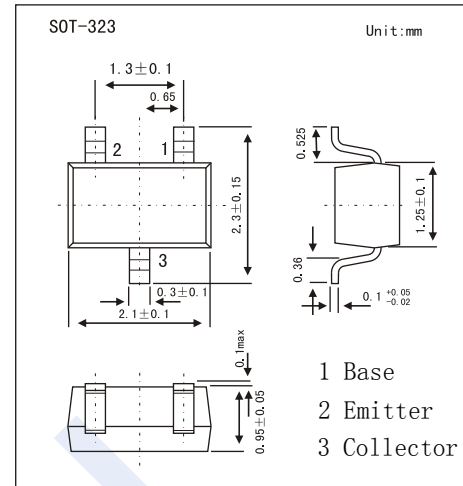


NPN Transistors

2SC4116

■ Features

- High voltage and high current
- High h_{FE} : $h_{FE} = 70 \sim 700$
- Low noise: $NF = 1\text{dB (typ.)}$, 10dB (max)
- Small package
- Complementary to 2SA1586

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

Parameter	Symbol	Rating	Unit
Collector - Base Voltage	V_{CBO}	60	V
Collector - Emitter Voltage	V_{CEO}	50	
Emitter - Base Voltage	V_{EBO}	5	
Collector Current - Continuous	I_C	150	mA
Base Current	I_B	30	
Collector Power Dissipation	P_C	100	mW
Junction Temperature	T_J	125	$^\circ\text{C}$
Storage Temperature Range	T_{stg}	-55 to 125	

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

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Collector- base breakdown voltage	V_{CBO}	$I_C = 100\text{ }\mu\text{A}$, $I_E = 0$	60			V
Collector- emitter breakdown voltage	V_{CEO}	$I_C = 1\text{ mA}$, $I_B = 0$	50			
Emitter - base breakdown voltage	V_{EBO}	$I_E = 100\text{ }\mu\text{A}$, $I_C = 0$	5			
Collector-base cut-off current	I_{CBO}	$V_{CB} = 60\text{ V}$, $I_E = 0$			0.1	μA
Emitter cut-off current	I_{EBO}	$V_{EB} = 5\text{ V}$, $I_C = 0$			0.1	
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C = 100\text{ mA}$, $I_B = 10\text{ mA}$		0.1	0.25	V
Base - emitter saturation voltage	$V_{BE(sat)}$	$I_C = 100\text{ mA}$, $I_B = 10\text{ mA}$			1.2	
DC current gain	h_{FE}	$V_{CE} = 6\text{ V}$, $I_C = 2\text{ mA}$	70		700	
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
Collector output capacitance	C_{ob}	$V_{CB} = 10\text{ V}$, $I_E = 0$, $f = 1\text{ MHz}$		2	3.5	pF
Transition frequency	f_T	$V_{CE} = 10\text{ V}$, $I_C = 1\text{ mA}$	80			MHz

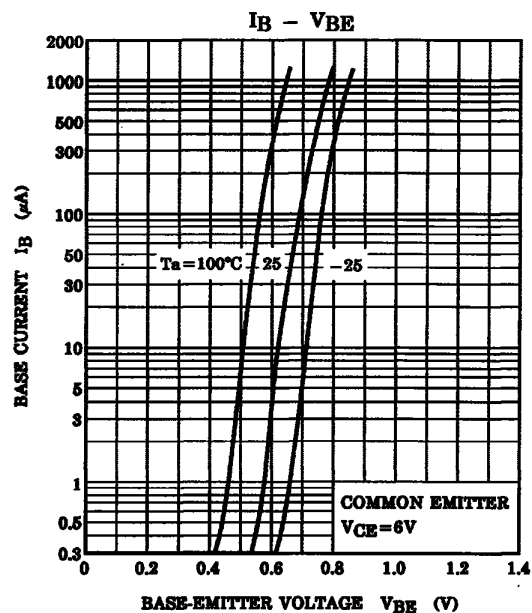
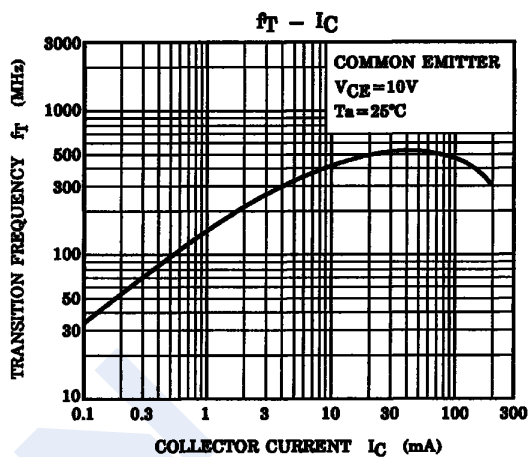
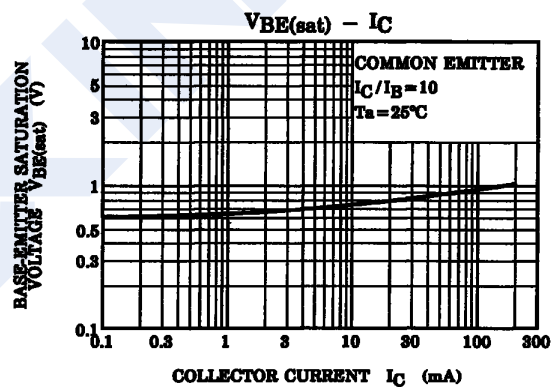
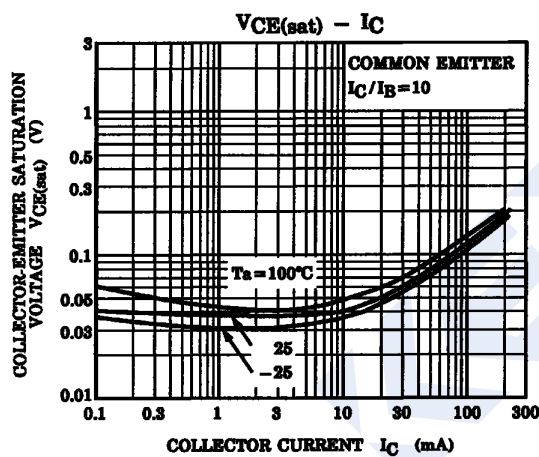
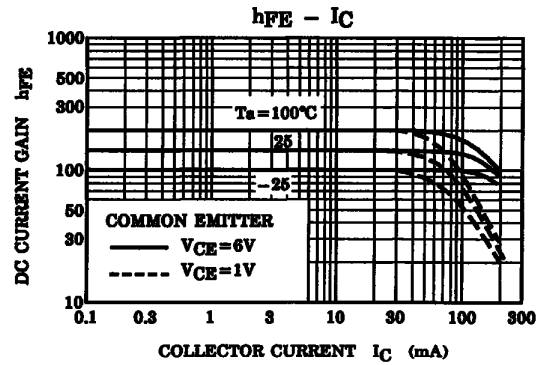
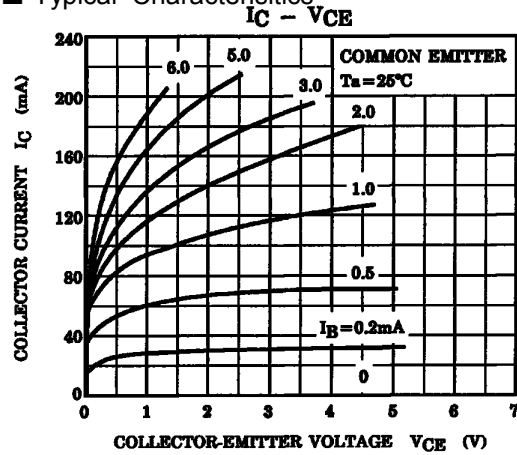
■ Classification of h_{FE}

Type	2SC4116-O	2SC4116-Y	2SC4116-G	2SC4116-L
Range	70-140	120-240	200-400	350-700
Marking	LO	LY	LG	LL

NPN Transistors

2SC4116

■ Typical Characteristics



NPN Transistors

2SC4116

■ Typical Characteristics

