

SANYO

No.3643

2SA1749/2SC4564

PNP/NPN Epitaxial Planar Silicon Transistors
 High-Definition CRT Display
 Video Output Applications

Features

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

() : 2SA1749

Absolute Maximum Ratings at $T_a = 25^\circ\text{C}$

			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
		10	W
Junction Temperature	T_j	150	$^\circ\text{C}$
Storage Temperature	T_{stg}	-55 to +150	$^\circ\text{C}$

$T_c = 25^\circ\text{C}$

Electrical Characteristics at $T_a = 25^\circ\text{C}$

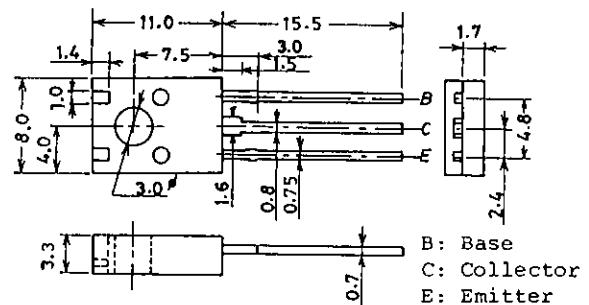
			min	typ	max	unit
Collector Cutoff Current	I_{CBO}	$V_{CB} = (-)150\text{V}, I_E = 0$			(-)0.1	μA
Emitter Cutoff Current	I_{EBO}	$V_{EB} = (-)2\text{V}, I_C = 0$			(-)1.0	μA
DC Current Gain	$h_{FE}(1)$	$V_{CE} = (-)10\text{V}, I_C = (-)50\text{mA}$	40*		320*	
	$h_{FE}(2)$	$V_{CE} = (-)10\text{V}, I_C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

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

40	C	80	60	D	120	100	E	200	160	F	320
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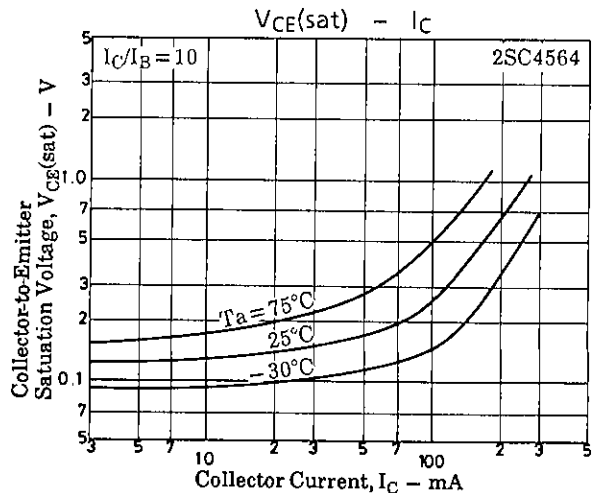
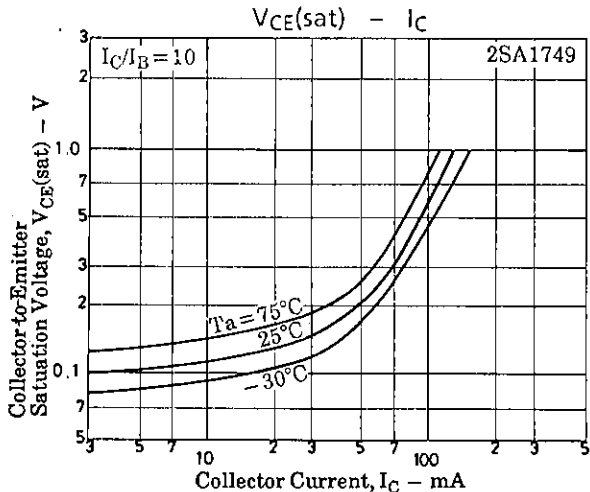
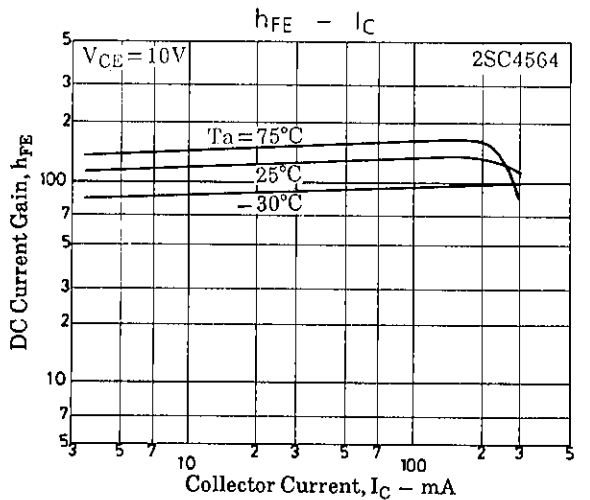
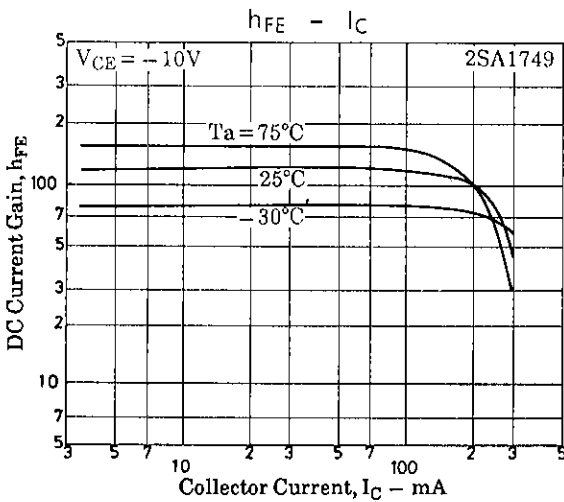
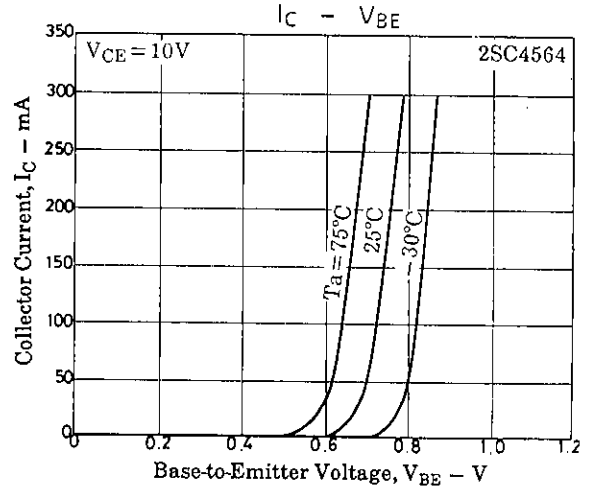
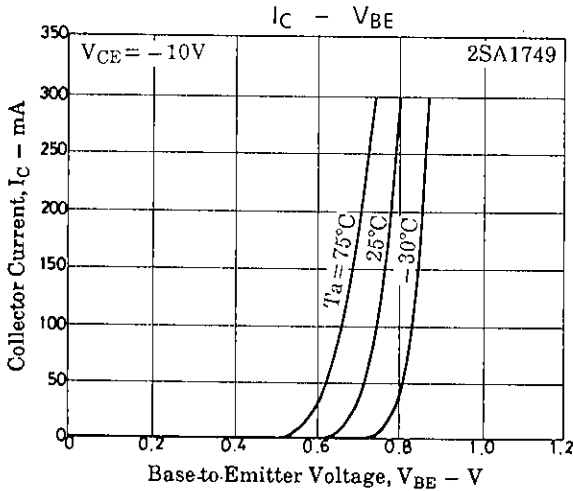
Package Dimensions 2042A
(unit: mm)



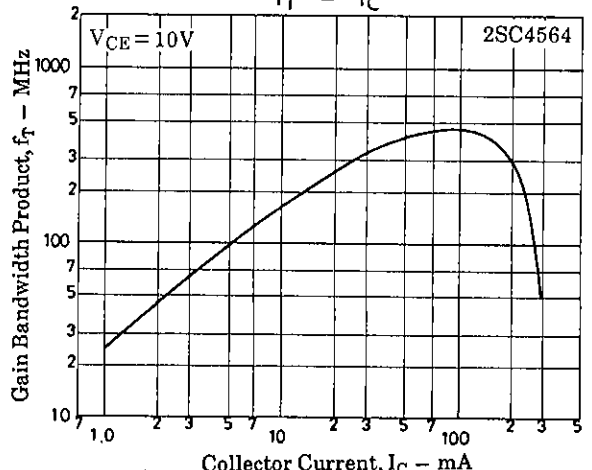
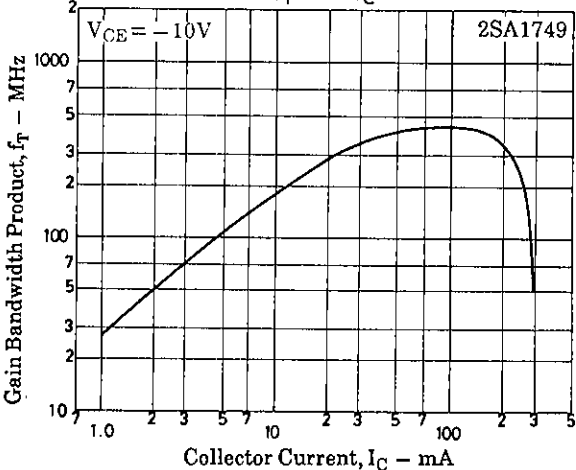
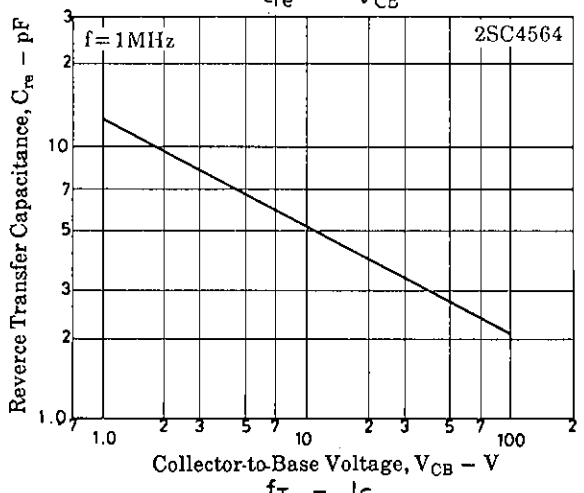
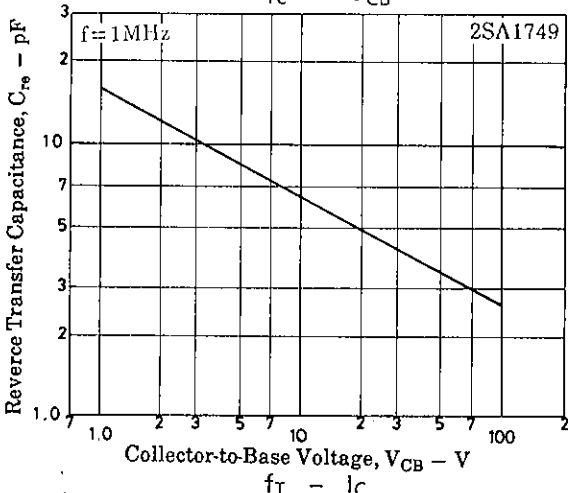
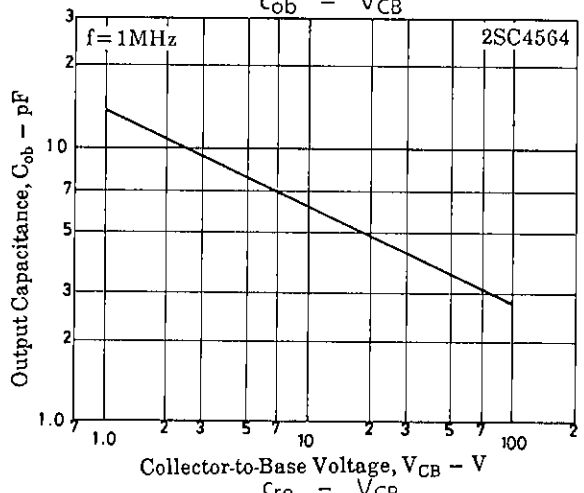
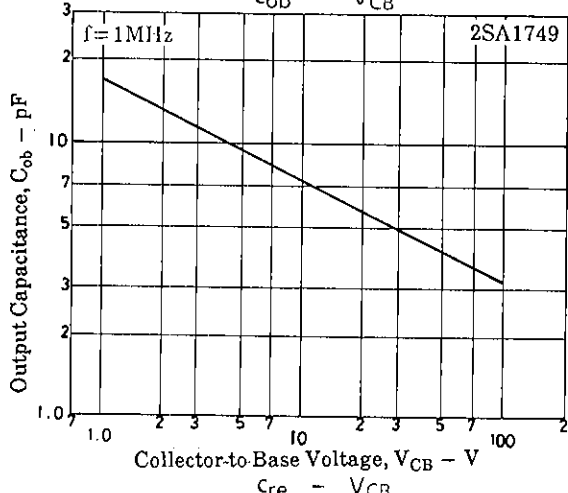
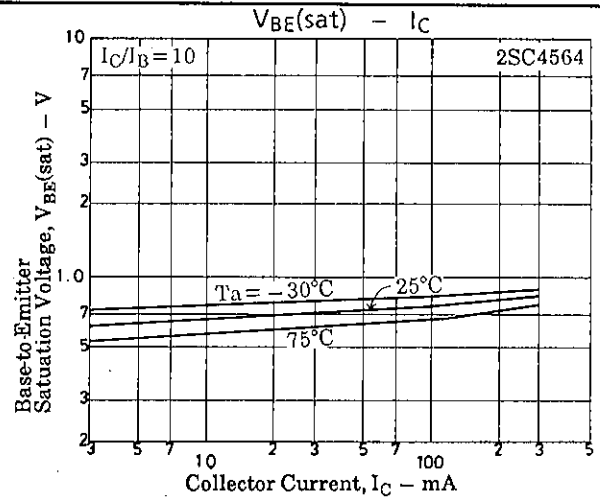
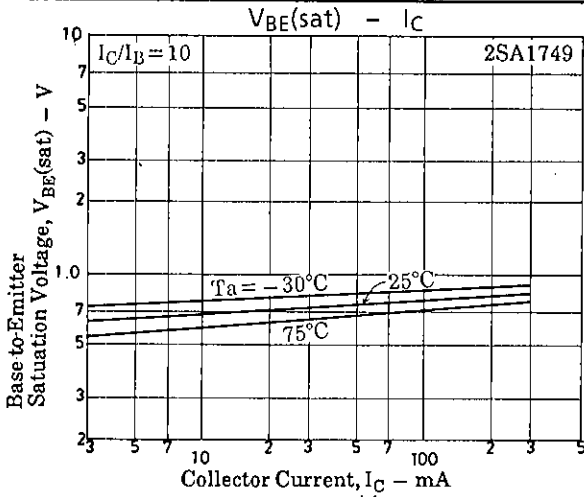
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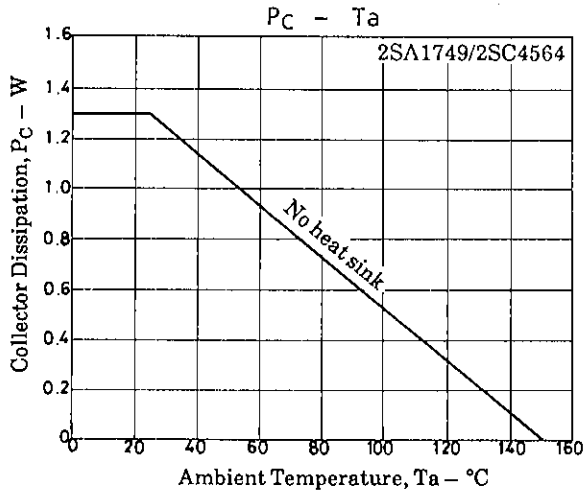
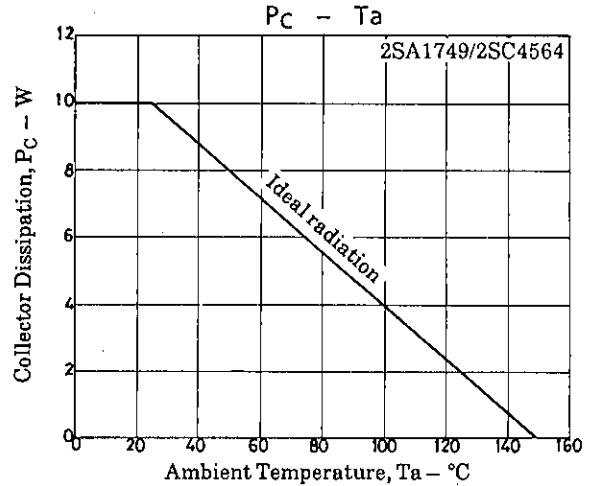
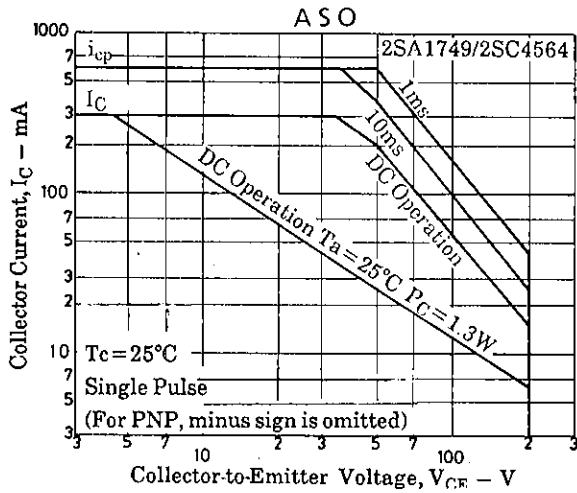
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			min	typ	max	unit
C-E Saturation Voltage	$V_{CE(sat)}$	$I_C = (-)50\text{mA}, I_B = (-)5\text{mA}$			(-) 1.0	V
B-E Saturation Voltage	$V_{BE(sat)}$	$I_C = (-)50\text{mA}, I_B = (-)5\text{mA}$			(-) 1.0	V
C-B Breakdown Voltage	$V_{(BR)CBO}$	$I_C =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



2SA1749/2SC4564





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