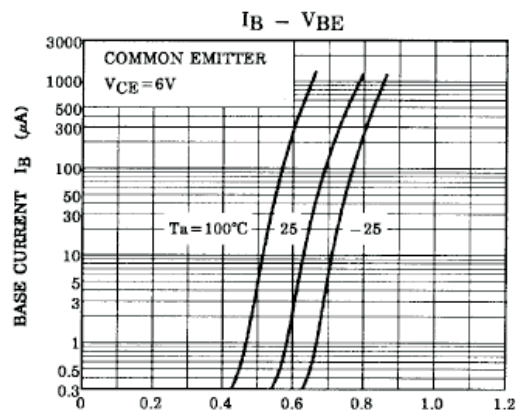


Fig.6 Base Emitter Voltage

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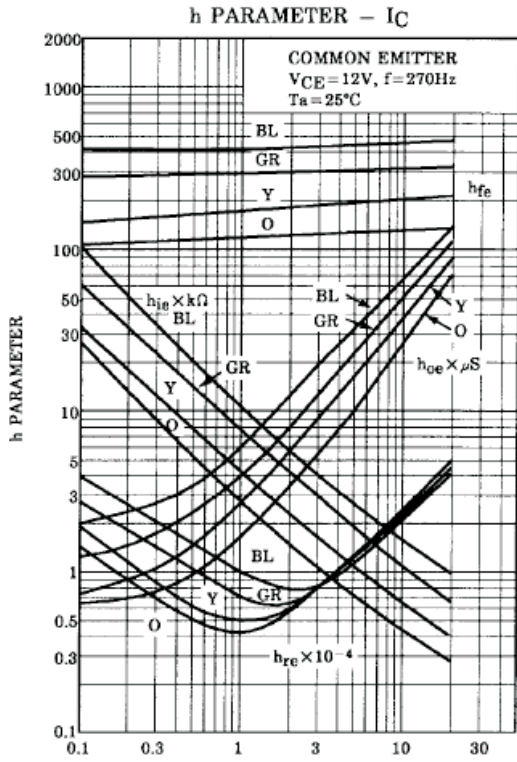


Fig.7 Collector Current

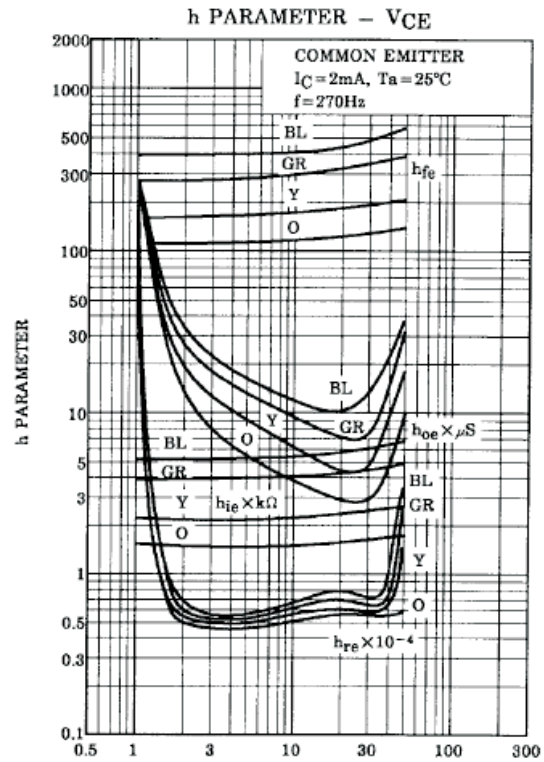


Fig.8 Collector Emitter Voltage

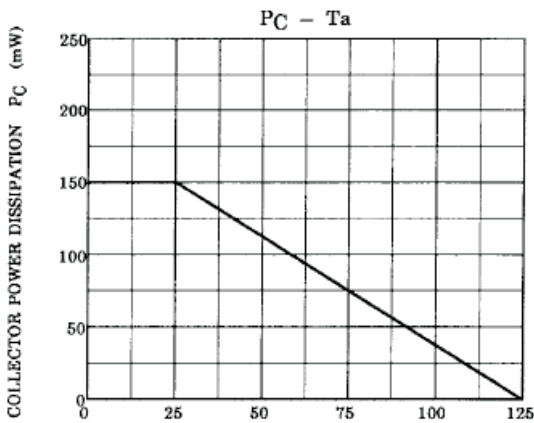


Fig.9 Ambient Temperature