Ordering number: EN 1413C

SANYO

No.1413C

2SA1371/2SC3468

PNP/NPN Epitaxial Planar Silicon Transistors

High-Definition CRT Display, Video Output Applications

Use

- Color TV chroma output and high breakdown voltage driver

Features

- High breakdown voltage: $V_{CEO} \geqq 300V$
- Small reverse transfer capacitance and excellent high frequency characteristic
  C_{re}=1.8pF(NPN), 2.3pF(PNP)
- Adoption of MBIT process

( ): 2SA1371

Absolute Maximum Ratings at Ta=25°C

			unit
Collector-to-Base Voltage	V_{CBO}	(-)300	V
Collector-to-Emitter Voltage	V_{CEO}	(-)300	V
Emitter-to-Base Voltage	V_{EBO}	(-)5	V
Collector Current	I_C	(-)100	mA
Collector Current(Pulse)	I_{CP}	(-)200	mA
Collector Dissipation	PC	1.0	W
Junction Temperature	Tj	150	°C
Storage Temperature	T_{stg}	-55 to +150	°C

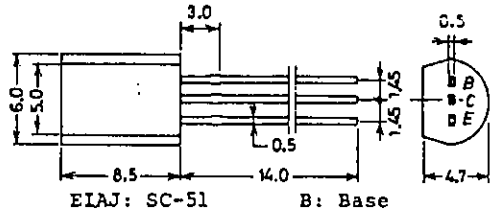
Electrical Characteristics at Ta=25°C

			min	typ	max	unit
Collector Cutoff Current	I_{CBO}	V_{CB}=(-)200V, 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}=(-)10V, I_C=(-)10mA	40*		320*	
Gain-Bandwidth Product	f_T	V_{CE}=(-)30V, I_C=(-)10mA		150		MHz
C-E Saturation Voltage	$V_{CE(sat)}$	I_C=(-)20mA, I_B=(-)2mA			(-)0.6	V
B-E Saturation Voltage	$V_{BE(sat)}$	I_C=(-)20mA, I_B=(-)2mA			(-)1.0	V
C-B Breakdown Voltage	$V_{(BR)CBO}$	I_C=(-)10μA, I_E=0	(-)300			V
C-E Breakdown Voltage	$V_{(BR)CEO}$	I_C=(-)1mA, R_{BE}=∞	(-)300			V
E-B Breakdown Voltage	$V_{(BR)EBO}$	I_E=(-)10μA, I_C=0	(-)5			V
Output Capacitance	cob	V_{CB}=(-)30V, f=1MHz		2.6 (3.1)		pF
Reverse Transfer Capacitance	C_{re}	V_{CB}=(-)30V, f=1MHz		1.8 (2.3)		pF

* : The 2SA1371/2SC3468 are classifed by 10mA h_{FE} as follows:

40 C 80	60 D 120	100 E 200	160 F 320

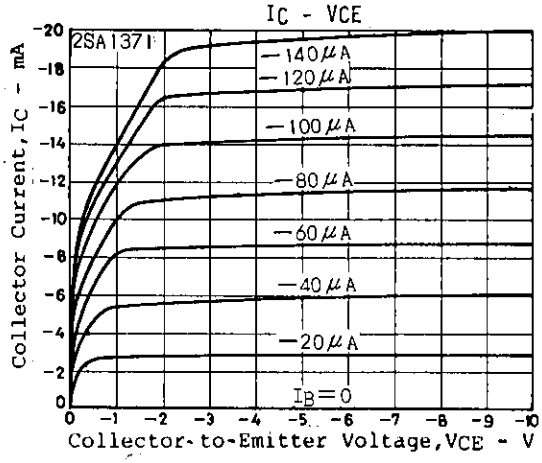
Package Dimensions
(unit: mm) 2006A

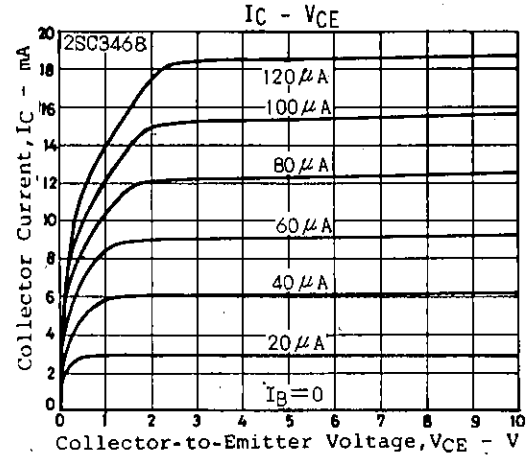


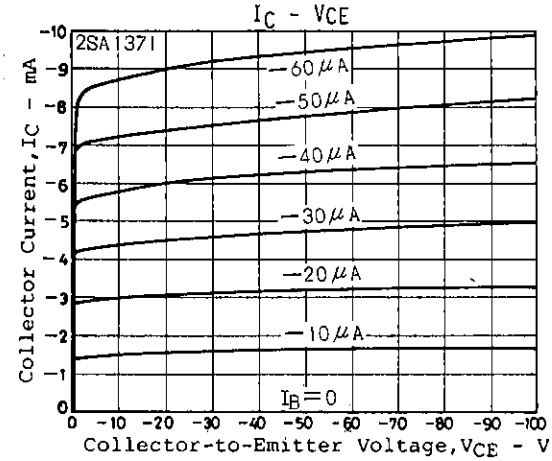
EIAJ: SC-51
SANYO: MP

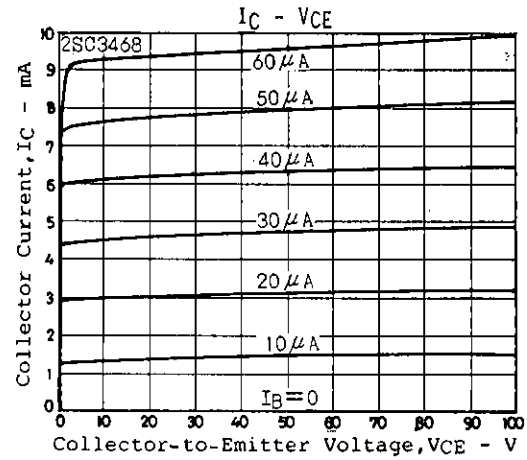
B: Base
C: Collector
E: Emitter

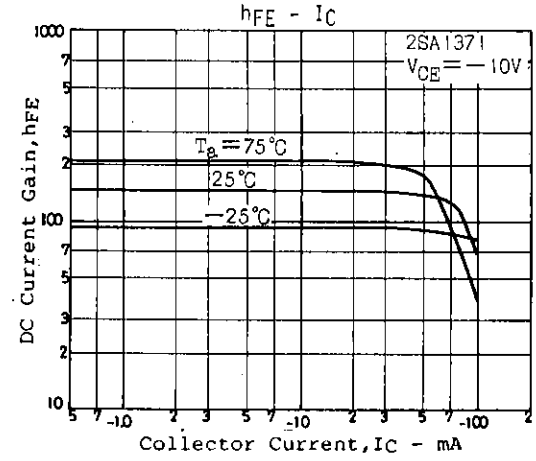
SANYO Electric Co.,Ltd. Semiconductor Business Headquarters
TOKYO OFFICE Tokyo Bldg., 1-10, 1 Chome, Ueno, Taito-ku, TOKYO, 110 JAPAN

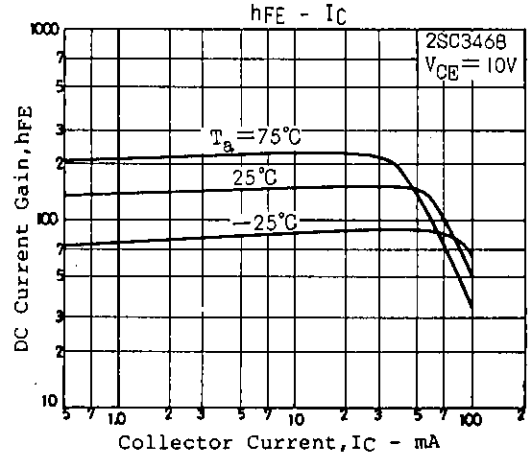

IC - VCE
2SA1371
−140μA
−120μA
−100μA
−80μA
−60μA
−40μA
−20μA
IB=0
Collector Current, IC - mA
Collector-to-Emitter Voltage, VCE - V

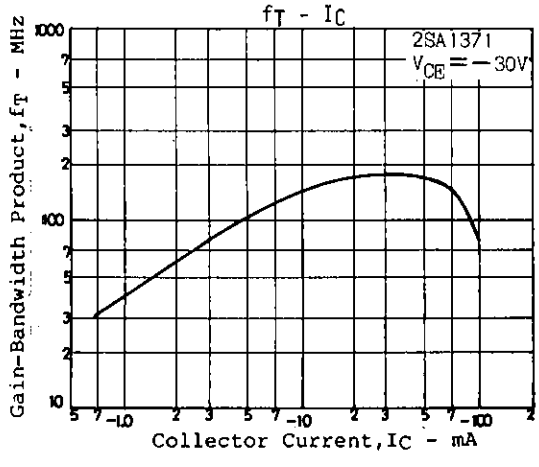

IC - VCE
2SC3468
120μA
100μA
80μA
60μA
40μA
20μA
IB=0
Collector Current, IC - mA
Collector-to-Emitter Voltage, VCE - V

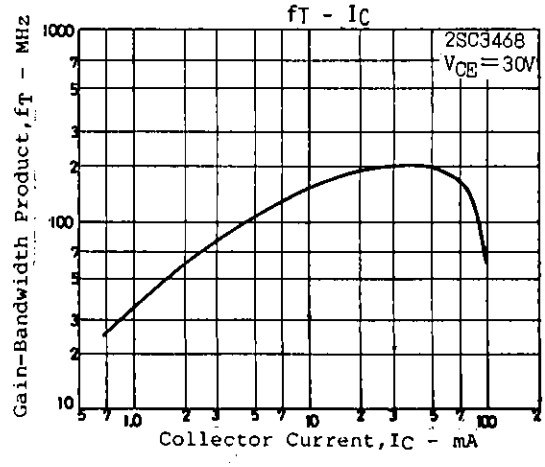

IC - VCE
2SA1371
−60μA
−50μA
−40μA
−30μA
−20μA
−10μA
IB=0
Collector Current, IC - mA
Collector-to-Emitter Voltage, VCE - V

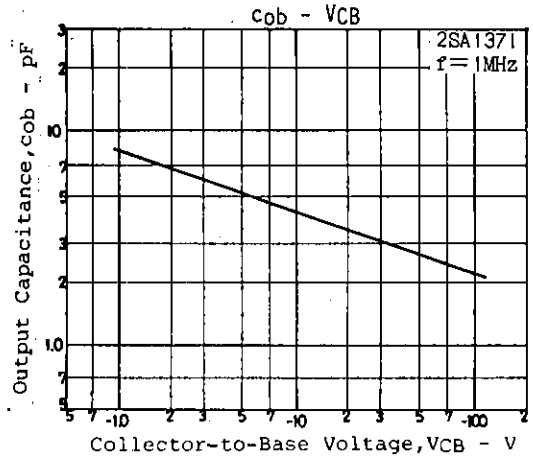

IC - VCE
2SC3468
60μA
50μA
40μA
30μA
20μA
10μA
IB=0
Collector Current, IC - mA
Collector-to-Emitter Voltage, VCE - V

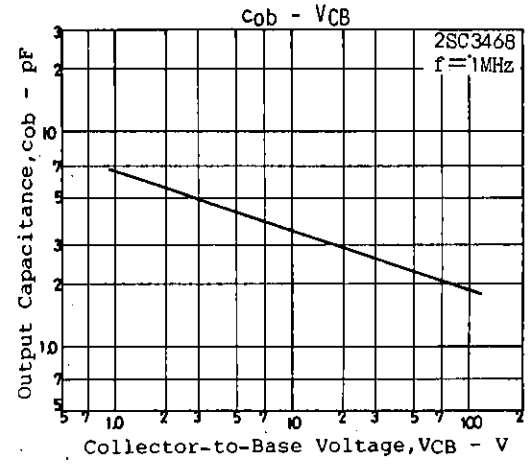

hFE - IC
2SA1371
VCE=−10V
Ta=75°C
25°C
−25°C
DC Current Gain, hFE
Collector Current, IC - mA

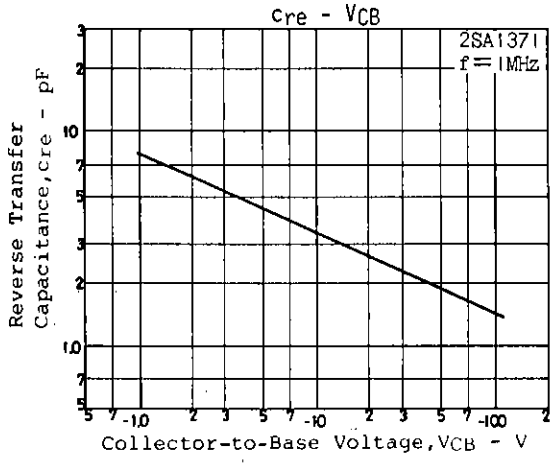

hFE - IC
2SC3468
VCE=10V
Ta=75°C
25°C
−25°C
DC Current Gain, hFE
Collector Current, IC - mA

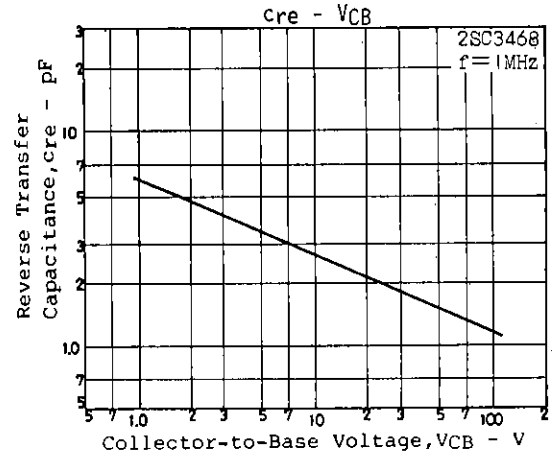

fT - IC
2SA1371
VCE=−30V
Gain-Bandwidth Product, fT - MHz
Collector Current, IC - mA

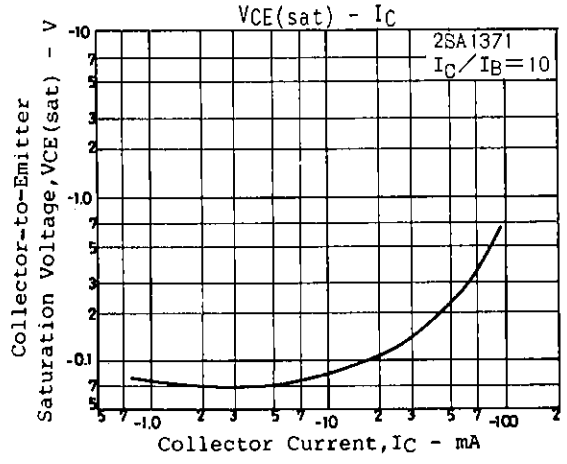

fT - IC
2SC3468
VCE=30V
Gain-Bandwidth Product, fT - MHz
Collector Current, IC - mA

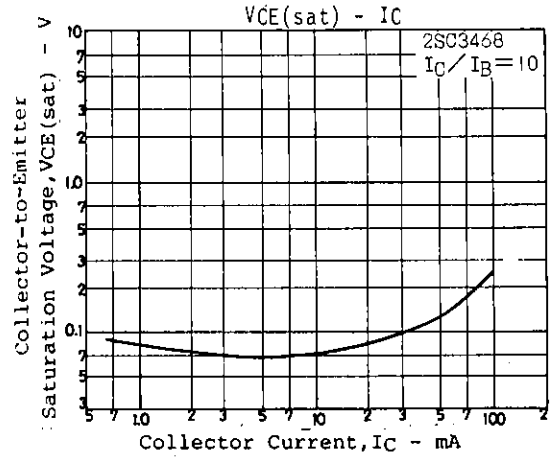

Cob - VCB
2SA1371
f=1MHz
Output Capacitance,Cob - pF
Collector-to-Base Voltage,VCB - V

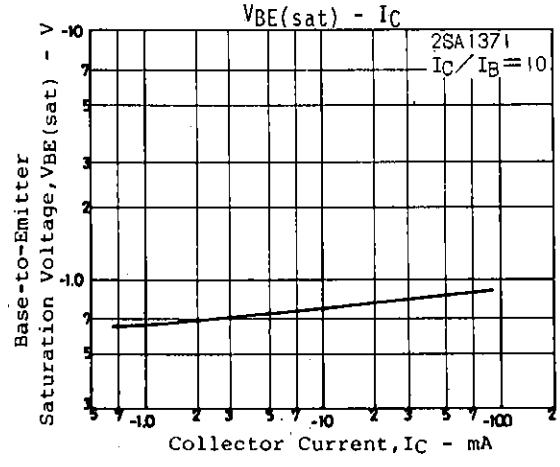

Cob - VCB
2SC3468
f=1MHz
Output Capacitance,Cob - pF
Collector-to-Base Voltage,VCB - V

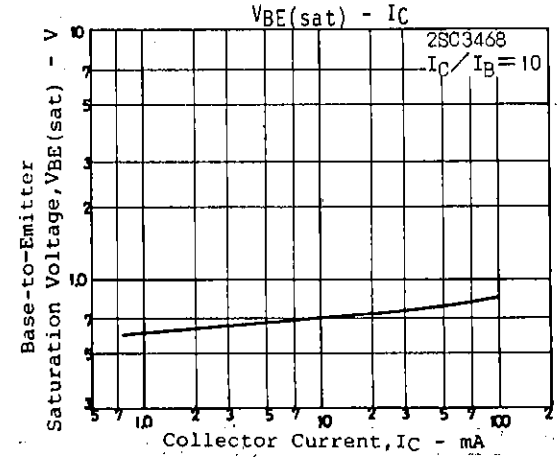

Cre - VCB
2SA1371
f=1MHz
Reverse Transfer Capacitance,Cre - pF
Collector-to-Base Voltage,VCB - V


Cre - VCB
2SC3468
f=1MHz
Reverse Transfer Capacitance,Cre - pF
Collector-to-Base Voltage,VCB - V


VCE(sat) - IC
2SA1371
IC/IB=10
Collector-to-Emitter Saturation Voltage,VCE(sat) - V
Collector Current,IC - mA


VCE(sat) - IC
2SC3468
IC/IB=10
Collector-to-Emitter Saturation Voltage,VCE(sat) - V
Collector Current,IC - mA


VBE(sat) - IC
2SA1371
IC/IB=10
Base-to-Emitter Saturation Voltage,VBE(sat) - V
Collector Current,IC - mA


VBE(sat) - IC
2SC3468
IC/IB=10
Base-to-Emitter Saturation Voltage,VBE(sat) - V
Collector Current,IC - mA