



No.485F

**2SC2314**

NPN Epitaxial Planar Silicon Transistor

27MHz CB Transceiver Driver Applications

**Absolute Maximum Ratings at Ta = 25°C**

Parameter	Symbol	Condition	Value	Unit
Collector-to-Base Voltage	V <sub>CB0</sub>	R <sub>BE</sub> = 150Ω	75	V
Collector-to-Emitter Voltage	V <sub>CER</sub>		75	V
Collector-to-Emitter Voltage	V <sub>CEO</sub>		45	V
Emitter-to-Base Voltage	V <sub>EBO</sub>		5	V
Collector Current	I <sub>C</sub>		1.0	A
	I <sub>CP</sub>		1.5	A
Collector Dissipation	P <sub>C</sub>	T <sub>c</sub> = 25°C	750	mW
			5	W
Junction Temperature	T <sub>j</sub>		150	°C
Storage Temperature	T <sub>stg</sub>		-55 to +150	°C

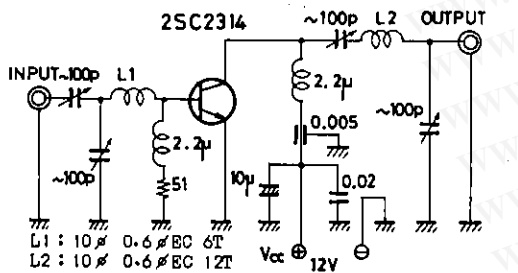
**Electrical Characteristics at Ta = 25°C**

Parameter	Symbol	Condition	min	typ	max	unit
Collector Cutoff Current	I <sub>CB0</sub>	V <sub>CB</sub> = 40V, I <sub>E</sub> = 0			1.0	μA
Emitter Cutoff Current	I <sub>EBO</sub>	V <sub>EB</sub> = 4V, I <sub>C</sub> = 0			1.0	μA
C-B Breakdown Voltage	V <sub>(BR)CBO</sub>	I <sub>C</sub> = 10μA, I <sub>E</sub> = 0	75			V
C-E Breakdown Voltage	V <sub>(BR)CER</sub>	I <sub>C</sub> = 1mA, R <sub>BE</sub> = 150Ω	75			V
C-E Breakdown Voltage	V <sub>(BR)CEO</sub>	I <sub>C</sub> = 1mA, R <sub>BE</sub> = ∞	45			V
E-B Breakdown Voltage	V <sub>(BR)EBO</sub>	I <sub>E</sub> = 10μA, I <sub>C</sub> = 0	5			V
DC Current Gain	h <sub>FE</sub>	V <sub>CE</sub> = 5V, I <sub>C</sub> = 500mA	60*		320*	
Gain-Bandwidth Product	f <sub>T</sub>	V <sub>CE</sub> = 10V, I <sub>C</sub> = 50mA	180	250		MHz
Output Capacitance	C <sub>ob</sub>	V <sub>CB</sub> = 10V, f = 1MHz		15	25	pF
Output Power	P <sub>o</sub>	V <sub>CC</sub> = 12V, f = 27MHz, P <sub>i</sub> = 35mW	1.0	1.8		W
Collector Efficiency	η <sub>c</sub>	See specified Test Circuit.	60			%
C-E Saturation Voltage	V <sub>CE(sat)</sub>	I <sub>C</sub> = 500mA, I <sub>B</sub> = 50mA		0.2	0.6	V
B-E Saturation Voltage	V <sub>BE(sat)</sub>	I <sub>C</sub> = 500mA, I <sub>B</sub> = 50mA		0.9	1.2	V

\* : The 2SC2314 is classified by 500mA h<sub>FE</sub> as follows :

60	D	120	100	E	200	160	F	320
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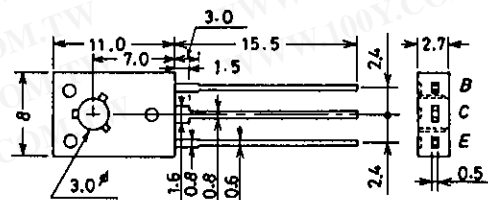
**Collector Efficiency Test Circuit**



Unit (Resistance : Ω, Capacitance : F)

**Package Dimensions 2009A**

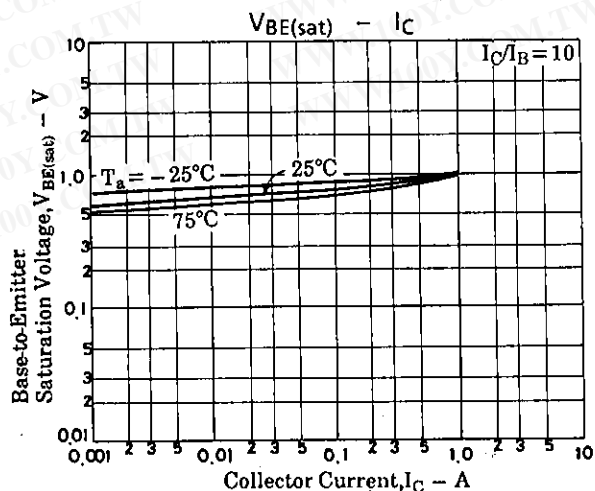
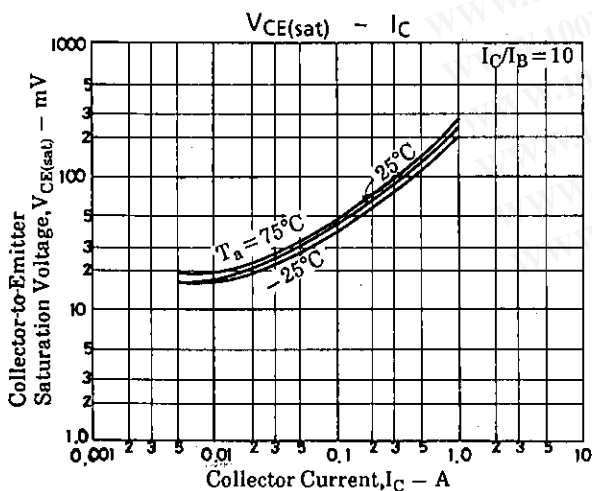
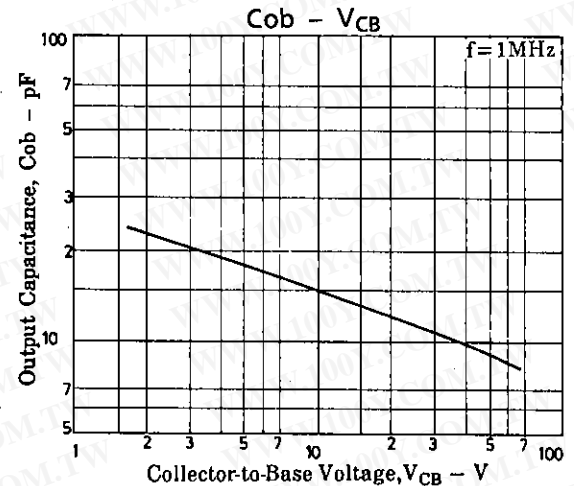
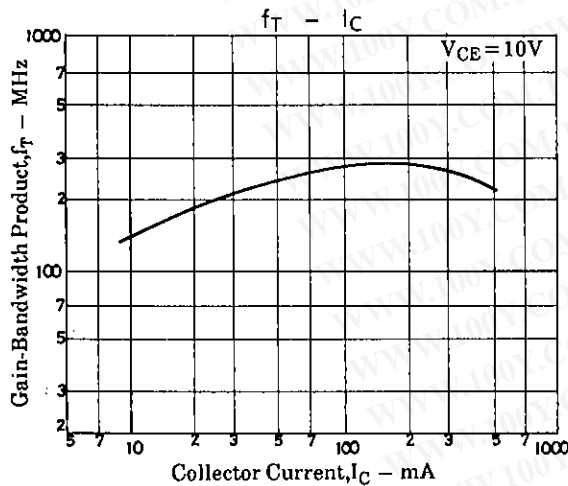
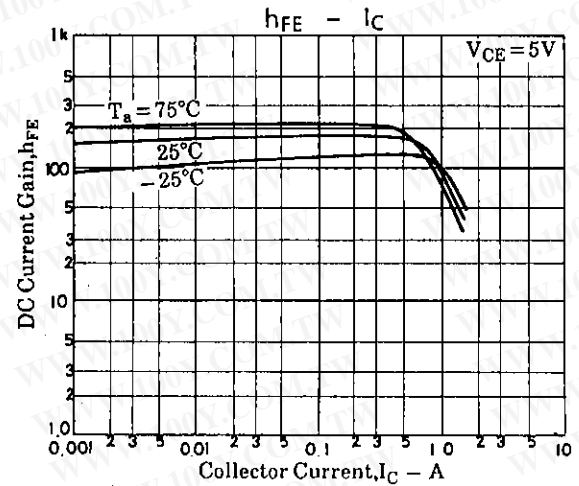
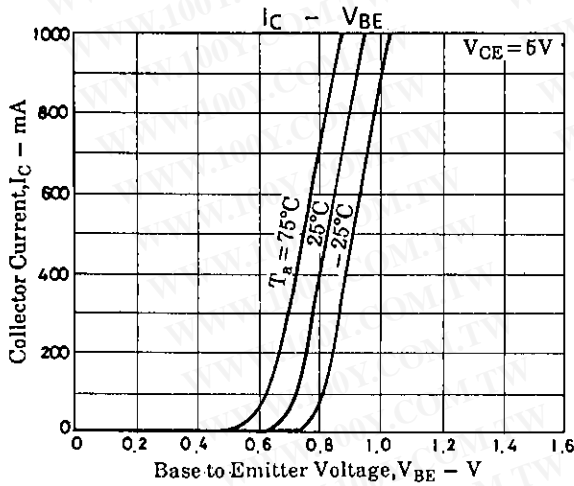
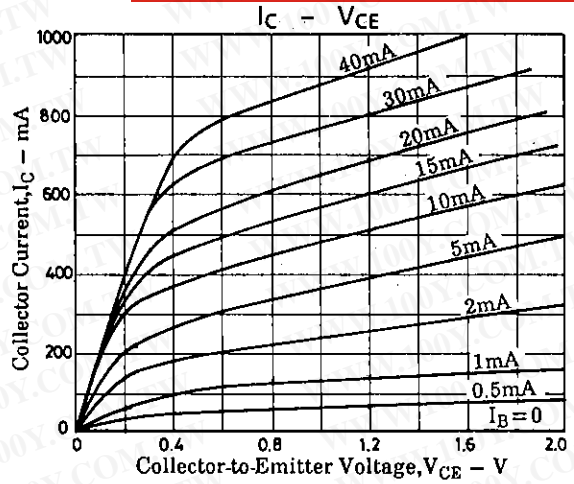
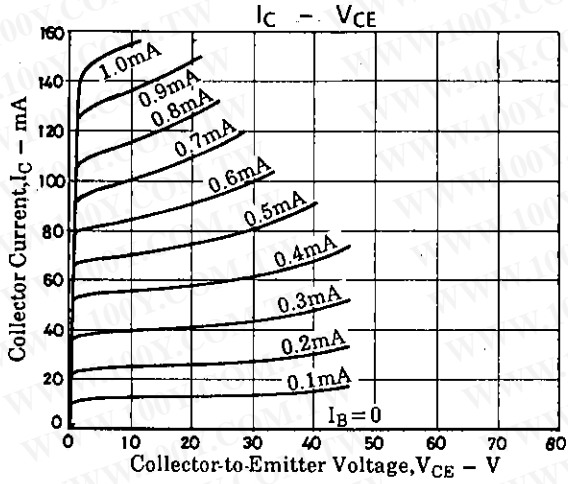
(unit : mm)

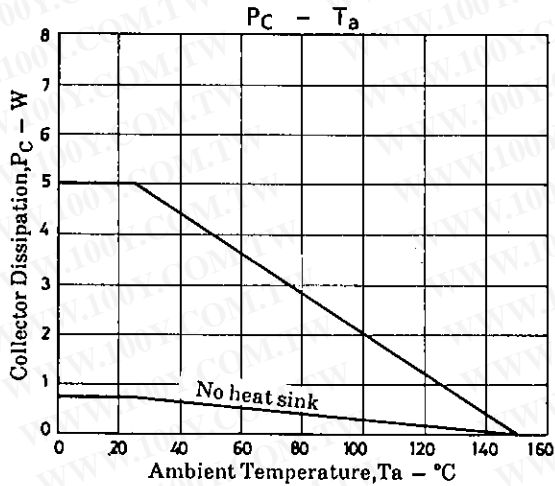


JEDEC: TO-126

B: Base  
 C: Collector  
 E: Emitter

2SC2314





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