Ordering number:ENN1412D

PNP/NPN Epitaxial Planar Silicon Transistors

2SA1370/2SC3467

High-Definition CRT Display, Video Output Applications

Use

· Color TV chroma output and high breakdown voltage driver.

Features

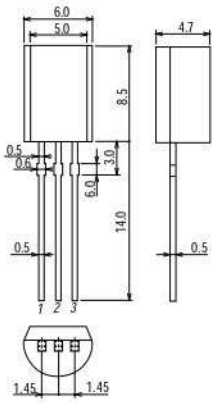
· High breakdown voltage : V_{CEO}≥200V.
· Small reverse transfer capacitance and excellent high frequency characteristic
  : C_{re}=1.2pF (NPN), 1.7pF (PNP).
· Adoption of FBET process.

Package Dimensions

unit:mm

2006B

[2SA1370/2SC3467]



1 : Emitter
2 : Collector
3 : Base
SANYO : MP

( ) : 2SA1370

Specifications

Absolute Maximum Ratings at Ta = 25°C

Parameter	Symbol	Conditions	Ratings	Unit
Collector-to-Base Voltage	V_{CBO}		(–)200	V
Collector-to-Emitter Voltage	V_{CEO}		(–)200	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}=(–)150, 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 2SA1370/2SC3467 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

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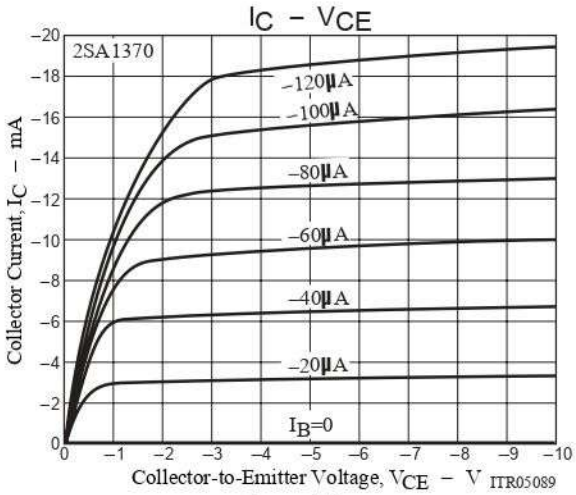
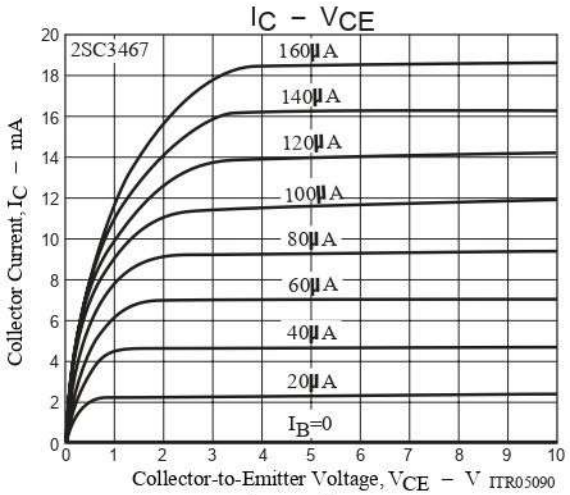
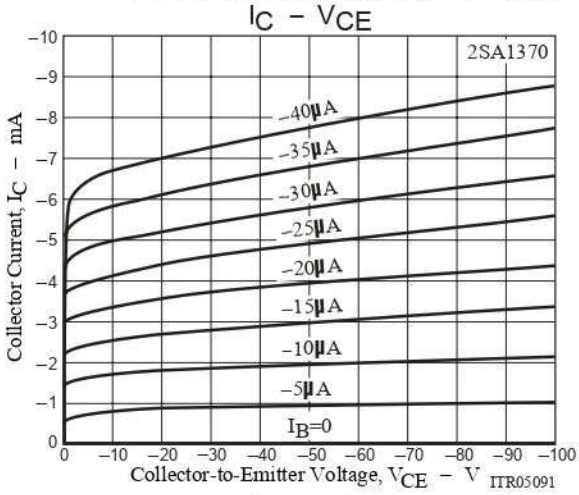
SANYO Electric Co.,Ltd. Semiconductor Company
TOKYO OFFICE Tokyo Bldg., 1-10, 1 Chome, Ueno, Taito-ku, TOKYO, 110-8534 JAPAN

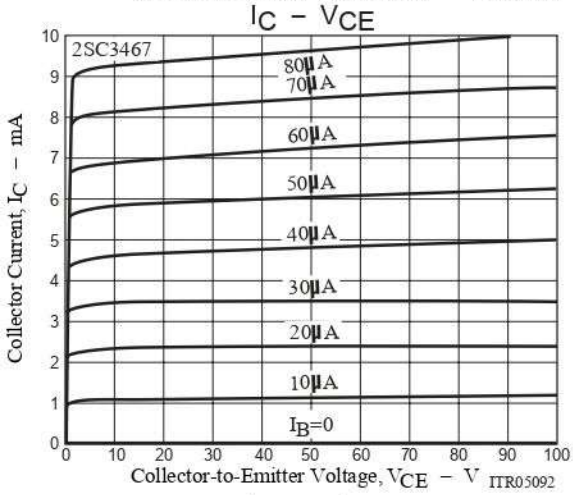
Continued from preceding page.

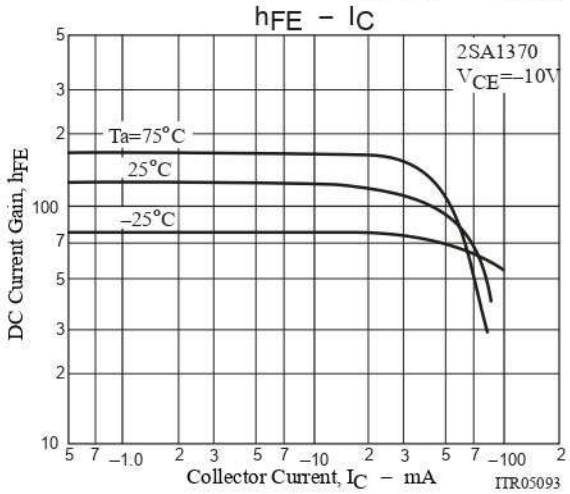
Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Collector-to-Base Breakdown Voltage	$V_{(BR)CBO}$	I_C=(–)10μA, I_E=0	(–)200			V
Collector-to-Emitter Breakdown Voltage	$V_{(BR)CEO}$	I_C=(–)1mA, R_{BE}=∞	(–)200			V
Emitter-to-Base Breakdown Votage	$V_{(BR)EBO}$	I_E=(–)10μA, I_C=0	(–)5			V
Output Capacitance	C_{ob}	V_{CB}=(–)30V, f=1MHz		1.7		pF
				(2.6)		pF
Reverse Transfer Capacitance	C_{re}	V_{CB}=(–)30V, f=1MHz		1.2		pF
				(1.7)		pF

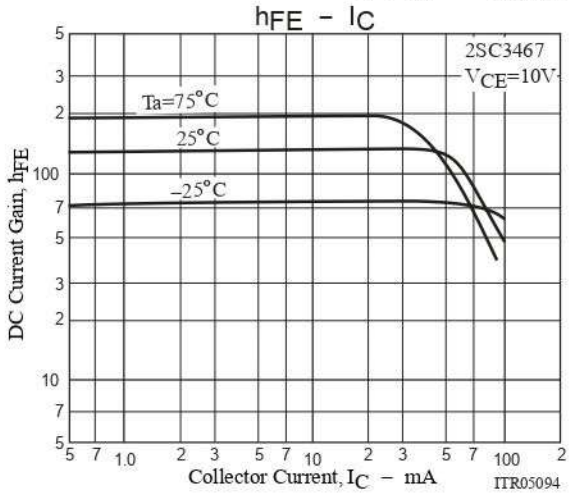


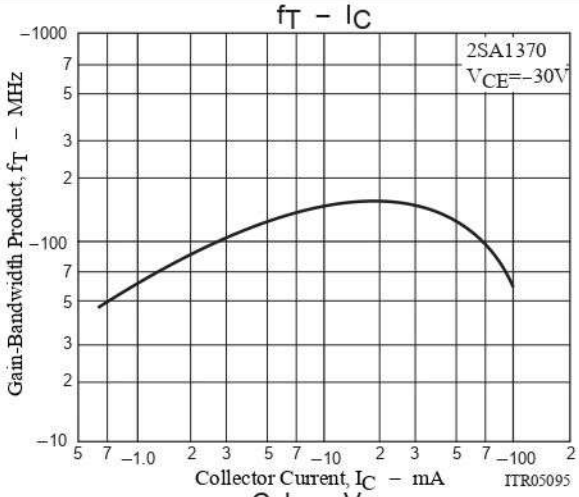


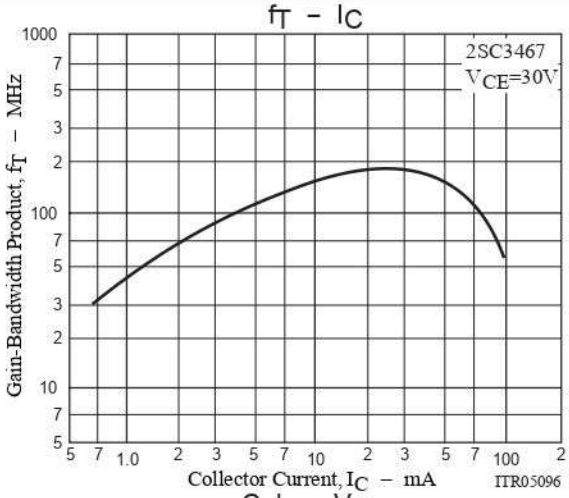


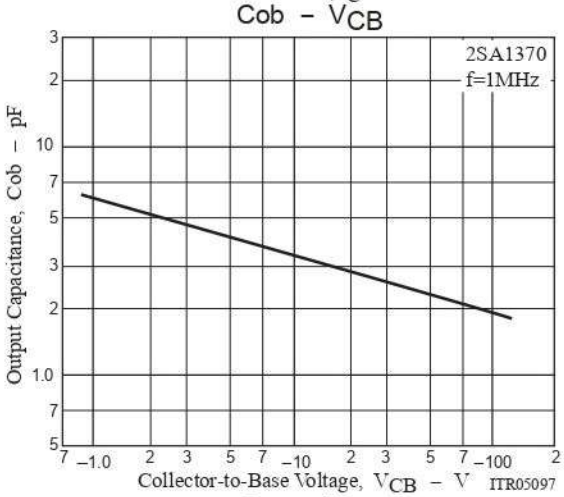


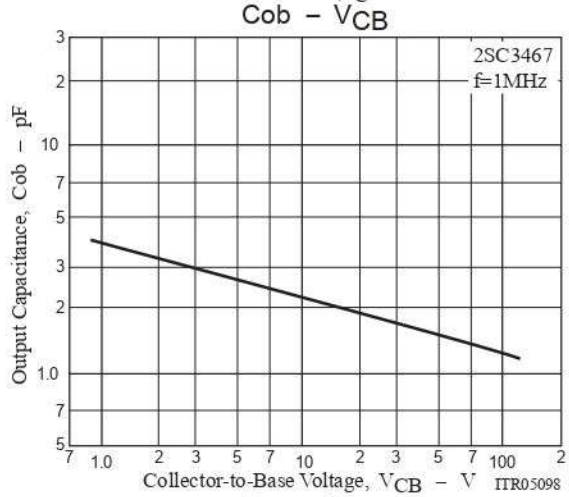


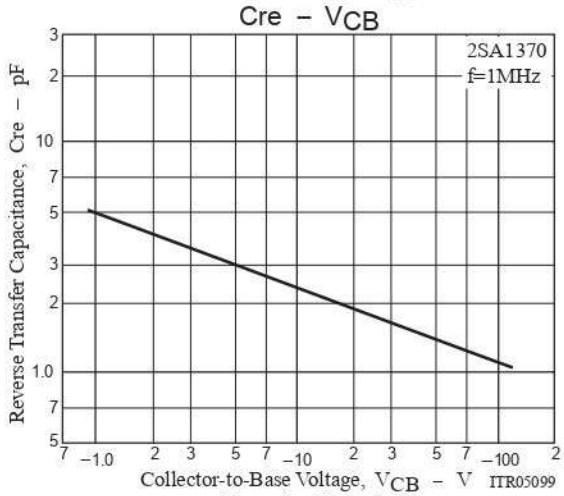


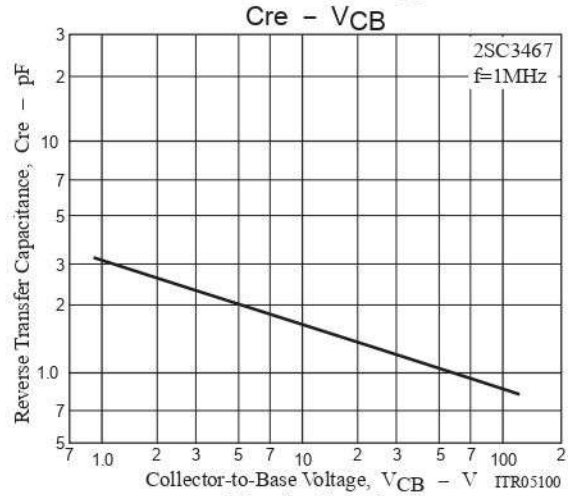

fT – IC
2SA1370
VCE=–30V
Gain-Bandwidth Product, fT – MHz
Collector Current, IC – mA
ITR05095

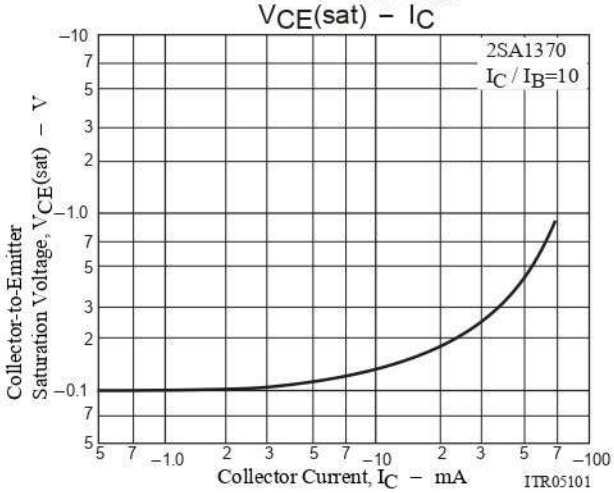

fT – IC
2SC3467
VCE=30V
Gain-Bandwidth Product, fT – MHz
Collector Current, IC – mA
ITR05096

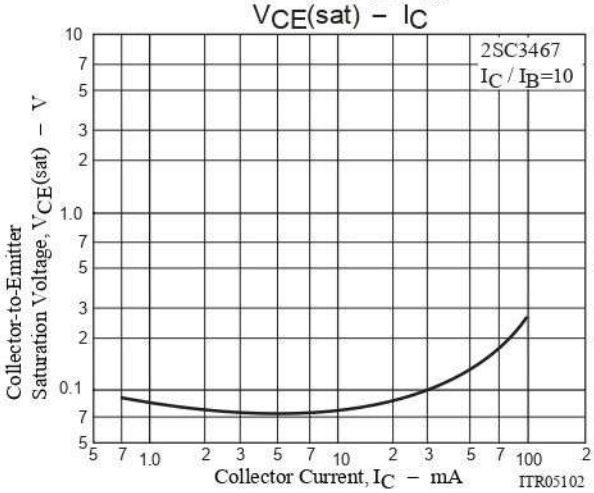

Cob – VCB
2SA1370
f=1MHz
Output Capacitance, Cob – pF
Collector-to-Base Voltage, VCB – V
ITR05097

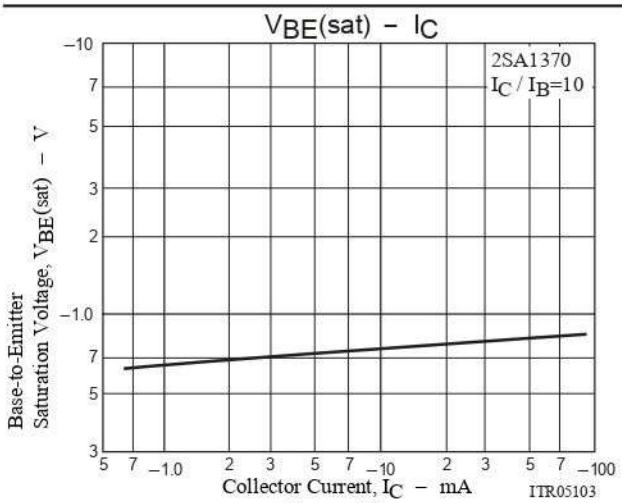

Cob – VCB
2SC3467
f=1MHz
Output Capacitance, Cob – pF
Collector-to-Base Voltage, VCB – V
ITR05098

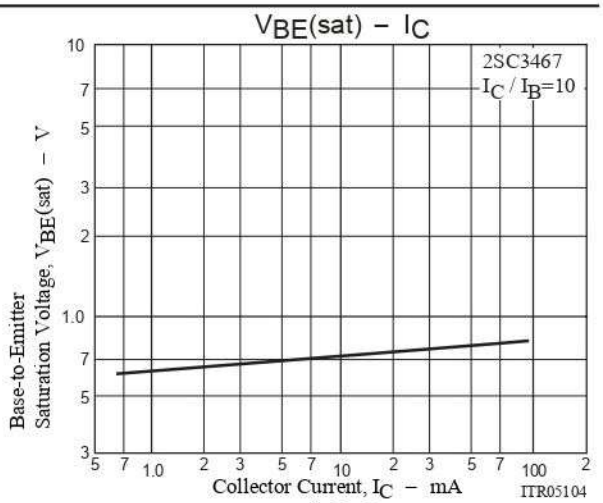

Cre – VCB
2SA1370
f=1MHz
Reverse Transfer Capacitance, Cre – pF
Collector-to-Base Voltage, VCB – V
ITR05099

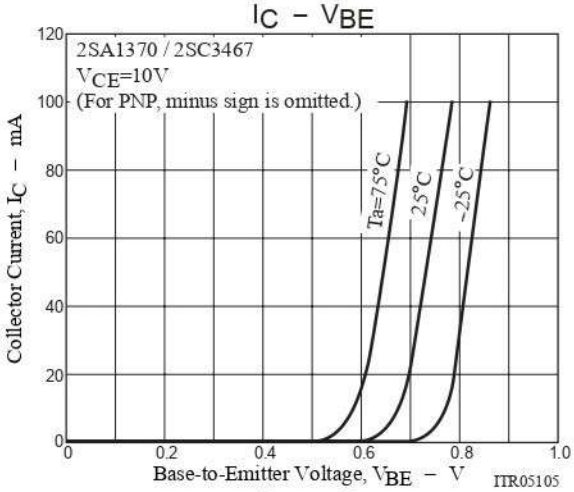

Cre – VCB
2SC3467
f=1MHz
Reverse Transfer Capacitance, Cre – pF
Collector-to-Base Voltage, VCB – V
ITR05100

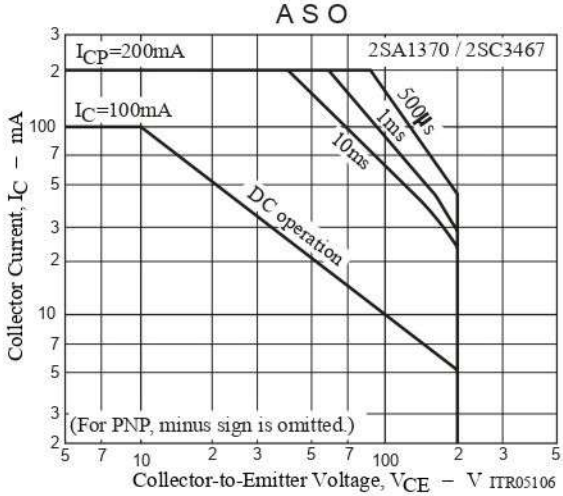

VCE(sat) – IC
2SA1370
IC / IB=10
Collector-to-Emitter Saturation Voltage, VCE(sat) – V
Collector Current, IC – mA
ITR05101

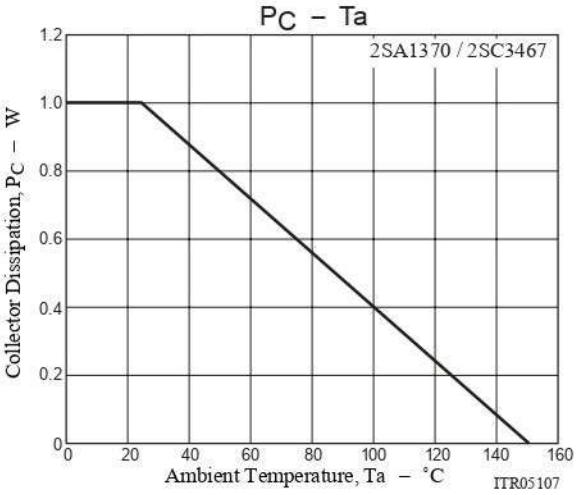

VCE(sat) – IC
2SC3467
IC / IB=10
Collector-to-Emitter Saturation Voltage, VCE(sat) – V
Collector Current, IC – mA
ITR05102


VBE(sat) – IC
2SA1370
IC / IB=10
Base-to-Emitter Saturation Voltage, VBE(sat) – V
Collector Current, IC – mA
ITR05103


VBE(sat) – IC
2SC3467
IC / IB=10
Base-to-Emitter Saturation Voltage, VBE(sat) – V
Collector Current, IC – mA
ITR05104


IC – VBE
2SA1370 / 2SC3467
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
ITR05105


ASO
ICP=200mA
IC=100mA
2SA1370 / 2SC3467
500μs
1ms
10ms
DC operation
(For PNP, minus sign is omitted.)
Collector Current, IC – mA
Collector-to-Emitter Voltage, VCE – V
ITR05106


PC – Ta
2SA1370 / 2SC3467
Collector Dissipation, PC – W
Ambient Temperature, Ta – °C
ITR05107

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