Ordering number:ENN1413D

PNP/NPN Epitaxial Planar Silicon Transistors

2SA1371/2SC3468

High-Definition CRT Display, Video Output Applications

Use

· Color TV chroma output and high breakdown voltage driver.

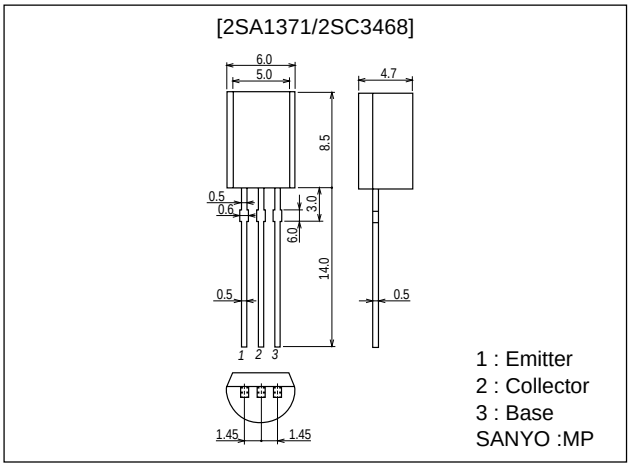
Features

· High breakdown votage : V_{CEO}≥300V.
· Small reverse transfer capacitance and excellent high frequency characteristic
  : C_{re}=1.8pF (NPN), 2.3pF (PNP).
· Adoption of MBIT process.

Package Dimensions

unit:mm

2006B



( ) : 2SA1371

Specifications

Absolute Maximum Ratings at Ta = 25˚C

Parameter	Symbol	Conditions	Ratings	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	P_C		1.0	W
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}=(–)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
Collector-to-Emitter Saturation Voltage	$V_{CE(sat)}$	I_C=(–)20mA, I_B=(–)2mA			(–)0.6	V
Base-to-Emitter Saturation Voltage	$V_{BE(sat)}$	I_C=(–)20mA, I_B=(–)2mA			(–)1.0	V

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

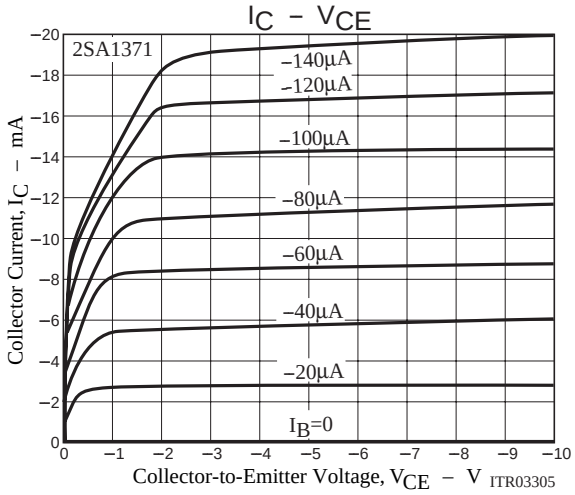
Continued on next page.

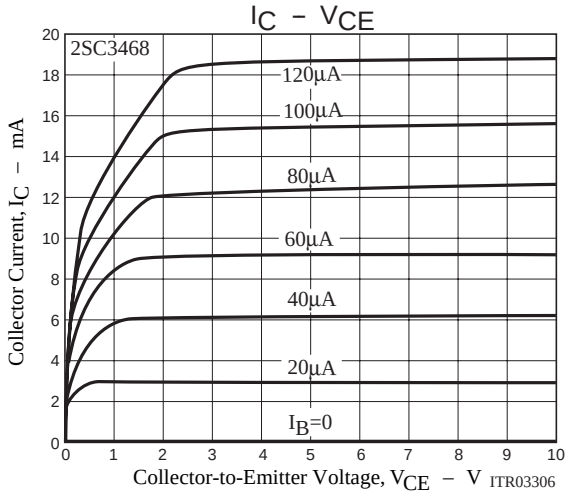
Rank	C	D	E	F
h_{FE}	40 to 80	60 to 120	100 to 200	160 to 320

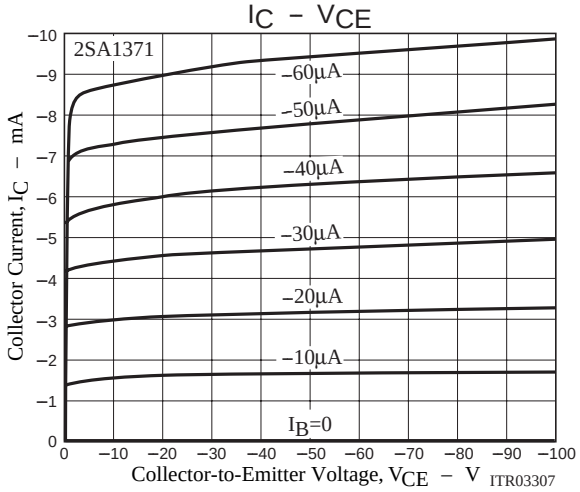
SANYO Electric Co.,Ltd. Semiconductor Company
TOKYO OFFICE Tokyo Bldg., 1-10, 1 Chome, Ueno, Taito-ku, TOKYO, 110-8534 JAPAN

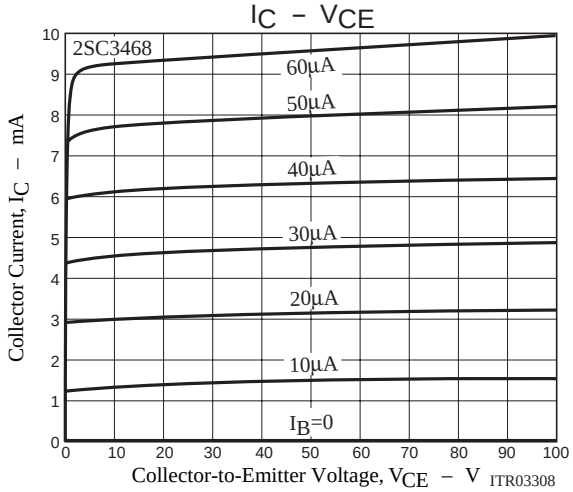
Continued from preceding page.

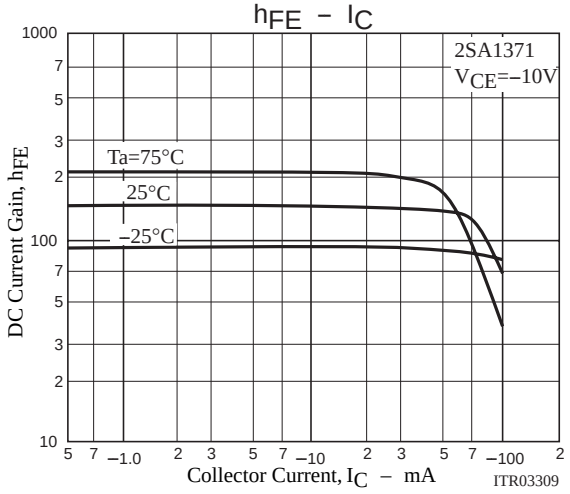
Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Collector-to-Base Breakdown Voltage	$V_{(BR)CBO}$	I_C=(–)10μA, I_E=0	(–)300			V
Collector-to-Emitter Breakdown Voltage	$V_{(BR)CEO}$	I_C=(–)1mA, R_{BE}=∞	(–)300			V
Emitter-to-Base Breakdown Votage	$V_{(BR)EBO}$	I_E=(–)10μA, I_C=0	(–)5			V
Output Capacitance	C_{ob}	V_{CB}=(–)30V, f=1MHz		2.6		pF
				(3.1)		pF
Reverse Transfer Capacitance	C_{re}	V_{CB}=(–)30V, f=1MHz		1.8		pF
				(2.3)		pF

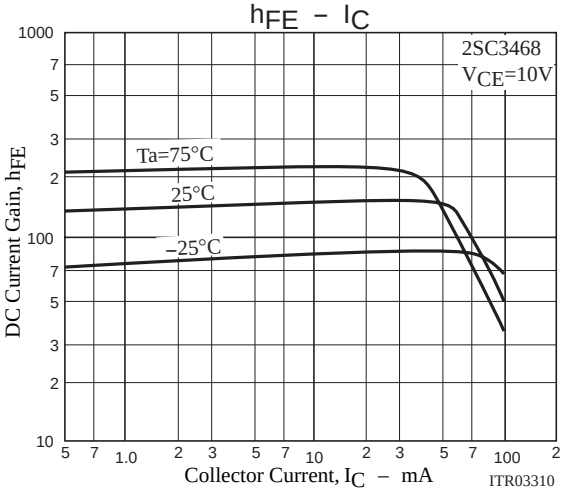


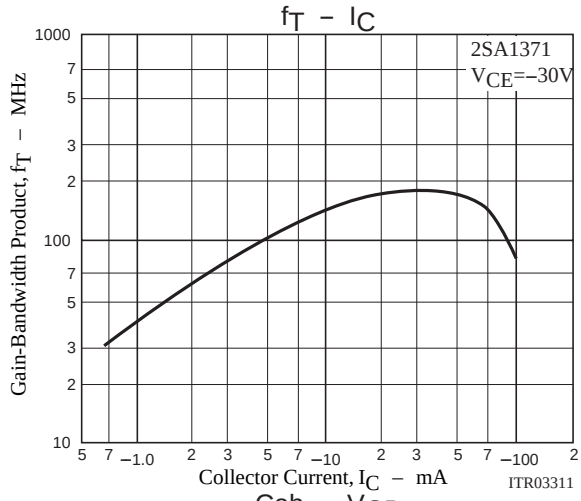


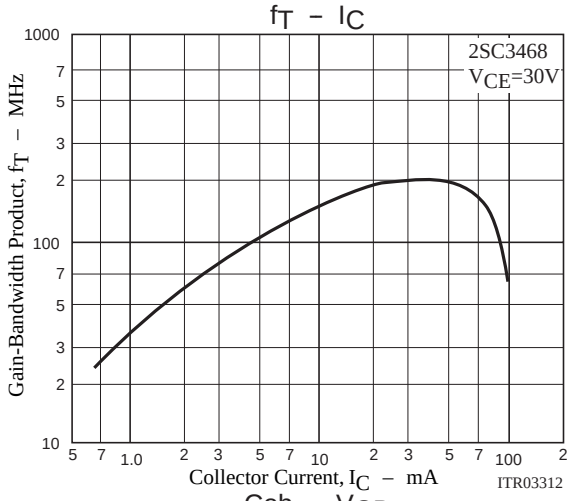


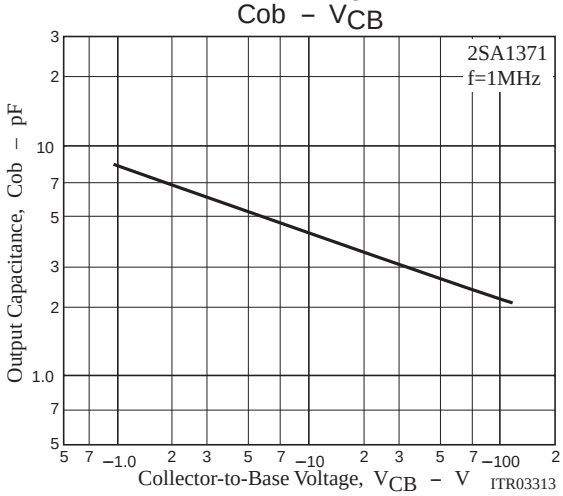


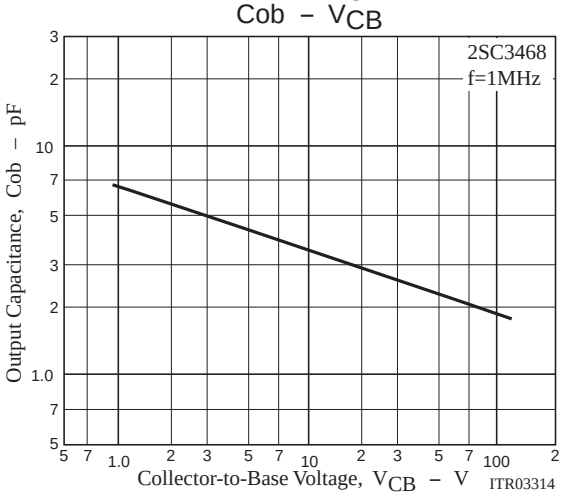


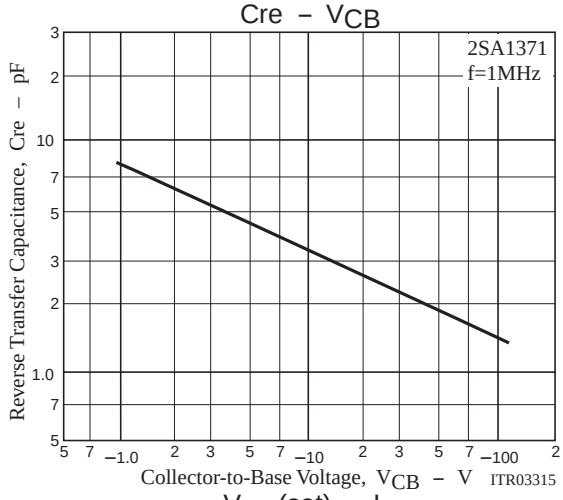


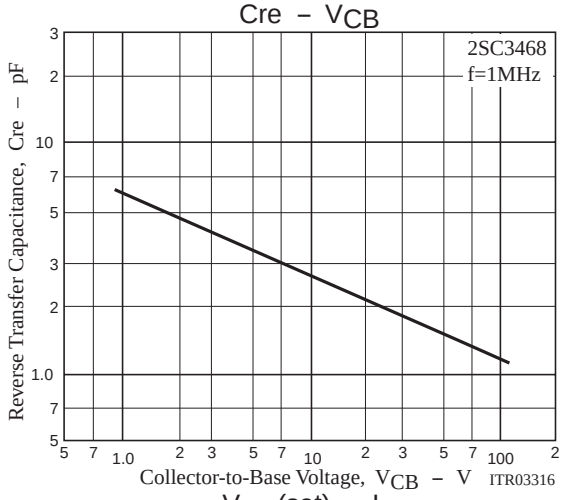

fT – IC
2SA1371
VCE=–30V
Gain-Bandwidth Product, fT – MHz
Collector Current, IC – mA
ITR03311

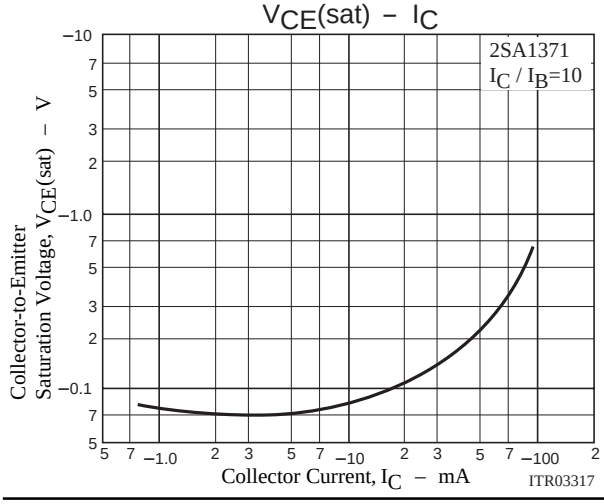

fT – IC
2SC3468
VCE=30V
Gain-Bandwidth Product, fT – MHz
Collector Current, IC – mA
ITR03312

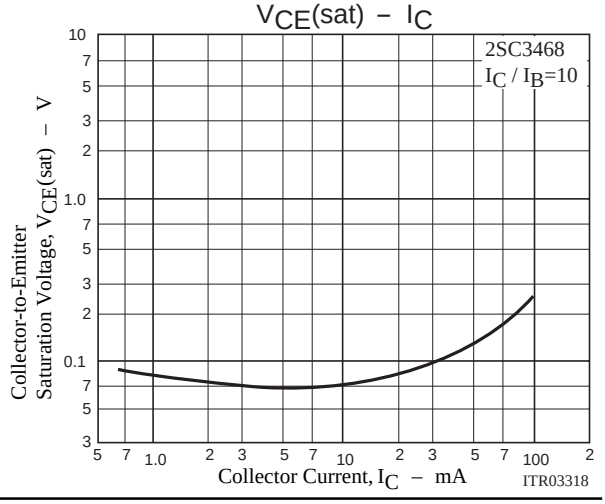

Cob – VCB
2SA1371
f=1MHz
Output Capacitance, Cob – pF
Collector-to-Base Voltage, VCB – V
ITR03313

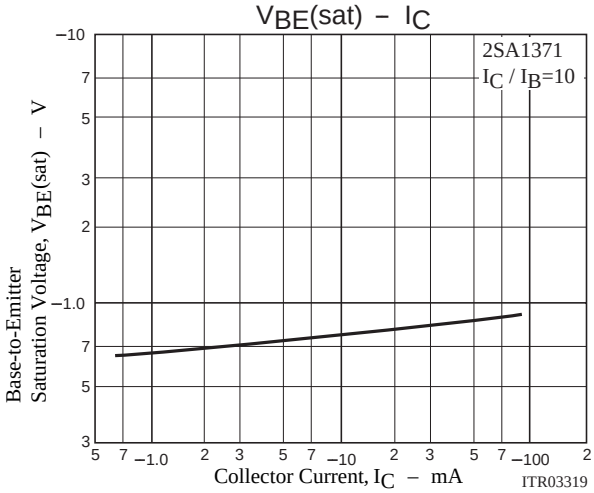

Cob – VCB
2SC3468
f=1MHz
Output Capacitance, Cob – pF
Collector-to-Base Voltage, VCB – V
ITR03314

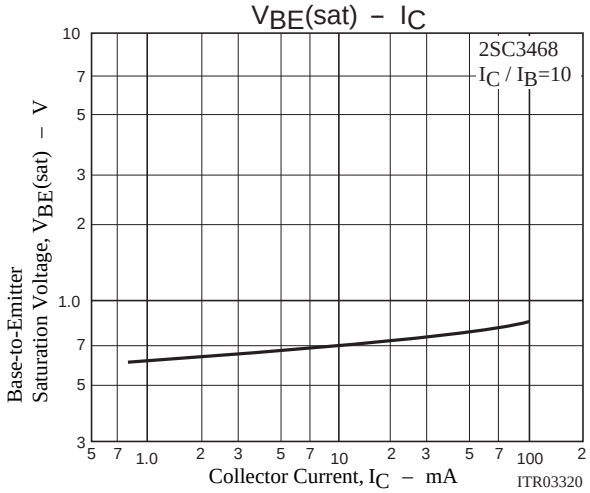

Cre – VCB
2SA1371
f=1MHz
Reverse Transfer Capacitance, Cre – pF
Collector-to-Base Voltage, VCB – V
ITR03315

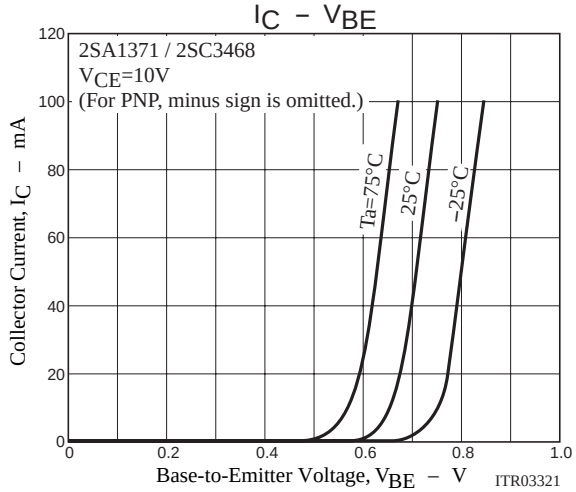

Cre – VCB
2SC3468
f=1MHz
Reverse Transfer Capacitance, Cre – pF
Collector-to-Base Voltage, VCB – V
ITR03316

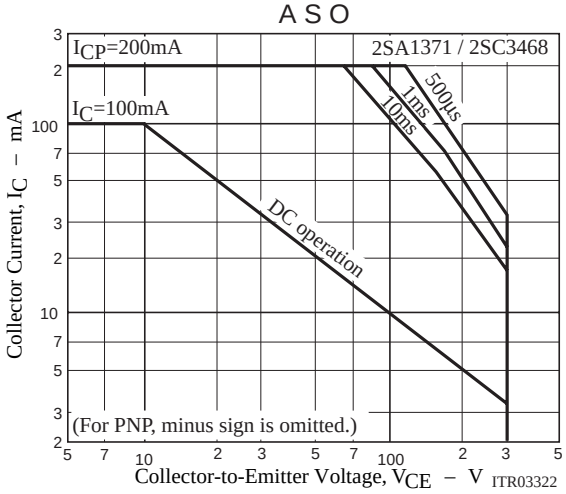

VCE(sat) – IC
2SA1371
IC / IB=10
Collector-to-Emitter Saturation Voltage, VCE(sat) – V
Collector Current, IC – mA
ITR03317

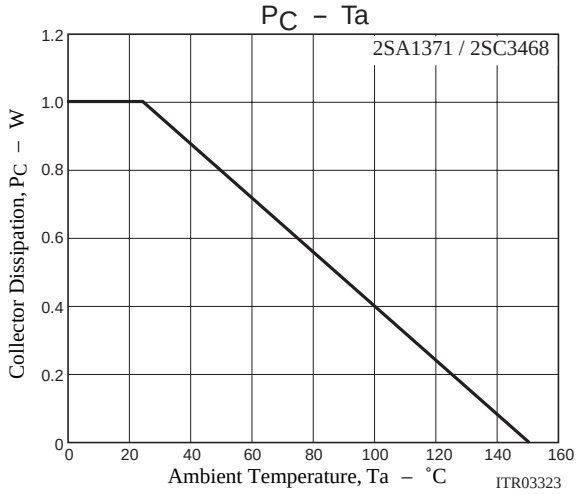

VCE(sat) – IC
2SC3468
IC / IB=10
Collector-to-Emitter Saturation Voltage, VCE(sat) – V
Collector Current, IC – mA
ITR03318


VBE(sat) – IC
2SA1371
IC / IB=10
Base-to-Emitter Saturation Voltage, VBE(sat) – V
Collector Current, IC – mA
ITR03319


VBE(sat) – IC
2SC3468
IC / IB=10
Base-to-Emitter Saturation Voltage, VBE(sat) – V
Collector Current, IC – mA
ITR03320


IC – VBE
2SA1371 / 2SC3468
VCE=10V
(For PNP, minus sign is omitted.)
Ta=75°C
25°C
–25°C
Collector Current, IC – mA
Base-to-Emitter Voltage, VBE – V
ITR03321


A S O
ICP=200mA
IC=100mA
2SA1371 / 2SC3468
500µs
1ms
10ms
DC operation
(For PNP, minus sign is omitted.)
Collector Current, IC – mA
Collector-to-Emitter Voltage, VCE – V
ITR03322


PC – Ta
2SA1371 / 2SC3468
Collector Dissipation, PC – W
Ambient Temperature, Ta – °C
ITR03323