Ordering number: EN 3643

SANYO

No.3643

2SA1749/2SC4564

PNP/NPN Epitaxial Planar Silicon Transistors

High-Definition CRT Display Video Output Applications

Features

- High f_T [f_T=400MHz (typ)]
- High breakdown voltage [$V_{CEO} \geqq$ 200V (min)]
- High current
- Small reverse transfer capacitance and excellent high frequency characteristics [C_{re}=3.4pF (NPN), 4.2pF (PNP)]
- Complementary 2SA1749 and 2SC4564 types
- Adoption of FBET process

( ) : 2SA1749

Absolute Maximum Ratings at Ta=25°C

				unit
Collector-to-Base Voltage	V_{CBO}		(−)200	V
Collector-to-Emitter Voltage	V_{CEO}		(−)200	V
Emitter-to-Base Voltage	V_{EBO}		(−)3	V
Collector Current	I_C		(−)300	mA
Peak Collector Current	i_{cp}		(−)600	mA
Collector Dissipation	P_C		1.3	W
		Tc=25°C	10	W
Junction Temperature	Tj		150	°C
Storage Temperature	Tstg		−55 to +150	°C

Electrical Characteristics at Ta=25°C

			min	typ	max	unit
Collector Cutoff Current	I_{CBO}	V_{CB}=(−)150V,I_E=0			(−)0.1	μA
Emitter Cutoff Current	I_{EBO}	V_{EB}=(−)2V,I_C=0			(−)1.0	μA
DC Current Gain	h_{FE}(1)	V_{CE}=(−)10V,I_C=(−)50mA	40※		320※	
	h_{FE}(2)	V_{CE}=(−)10V,I_C=(−)250mA	20			
Gain Bandwidth Product	f_T	V_{CE}=(−)30V,I_C=(−)100mA		400		MHz
Output Capacitance	C_{ob}	V_{CB}=(−)30V,f=1MHz		(5.0)4.2		pF
Reverse Transfer Capacitance	C_{re}	V_{CB}=(−)30V,f=1MHz		(4.2)3.4		pF

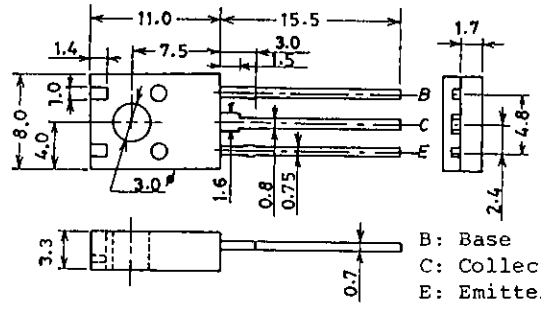
Continued on next page

※ : The 2SA1749/2SC4564 are classified by 50mA h_{FE} as follows :

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

Package Dimensions 2042A

(unit : mm)



B: Base
C: Collector
E: Emitter

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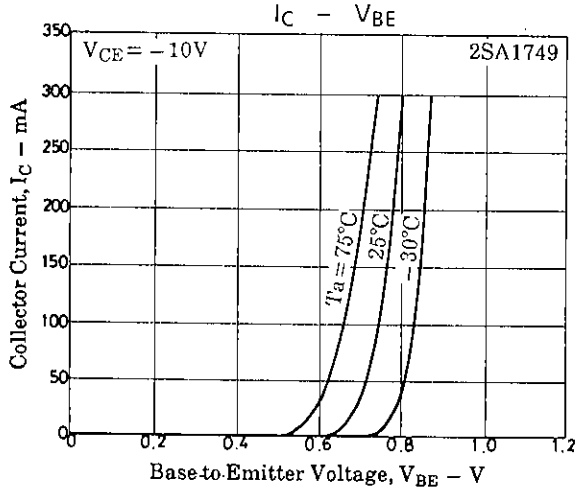
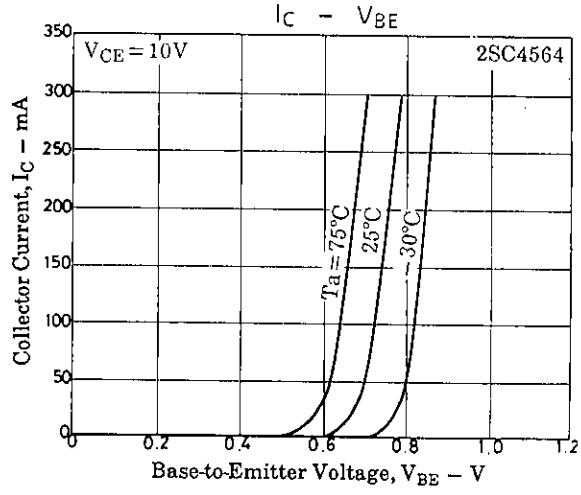
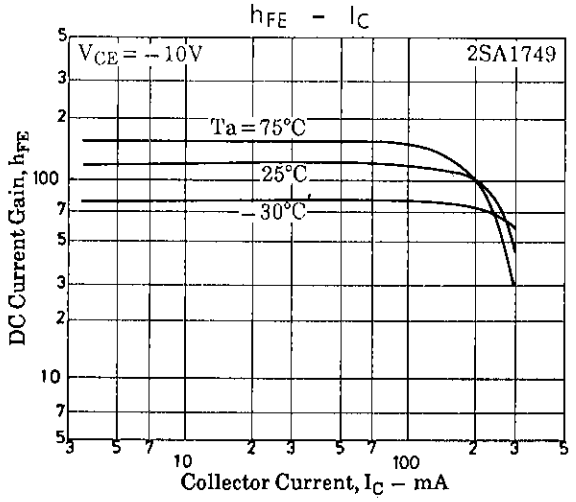
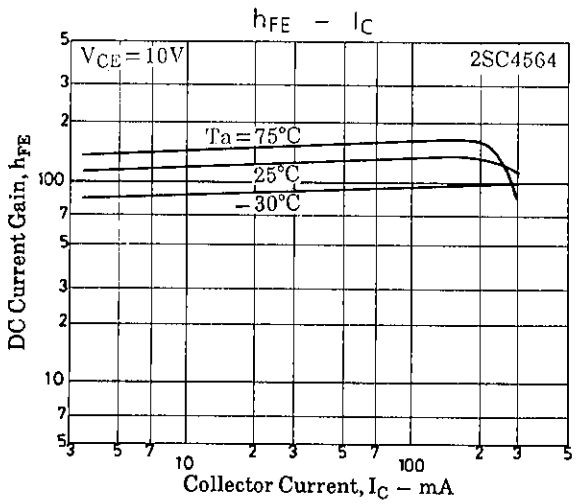
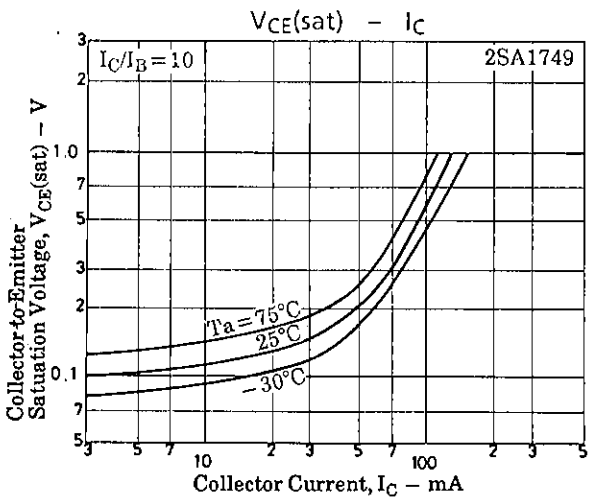
			min	typ	max	unit
C-E Saturation Voltage	$V_{CE(sat)}$	$I_C=(-)50mA, I_B=(-)5mA$			(−)1.0	V
B-E Saturation Voltage	$V_{BE(sat)}$	$I_C=(-)50mA, I_B=(-)5mA$			(−)1.0	V
C-B Breakdown Voltage	$V_{(BR)CBO}$	$I_C=(-)10\mu A, I_E=0$	(−)200			V
C-E Breakdown Voltage	$V_{(BR)CEO}$	$I_C=(-)1mA, R_{BE}=\infty$	(−)200			V
E-B Breakdown Voltage	$V_{(BR)EBO}$	$I_E=(-)100\mu A, I_C=0$	(−)3			V

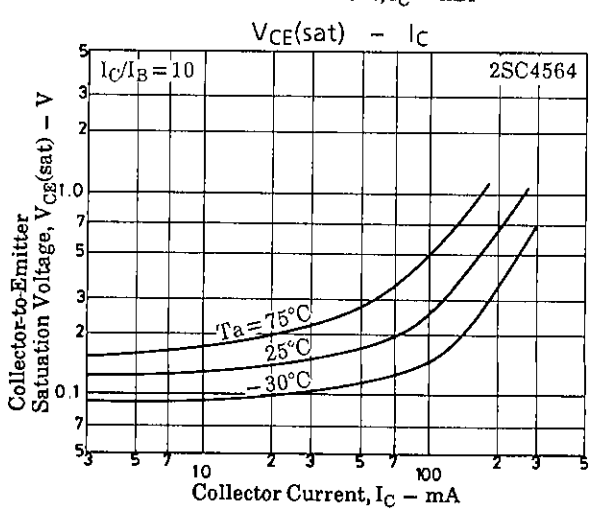




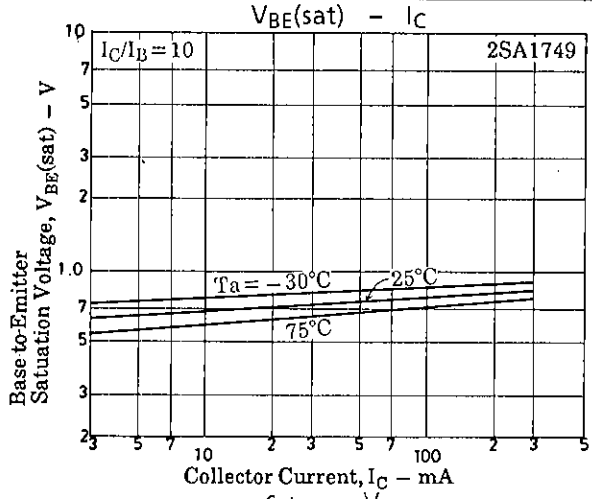




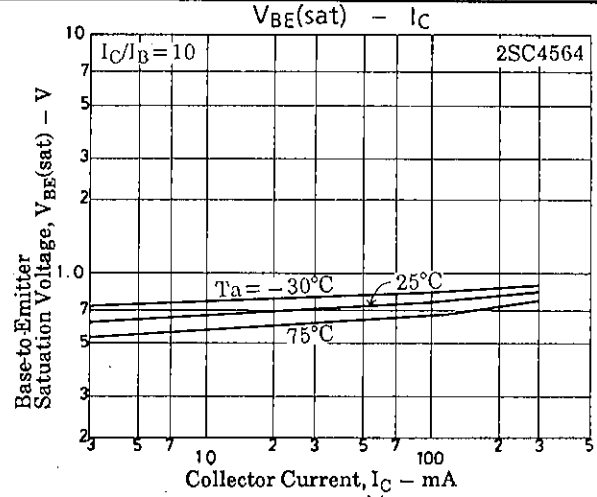




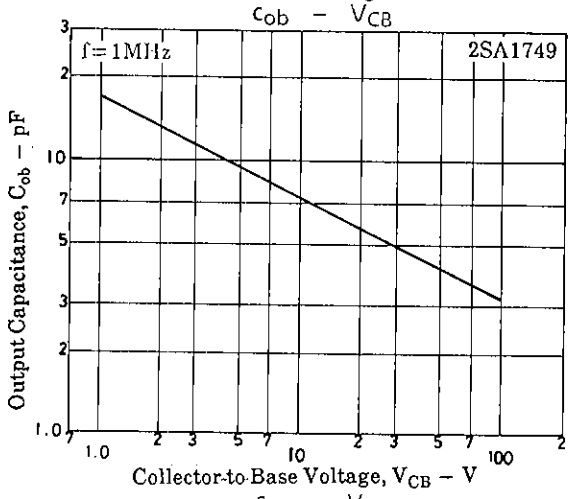
$V_{BE}(sat)$ – I_C



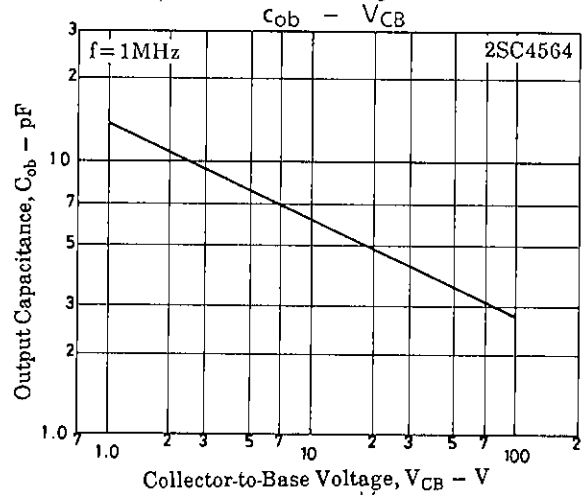
$V_{BE}(sat)$ – I_C



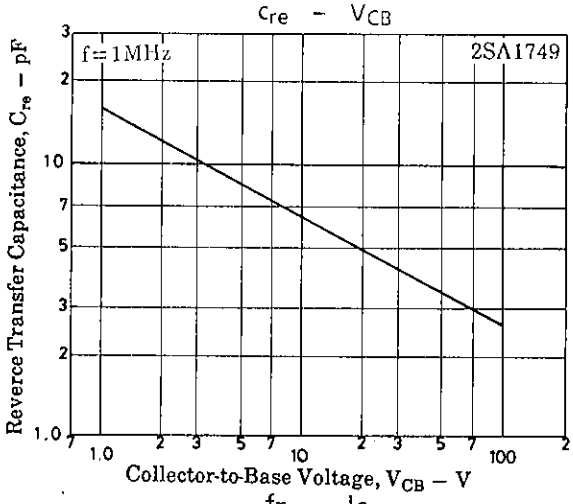
C_{ob} – V_{CB}



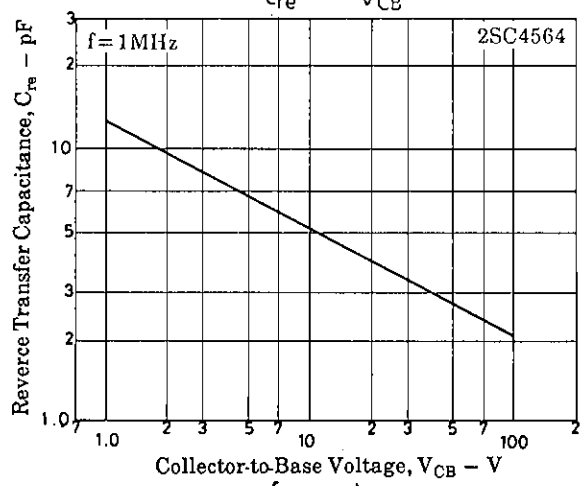
C_{ob} – V_{CB}



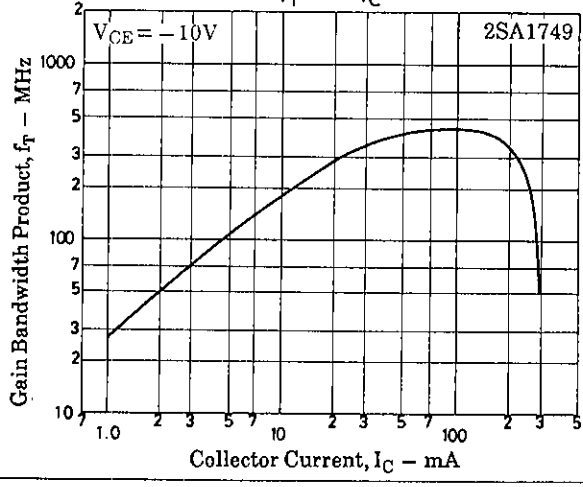
C_{re} – V_{CB}



C_{re} – V_{CB}



f_T – I_C



f_T – I_C