Ordering number: EN485F

SANYO

No.485F

2SC2314

NPN Epitaxial Planar Silicon Transistor

27MHz CB Transceiver Driver Applications

Absolute Maximum Ratings at Ta = 25°C

				unit
Collector-to-Base Voltage	V_{CBO}	R_{BE} = 150Ω	75	V
Collector-to-Emitter Voltage	V_{CER}		75	V
Collector-to-Emitter Voltage	V_{CEO}		45	V
Emitter-to-Base Voltage	V_{EBO}		5	V
Collector Current	I_C		1.0	A
	I_{CP}		1.5	A
Collector Dissipation	P_C		750	mW
		Tc = 25°C	5	W
Junction Temperature	Tj		150	°C
Storage Temperature	Tstg		−55 to +150	°C

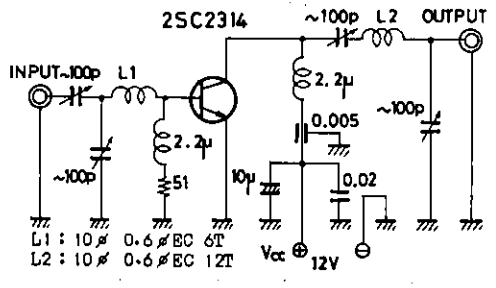
Electrical Characteristics at Ta = 25°C

			min	typ	max	unit
Collector Cutoff Current	I_{CBO}	V_{CB} = 40V, I_E = 0			1.0	μA
Emitter Cutoff Current	I_{EBO}	V_{EB} = 4V, I_C = 0			1.0	μA
C-B Breakdown Voltage	$V_{(BR)CBO}$	I_C = 10μA, I_E = 0	75			V
C-E Breakdown Voltage	$V_{(BR)CER}$	I_C = 1mA, R_{BE} = 150Ω	75			V
C-E Breakdown Voltage	$V_{(BR)CEO}$	I_C = 1mA, R_{BE} = ∞	45			V
E-B Breakdown Voltage	$V_{(BR)EBO}$	I_E = 10μA, I_C = 0	5			V
DC Current Gain	h_{FE}	V_{CE} = 5V, I_C = 500mA	60※		320※	
Gain-Bandwidth Product	f_T	V_{CE} = 10V, I_C = 50mA	180	250		MHz
Output Capacitance	Cob	V_{CB} = 10V, f = 1MHz		15	25	pF
Output Power	Po	V_{CC} = 12V, f = 27MHz, Pi = 35mW	1.0	1.8		W
Collector Efficiency	η_c	See specified Test Circuit.	60			%
C-E Saturation Voltage	$V_{CE(sat)}$	I_C = 500mA, I_B = 50mA		0.2	0.6	V
B-E Saturation Voltage	$V_{BE(sat)}$	I_C = 500mA, I_B = 50mA		0.9	1.2	V

※ : The 2SC2314 is classified by 500mA h_{FE} as follows :

60 D 120	100 E 200	160 F 320

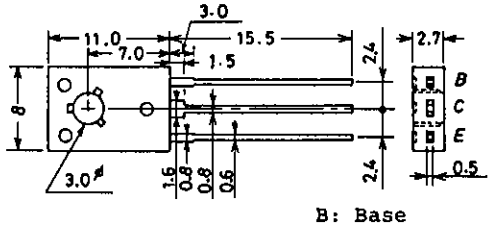
Collector Efficiency Test Circuit



Unit (Resistance : Ω, Capacitance : F)

Package Dimensions 2009A

(unit : mm)



JEDEC: TO-126

B: Base
C: Collector
E: Emitter

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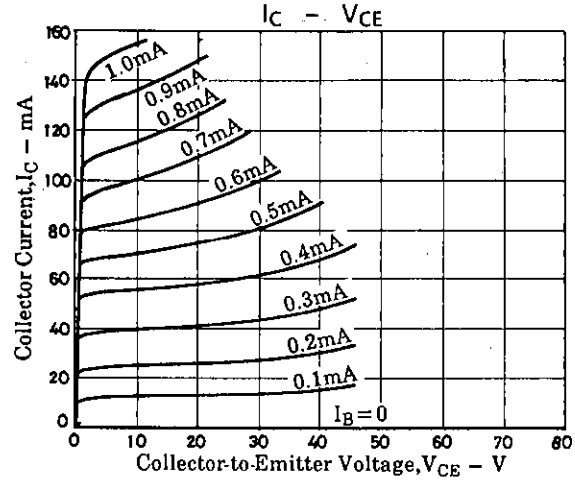
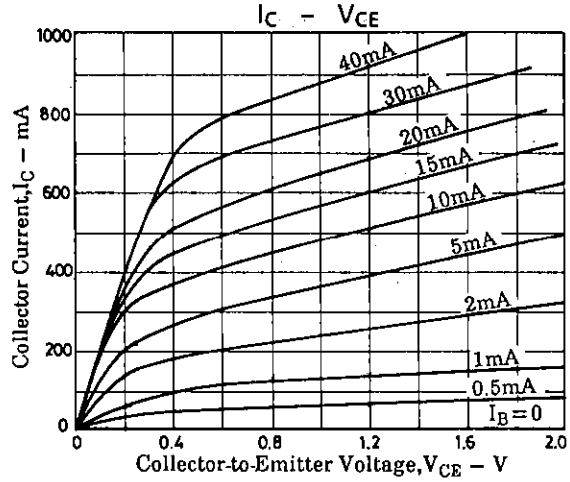
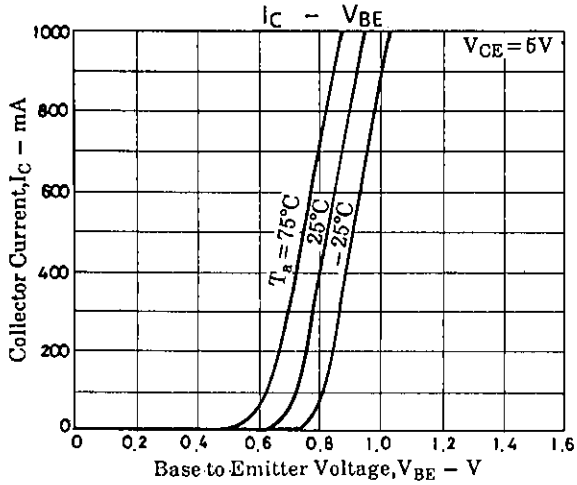
I_C – V_{CE}



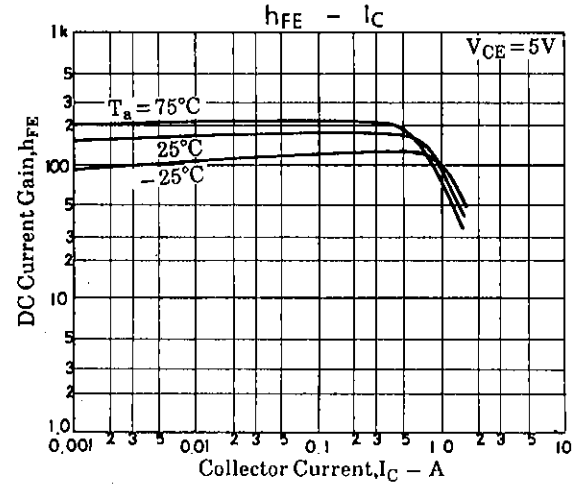
I_C – V_{CE}



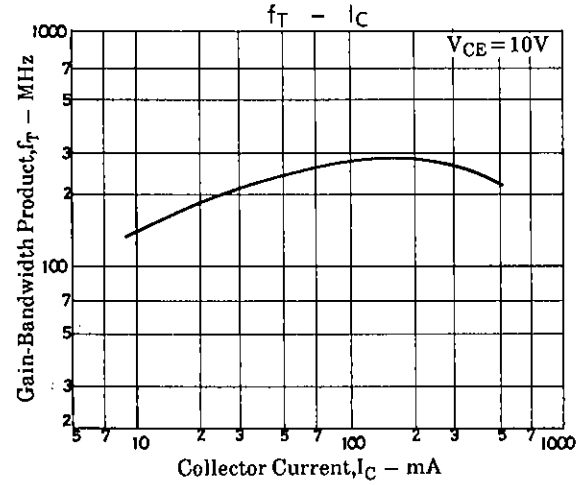
I_C – V_{BE}



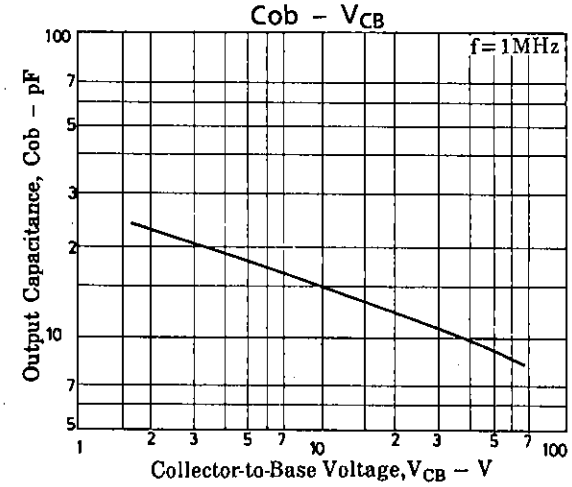
h_{FE} – I_C



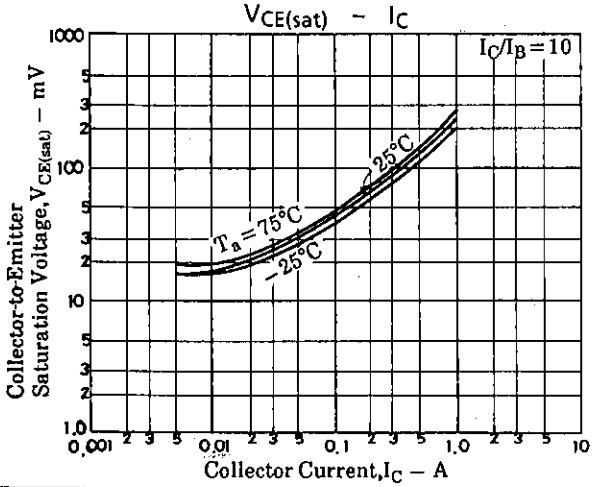
f_T – I_C



Cob – V_{CB}



$V_{CE(sat)}$ – I_C



$V_{BE(sat)}$ – I_C