Ordering number:EN1856A

PNP Epitaxial Planar Silicon Transistor

2SA1435

High h_{FE}, AF Amplifier Applications

Applications

· Low frequency general-purpose amplifiers, drivers, muting circuits.

Features

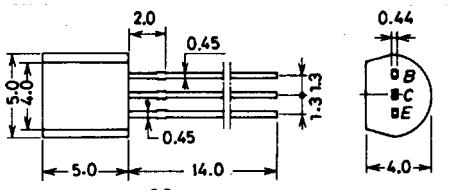
· Adoption of MBIT process.
· High DC current gain (h_{FE}=500 to 1200).
· Large current capacity.
· Low colletor-to-emitter saturation voltage ($V_{CE(sat)}$≤0.5V max).
· High V_{EBO} (V_{EBO}≥15V).

Package Dimensions

unit:mm

2003A

[2SA1435]



JEDEC : TO-92 B : Base
EIAJ : SC-43 C : Collector
SANYO : NP E : Emitter

Specifications

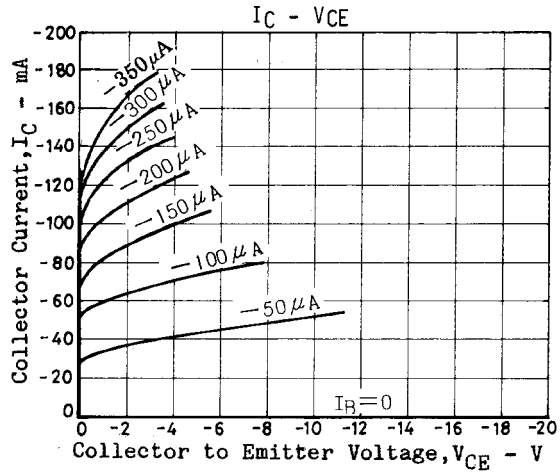
Absolute Maximum Ratings at Ta = 25˚C

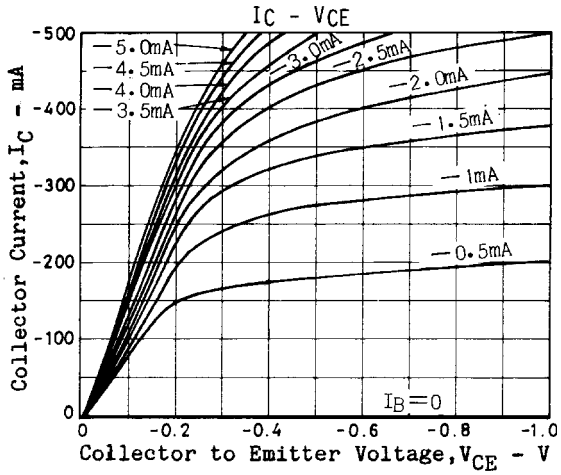
Parameter	Symbol	Conditions	Ratings	Unit
Collector-to-Base Voltage	V_{CBO}		–30	V
Collector-to-Emitter Voltage	V_{CEO}		–25	V
Emitter-to-Base Voltage	V_{EBO}		–15	V
Collector Current	I_C		–300	mA
Collector Current (Pulse)	I_{CP}		–500	mA
Collector Dissipation	P_C		600	mW
Junction Temperature	Tj		150	˚C
Storage Temperature	Tstg		–55 to +150	˚C

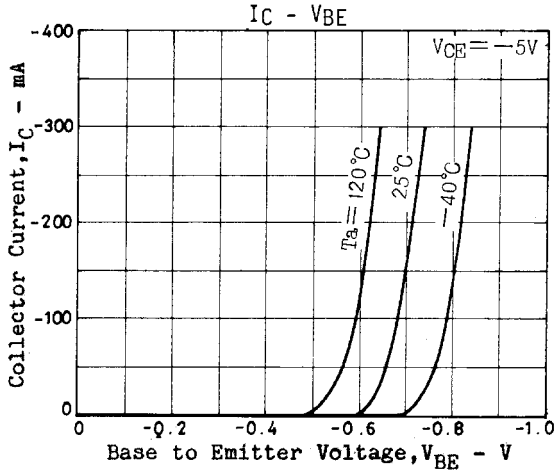
Electrical Characteristics at Ta = 25˚C

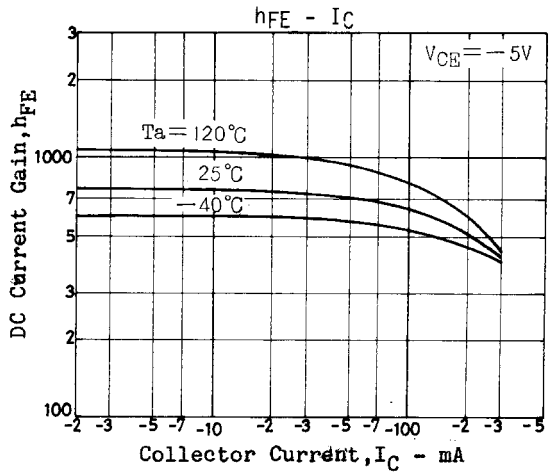
Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Collector Cutoff Current	I_{CBO}	V_{CB}=–40V, I_E=0			–0.1	μA
Emitter Cutoff Current	I_{EBO}	V_{EB}=–10V, I_C=0			–0.1	μA
DC Current Gain	$h_{FE}1$	V_{CE}=–5V, I_C=–10mA	500	800	1200	
	$h_{FE}2$	V_{CE}=–5V, I_C=–200mA	200			
Gain-Bandwidth Product	f_T	V_{CE}=–10V, I_C=–10mA		100		MHz
Output Capacitance	C_{ob}	V_{CB}=–10V, f=1MHz		7.5		pF
Collector-to-Emitter Saturation Voltage	$V_{CE(sat)}$	I_C=–100mA, I_B=–4mA		–0.2	–0.5	V
Base-to-Emitter Saturation Voltage	$V_{BE(sat)}$	I_C=–100mA, I_B=–4mA		–0.75	–1.1	V
Collector-to-Base Breakdown Voltage	$V_{(BR)CBO}$	I_C=–10μA, I_E=0	–60			V
Collector-to-Emitter Breakdown Voltage	$V_{(BR)CEO}$	I_C=–1mA, R_{BE}=∞	–50			V
Emitter-to-Base Breakdown Votage	$V_{(BR)EBO}$	I_E=–10μA, I_C=0	–15			V

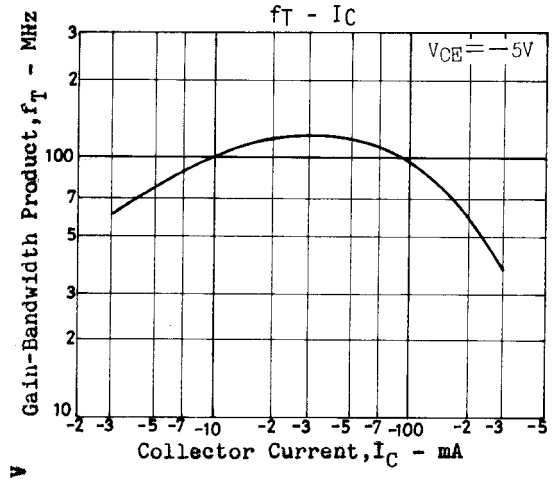
SANYO Electric Co.,Ltd. Semiconductor Bussiness Headquaters
TOKYO OFFICE Tokyo Bldg., 1-10, 1 Chome, Ueno, Taito-ku, TOKYO, 110-8534 JAPAN

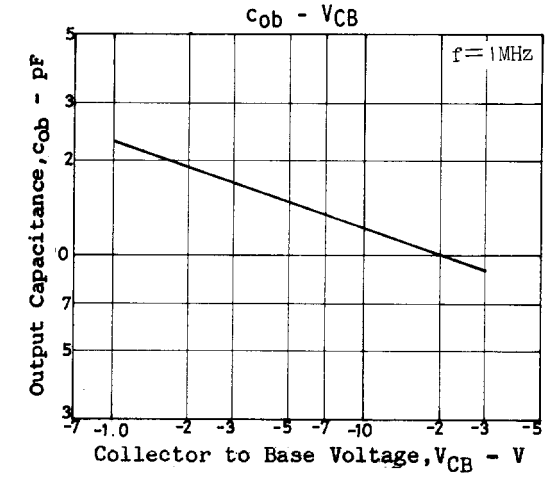

I_C - V_{CE}
Collector Current, I_C - mA
Collector to Emitter Voltage, V_{CE} - V
I_B=0
-350μA
-300μA
-250μA
-200μA
-150μA
-100μA
-50μA

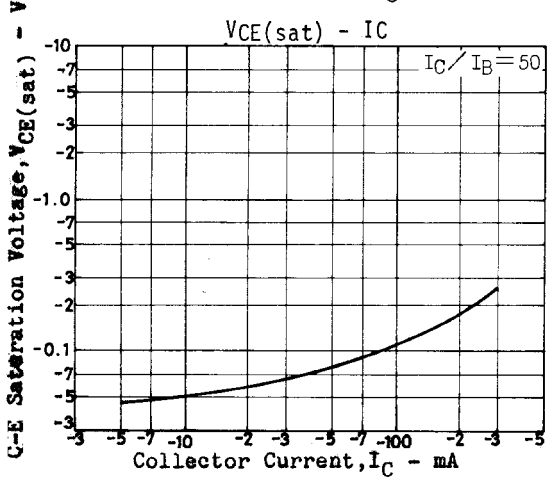

I_C - V_{CE}
Collector Current, I_C - mA
Collector to Emitter Voltage, V_{CE} - V
I_B=0
-5.0mA
-4.5mA
-4.0mA
-3.5mA
-3.0mA
-2.5mA
-2.0mA
-1.5mA
-1mA
-0.5mA

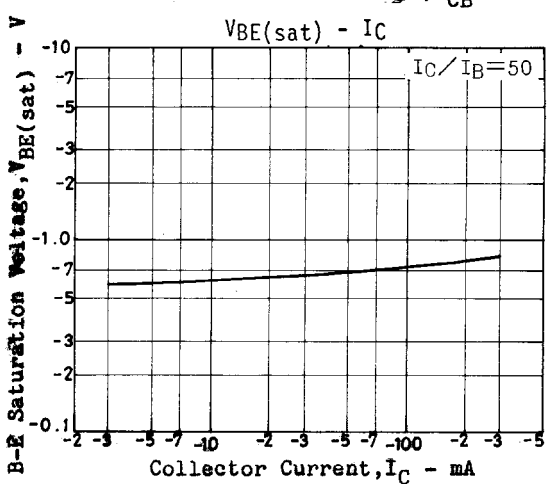

I_C - V_{BE}
Collector Current, I_C - mA
Base to Emitter Voltage, V_{BE} - V
V_{CE}=-5V
Ta=120°C
25°C
-40°C


h_{FE} - I_C
DC Current Gain, h_{FE}
Collector Current, I_C - mA
V_{CE}=-5V
Ta=120°C
25°C
-40°C


f_T - I_C
Gain-Bandwidth Product, f_T - MHz
Collector Current, I_C - mA
V_{CE}=-5V


C_{ob} - V_{CB}
Output Capacitance, C_{ob} - pF
Collector to Base Voltage, V_{CB} - V
f=1MHz


$V_{CE(sat)}$ - I_C
C-E Saturation Voltage, $V_{CE(sat)}$ - V
Collector Current, I_C - mA
I_C/I_B=50


$V_{BE(sat)}$ - I_C
B-E Saturation Voltage, $V_{BE(sat)}$ - V
Collector Current, I_C - mA
I_C/I_B=50