Ordering number : ENN6963

PNP / NPN Epitaxial Planar Silicon Transistors

EC3101C / EC3201C

Low-Frequency General-Purpose Amplifier Applications

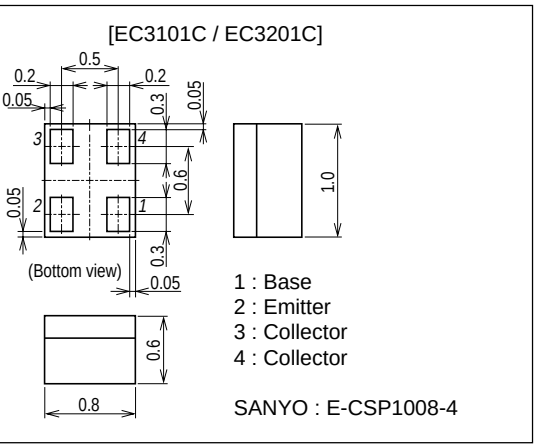
Features

- Ultraminiature package facilitates miniaturization in end products.

Package Dimensions

unit : mm

2184



Specifications

( ) : EC3101C

Absolute Maximum Ratings at Ta=25°C

Parameter	Symbol	Conditions	Ratings	Unit
Collector-to-Base Voltage	V_{CBO}		(-)55	V
Collector-to-Emitter Voltage	V_{CEO}		(-)50	V
Emitter-to-Base Voltage	V_{EBO}		(-)6	V
Collector Current	I_C		(-)150	mA
Collector Current (Pulse)	I_{CP}		(-)300	mA
Base Current	I_B		(-)30	mA
Collector Dissipation	P_C		150	mW
Junction Temperature	Tj		150	°C
Storage Temperature	Tstg		-55 to +150	°C

Electrical Characteristics at Ta=25°C

Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Collector Cutoff Current	I_{CBO}	V_{CB}=(-)35V, I_E=0			(-)0.1	μA
Emitter Cutoff Current	I_{EBO}	V_{EB}=(-)4V, I_C=0			(-)0.1	μA
DC Current Gain	h_{FE}	V_{CE}=(-)6V, I_C=(-)1mA	200		600	
Gain-Bandwidth Product	f_T	V_{CE}=(-)6V, I_C=(-)10mA		(180)200		MHz
Output Capacitance	Cob	V_{CB}=(-)6V, f=1MHz		(2.9)1.7		pF

Marking EC3101C : G
EC3201C : H

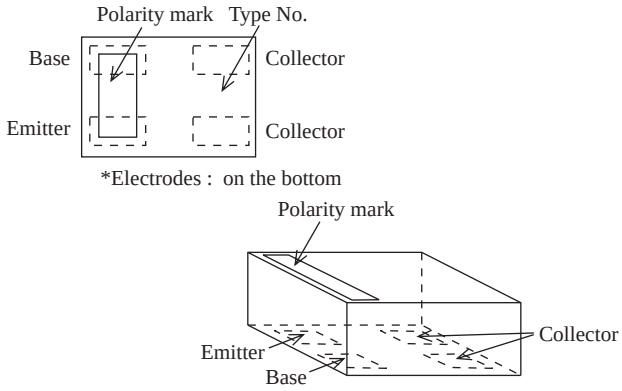
Continued on next page.

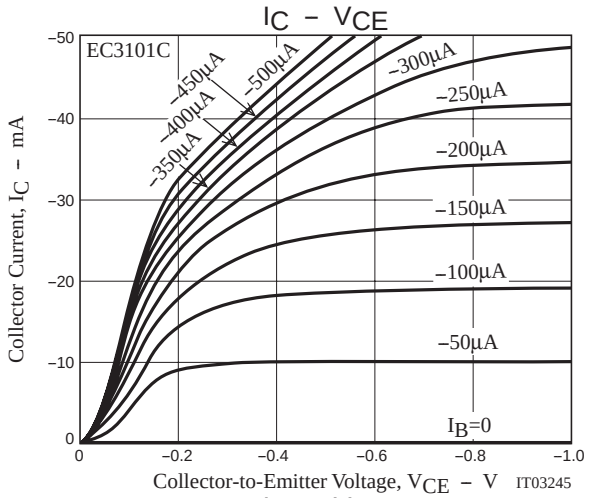
SANYO Electric Co.,Ltd. Semiconductor Company
TOKYO OFFICE Tokyo Bldg., 1-10, 1 Chome, Ueno, Taito-ku, TOKYO, 110-8534 JAPAN

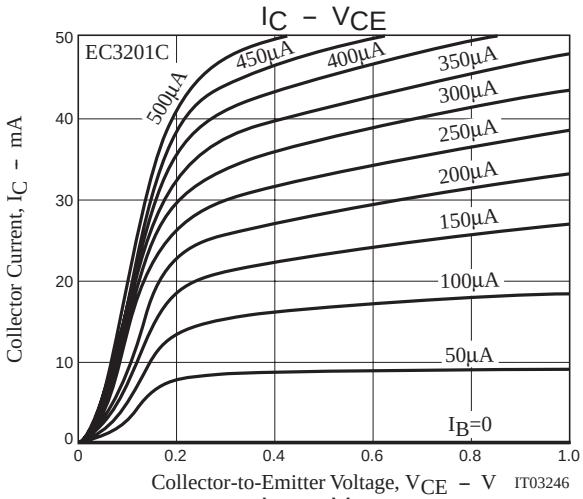
Continued from preceding page.

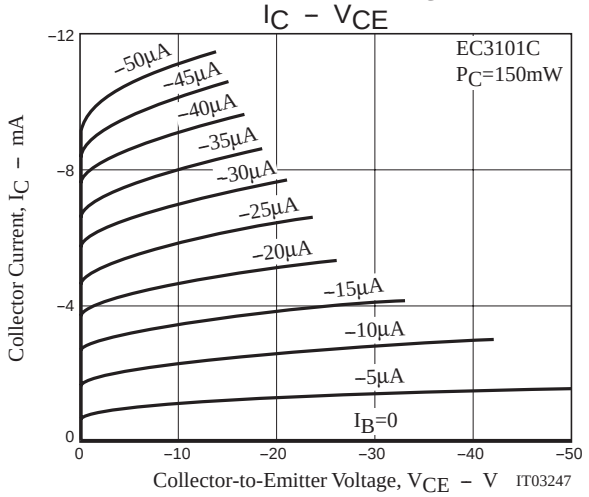
Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Collector-to-Emitter Saturation Voltage	VCE(sat)	IC=(–)50mA, IB=(–)5mA		(-0.12)0.08	(–)0.4	V
Base-to-Emitter Saturation Voltage	V_{BE}(sat)	I_C=(–)50mA, I_B=(–)5mA		(–)0.8	(–)1.0	V
Collector-to-Base Breakdown Voltage	$V_{(BR)CBO}$	I_C=(–)10μA, I_E=0	(–)55			V
Collector-to-Emitter Breakdown Voltage	$V_{(BR)CEO}$	I_C=(–)1mA, R_{BE}=∞	(–)50			V
Emitter-to-Base Breakdown Voltage	$V_{(BR)EBO}$	I_E=(–)10μA, I_C=0	(–)6			V

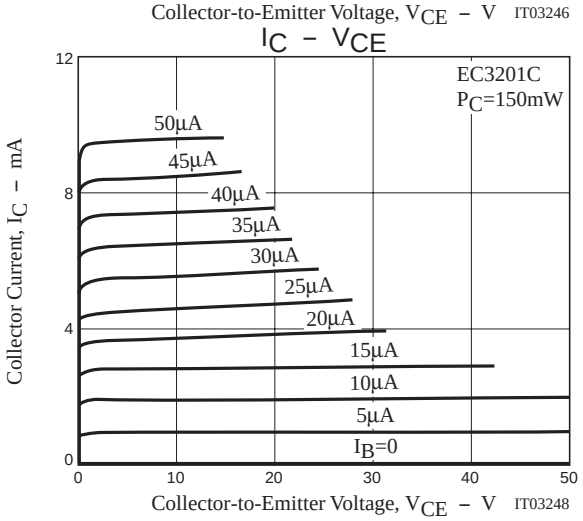
Electrical Connection (Top view)

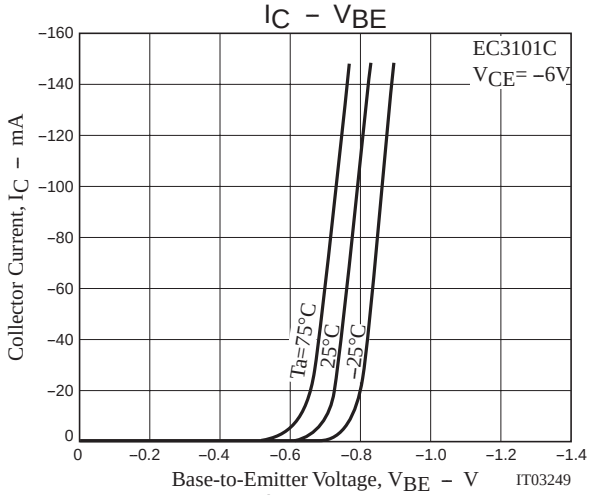


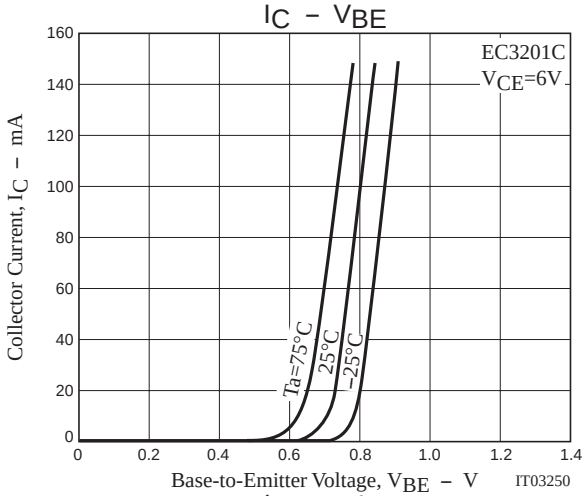


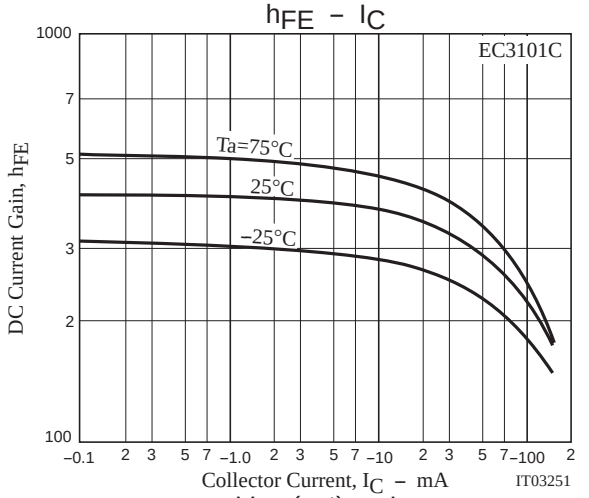


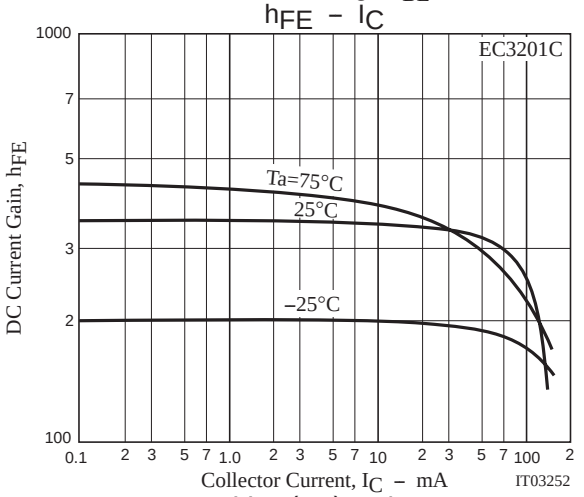


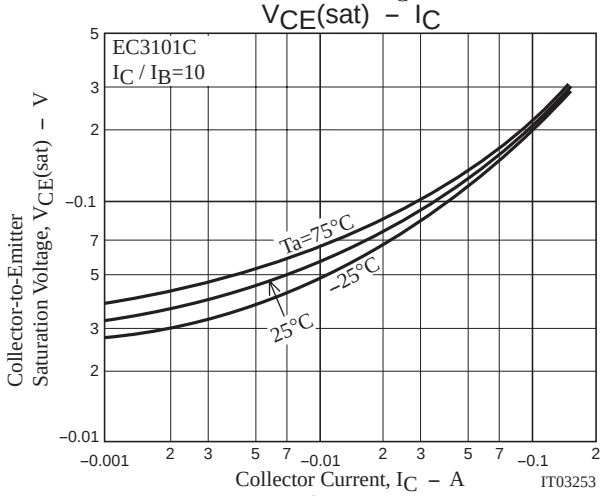


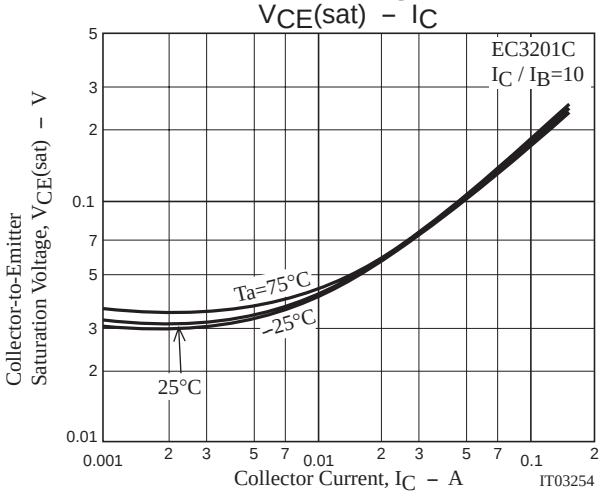

IC – VBE
EC3101C
VCE= –6V
Collector Current, IC – mA
Ta=75°C
25°C
–25°C
Base-to-Emitter Voltage, VBE – V
IT03249

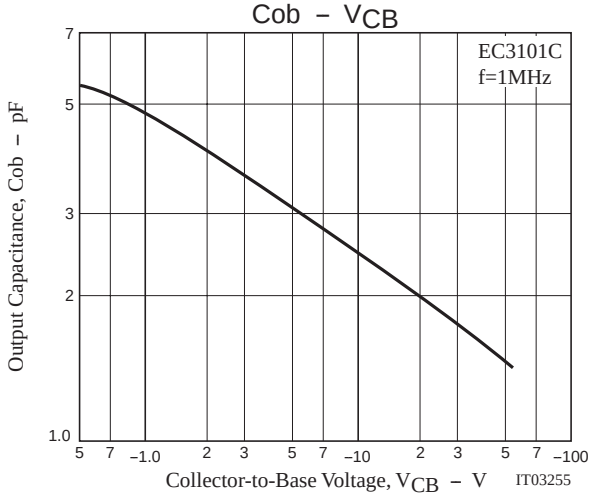

IC – VBE
EC3201C
VCE=6V
Collector Current, IC – mA
Ta=75°C
25°C
–25°C
Base-to-Emitter Voltage, VBE – V
IT03250

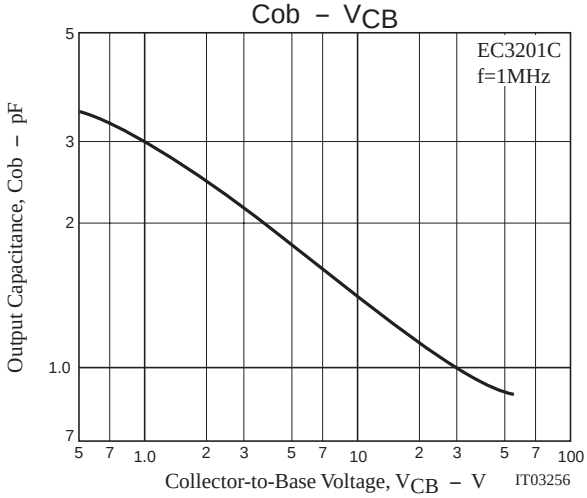

hFE – IC
EC3101C
DC Current Gain, hFE
Ta=75°C
25°C
–25°C
Collector Current, IC – mA
IT03251


hFE – IC
EC3201C
DC Current Gain, hFE
Ta=75°C
25°C
–25°C
Collector Current, IC – mA
IT03252


VCE(sat) – IC
EC3101C
IC / IB=10
Collector-to-Emitter Saturation Voltage, VCE(sat) – V
Ta=75°C
25°C
–25°C
Collector Current, IC – A
IT03253


VCE(sat) – IC
EC3201C
IC / IB=10
Collector-to-Emitter Saturation Voltage, VCE(sat) – V
Ta=75°C
25°C
–25°C
Collector Current, IC – A
IT03254


Cob – VCB
EC3101C
f=1MHz
Output Capacitance, Cob – pF
Collector-to-Base Voltage, VCB – V
IT03255


Cob – VCB
EC3201C
f=1MHz
Output Capacitance, Cob – pF
Collector-to-Base Voltage, VCB – V
IT03256