



No.3188

2SA1740/2SC4548

PNP Epitaxial Planar Silicon Transistor
NPN Triple Diffused Planar Silicon Transistor

High-Voltage Driver Applications

Features

- High breakdown voltage
- Adoption of MBIT process
- Excellent h_{FE} linearity

(): 2SA1740

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

			unit
Collector to Base Voltage	V_{CBO}	(-)400	V
Collector to Emitter Voltage	V_{CEO}	(-)400	V
Emitter to Base Voltage	V_{EBO}	(-)5	V
Collector Current	I_C	(-)200	mA
Collector Current(Pulse)	I_{CP}	(-)400	mA
Collector Dissipation	P_C	Mounted on ceramic board (250mm ² ×0.8mm)	1.3 W
Junction Temperature	T_j		150 °C
Storage Temperature	T_{stg}		-55 to +150 °C

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

			min	typ	max	unit
Collector Cutoff Current	I_{CBO}	$V_{CB} = (-)300\text{V}, I_E = 0$			(-)0.1	μA
Emitter Cutoff Current	I_{EBO}	$V_{EB} = (-)4\text{V}, I_C = 0$			(-)0.1	μA
DC Current Gain	h_{FE}	$V_{CE} = (-)10\text{V}, I_C = (-)50\text{mA}$	60*		200*	
Gain-Bandwidth Product	f_T	$V_{CE} = (-)30\text{V}, I_C = (-)10\text{mA}$		70		MHz
Output Capacitance	c_{ob}	$V_{CB} = (-)30\text{V}, f = 1\text{MHz}$		(5)4		pF
Reverse Transfer Capacitance	c_{re}	$V_{CB} = (-)30\text{V}, f = 1\text{MHz}$		(4)3		pF
C-E Saturation Voltage	$V_{CE(sat)}$	$I_C = (-)50\text{mA}, I_B = (-)5\text{mA}$		(-0.8)0.6		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	$V_{(BR)CBO}$	$I_C = (-)10\mu\text{A}, I_E = 0$	(-)400			V
C-E Breakdown Voltage	$V_{(BR)CEO}$	$I_C = (-)1\text{mA}, R_{BE} = \infty$	(-)400			V
E-B Breakdown Voltage	$V_{(BR)EBO}$	$I_E = (-)10\mu\text{A}, I_C = 0$	(-)5			V
Turn-ON Time	t_{on}	See specified Test Circuit.		0.25		μs
Turn-OFF Time	t_{off}	"		5.0		μs

*: The 2SA1740/2SC4548 are classified by 50mA h_{FE} as follows:

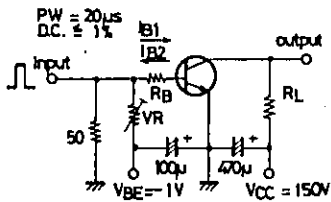
60 D 120	100 E 200
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Marking 2SA1740 : AK

2SC4548 : CN

h_{FE} rank : D,E

Switching Time Test Circuit

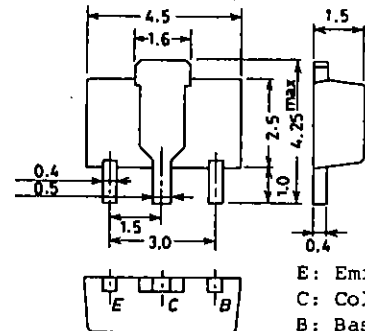


$10I_{B1} = -10I_{B2} = I_C = 50\text{mA}$
 $R_L = 3\text{k}\Omega, R_B = 200\Omega$ at $I_C = 50\text{mA}$
 For PNP, the polarity is reversed.

Unit (Resistance : Ω , Capacitance : F)

Package Dimensions 2038

(unit : mm)



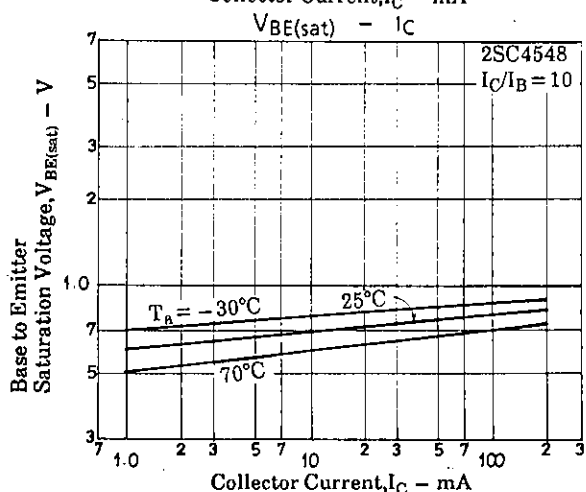
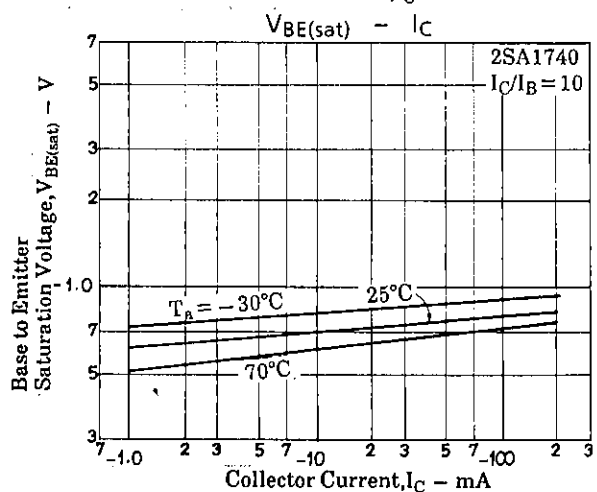
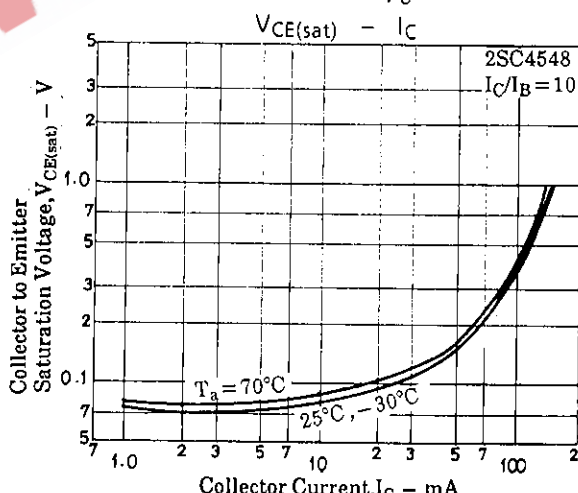
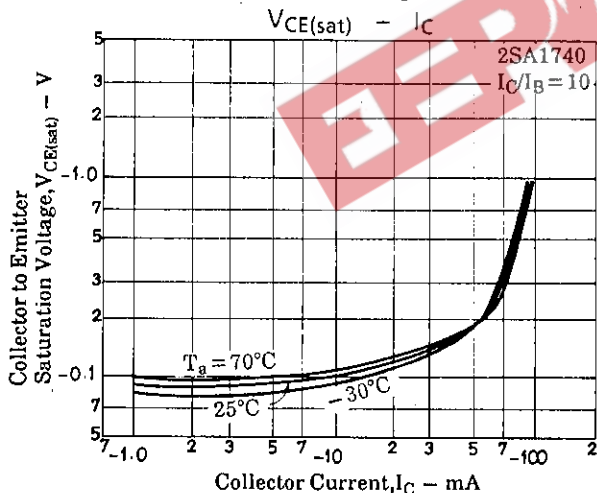
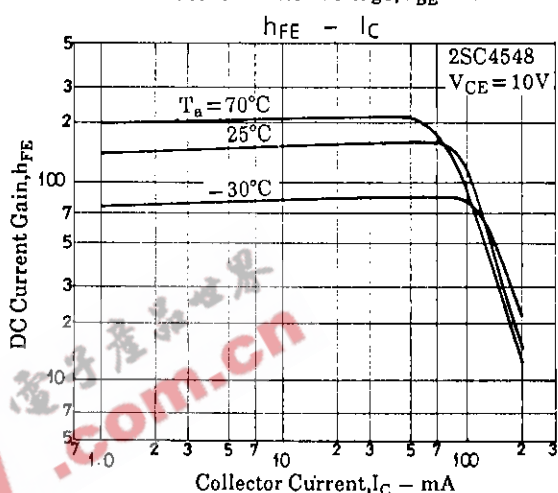
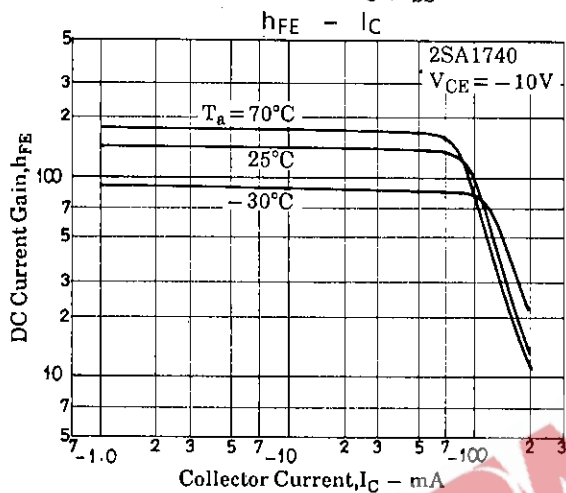
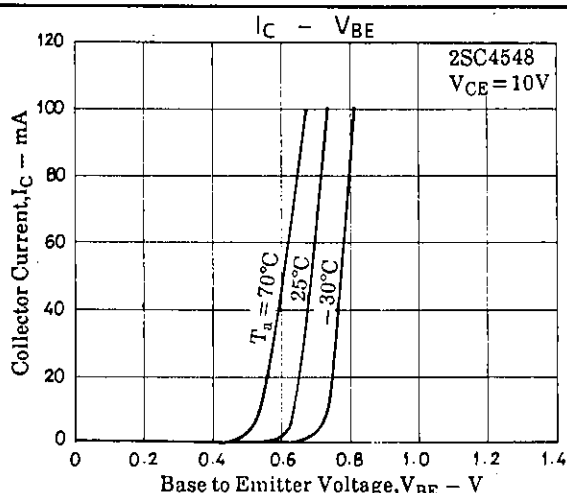
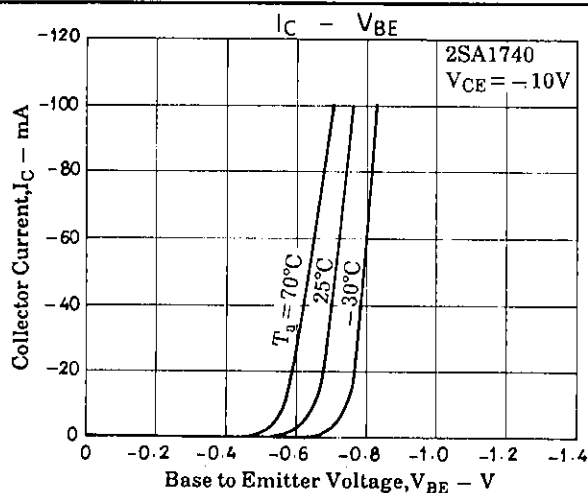
E: Emitter
C: Collector
B: Base

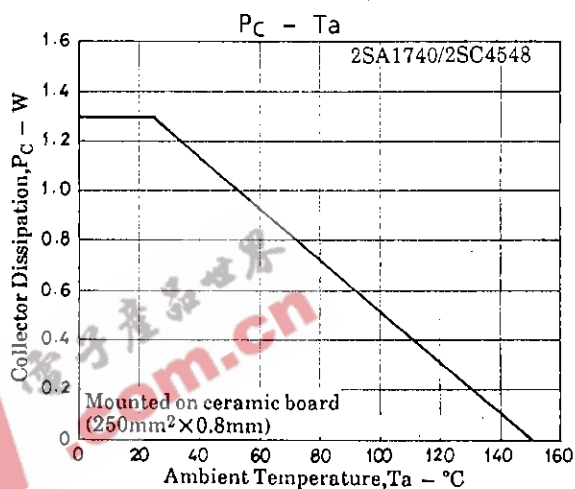
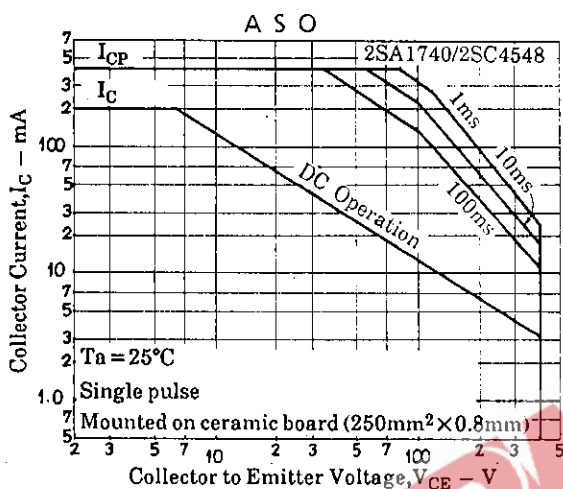
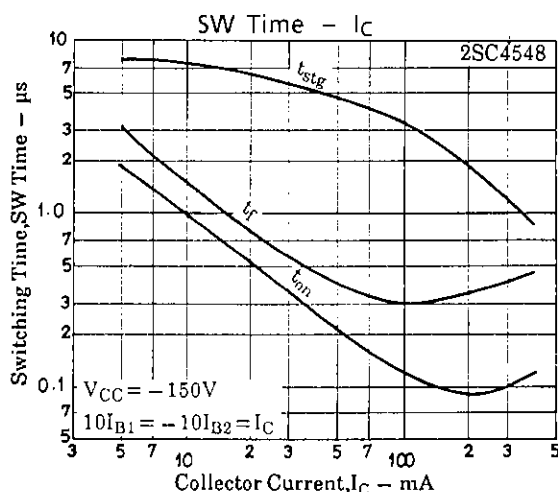
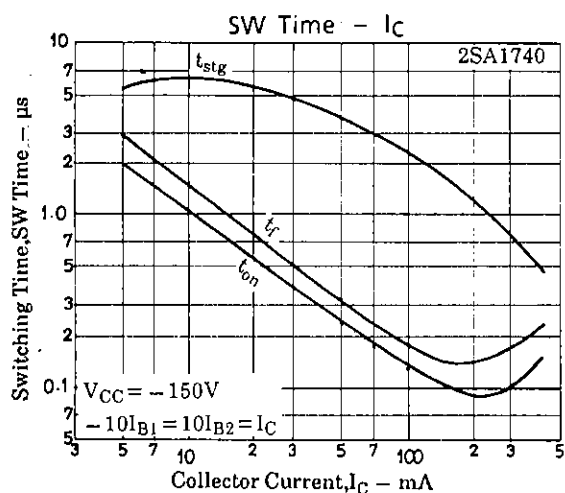
SANYO: PCP
(Bottom View)

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2SA1740/2SC4548





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