Ordering number: EN 3188

SANYO

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} linearlity

( ) : 2SA1740

Absolute Maximum Ratings at Ta = 25°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 (250mm²×0.8mm)	1.3	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}=(−)300V,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=(−)50mA	60※		200※	
Gain-Bandwidth Product	f_T	V_{CE}=(−)30V,I_C=(−)10mA		70		MHz
Output Capacitance	c_{ob}	V_{CB}=(−)30V,f=1MHz		(5)4		pF
Reverse Transfer Capacitance	c_{re}	V_{CB}=(−)30V,f=1MHz		(4)3		pF
C-E Saturation Voltage	$V_{CE(sat)}$	I_C=(−)50mA,I_B=(−)5mA			(−0.8)0.6	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=(−)10μA,I_E=0	(−)400			V
C-E Breakdown Voltage	$V_{(BR)CEO}$	I_C=(−)1mA,R_{BE}=∞	(−)400			V
E-B Breakdown Voltage	$V_{(BR)EBO}$	I_E=(−)10μA,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

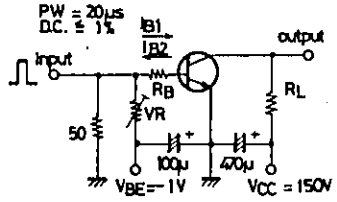
※: The 2SA1740/2SC4548 are classified by 50mA h_{FE} as follows:

60 D 120	100 E 200

Marking 2SA1740 : AK
2SC4548 : CN

h_{FE} rank : D,E

Switching Time Test Circuit

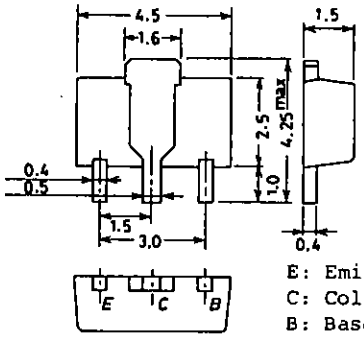


$10I_{B1} = -10I_{B2} = I_C = 50mA$
$R_L = 3k\Omega$, $R_B = 200\Omega$ at $I_C = 50mA$
For PNP, the polarity is reversed.

Unit (Resistance : Ω, Capacitance : F)

Package Dimensions 2038

(unit : mm)

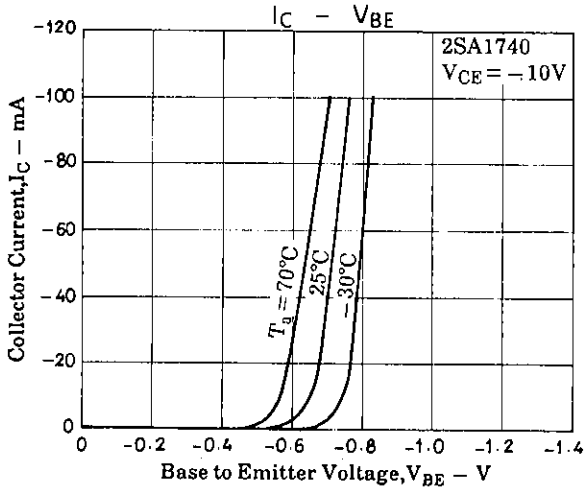


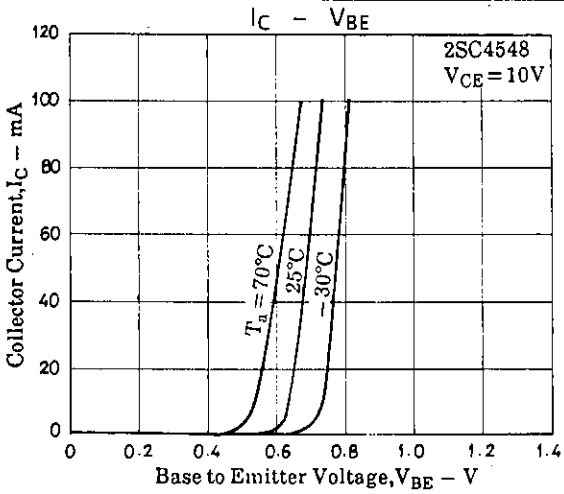
E: Emitter
C: Collector
B: Base

SANYO: PCP

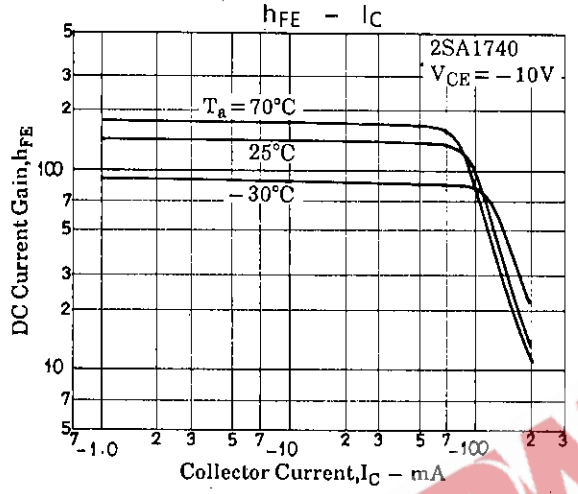
(Bottom View)

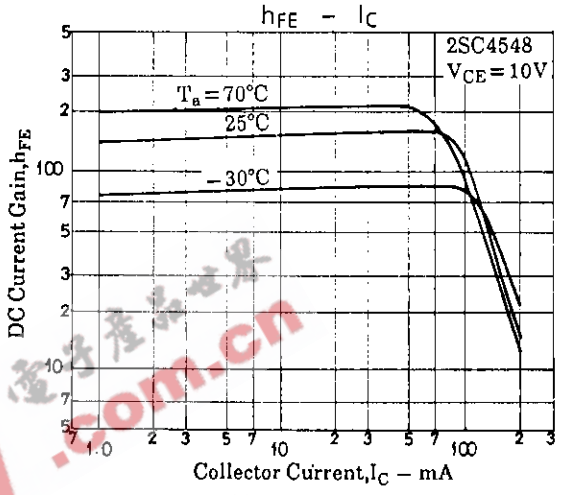
I_C – V_{BE}



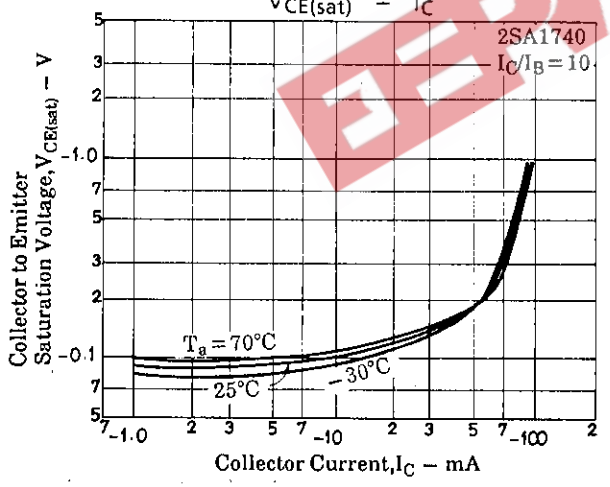


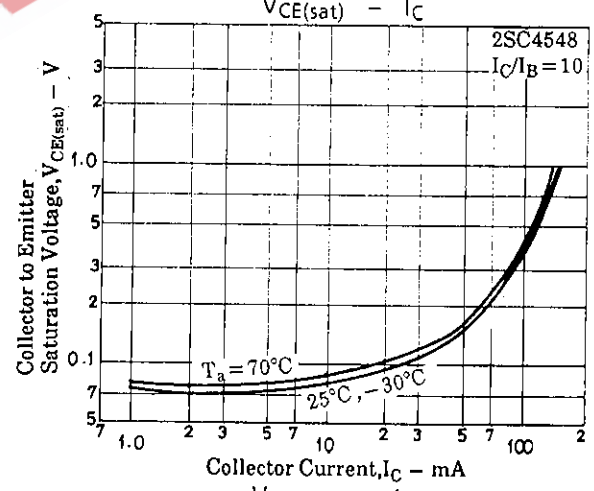
h_{FE} – I_C





$V_{CE(sat)}$ – I_C





$V_{BE(sat)}$ – I_C