Ordering number:EN3180B

PNP Epitaxial Planar Silicon Transistor

2SA1764

High-Speed Switching Applications

Features

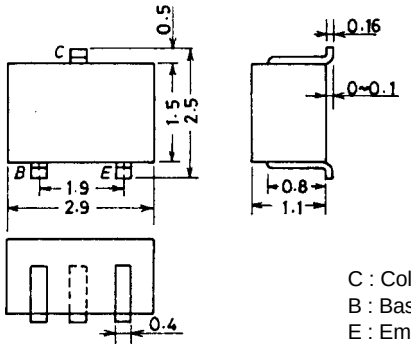
- Fast switching speed.
- Low collector saturation voltage.
- High gain-bandwidth product.
- Small collector capacitacne.
- Small-sized package permitting the 2SA1764-applied sets to be made small and slim.
- Complementary pair with th 2SC4453.

Package Dimensions

unit:mm

2018A

[2SA1764]



C : Collector
B : Base
E : Emitter

SANYO : CP

Specifications

Absolute Maximum Ratings at Ta = 25˚C

Parameter	Symbol	Conditions	Ratings	Unit
Collector-to-Base Voltage	V_{CBO}		–15	V
Collector-to-Emitter Voltage	V_{CEO}		–15	V
Emitter-to-Base Voltage	V_{EBO}		–5	V
Collector Current	I_C		–200	mA
Collector Current (Pulse)	I_{CP}		–500	mA
Base Current	I_B		–40	mA
Collector Dissipation	P_C		200	mW
Junction Temperature	Tj		150	˚C
Storage Temperature	Tstg		–55 to +150	˚C

Electrical Characteristics at Ta = 25˚C

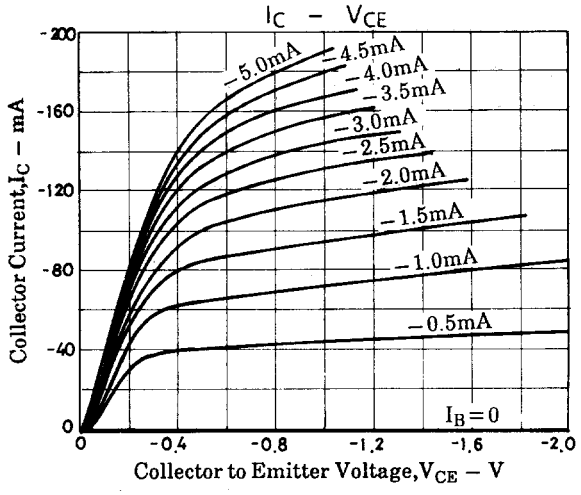
Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Collector Cutoff Current	I_{CBO}	V_{CB}=–8V, I_E=0			–0.1	μA
Emitter Cutoff Current	I_{EBO}	V_{EB}=–3V, I_C=0			–0.1	μA
DC Current Gain	h_{FE}	V_{CE}=–1V, I_C=–10mA	50	80	140	
Gain-Bandwidth Product	f_T	V_{CE}=–10V, I_C=–10mA	450	1000		MHz
Output Capacitance	C_{ob}	V_{CB}=–5V, f=1MHz		1.8	3.0	pF
Collector-to-Emitter Saturation Voltage	$V_{CE(sat)}$	I_C=–10mA, I_B=–1mA		–0.07	–0.20	V
Base-to-Emitter Saturation Voltage	$V_{BE(sat)}$	I_C=–10μA, I_B=–1mA		–0.80	–0.90	V

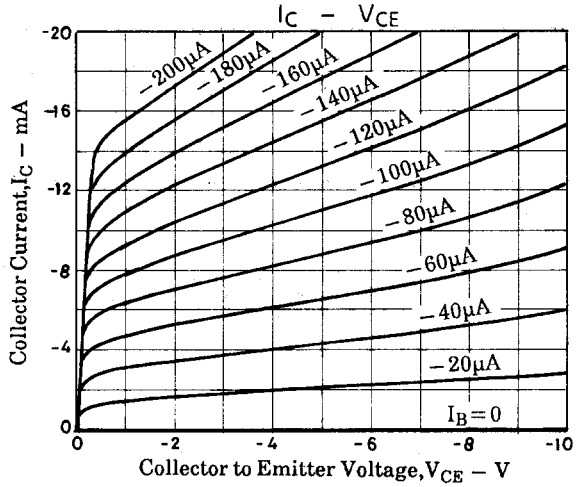
SANYO Electric Co.,Ltd. Semiconductor Bussiness Headquaters

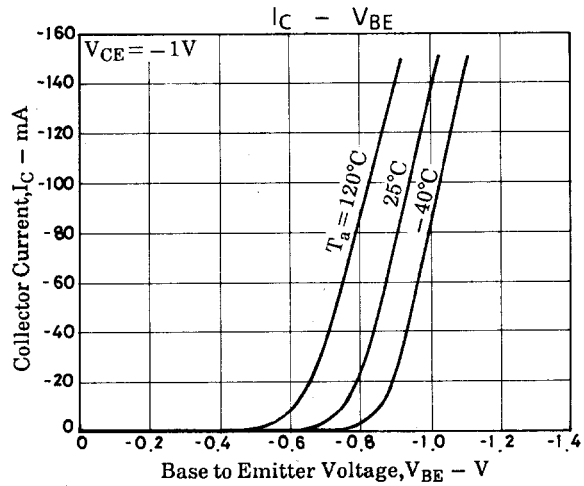
TOKYO OFFICE Tokyo Bldg., 1-10, 1 Chome, Ueno, Taito-ku, TOKYO, 110-8534 JAPAN

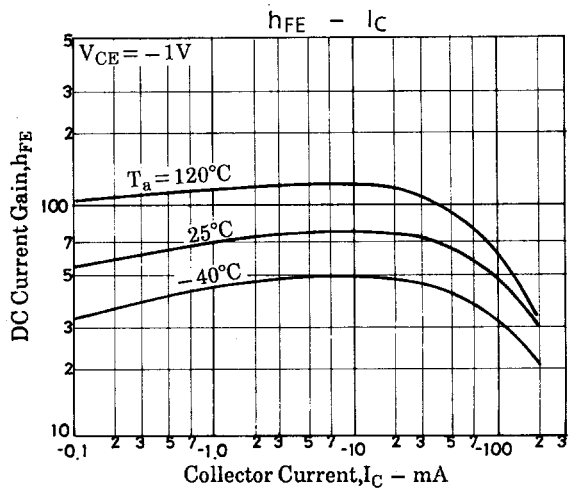
Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Collector-to-Base Breakdown Voltage	$V_{(BR)CBO}$	I_C=–10μA, I_E=0	–15			V
Collector-to-Emitter Breakdown Voltage	$V_{(BR)CEO}$	I_C=–1mA, R_{BE}=∞	–15			V
Emitter-to-Base Breakdown Voltage	$V_{(BR)EBO}$	I_E=–10μA, I_C=0	–5			V
Turn-ON Time	t_{on}	See specified Test Circuit		11		ns
Storage Time	t_{stg}	See specified Test Circuit		21		ns
Turn-OFF Time	t_{off}	See specified Test Circuit		19		ns

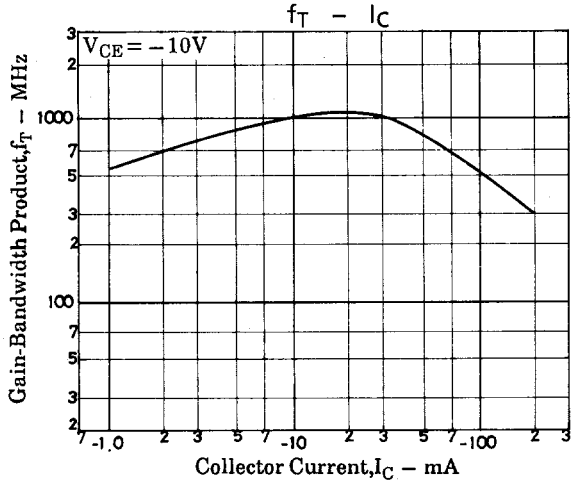
Marking : FS

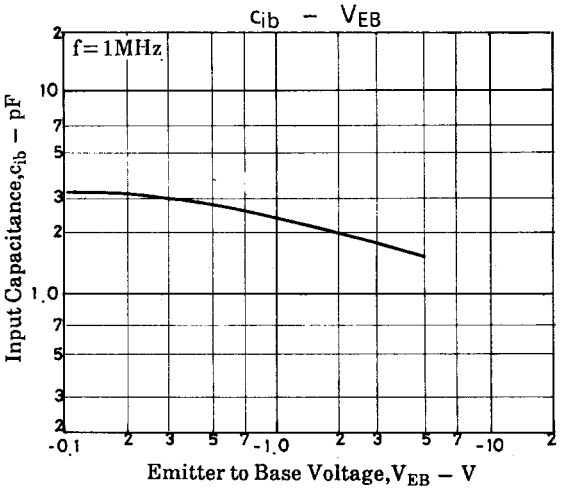


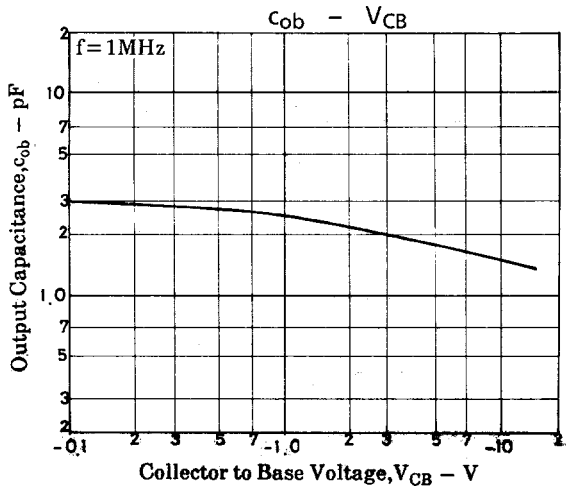


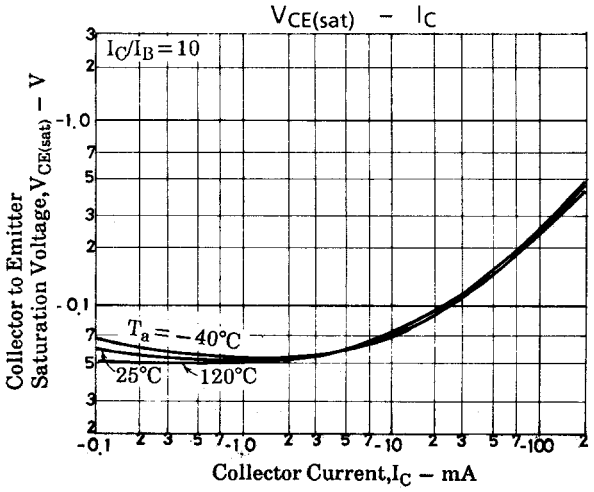


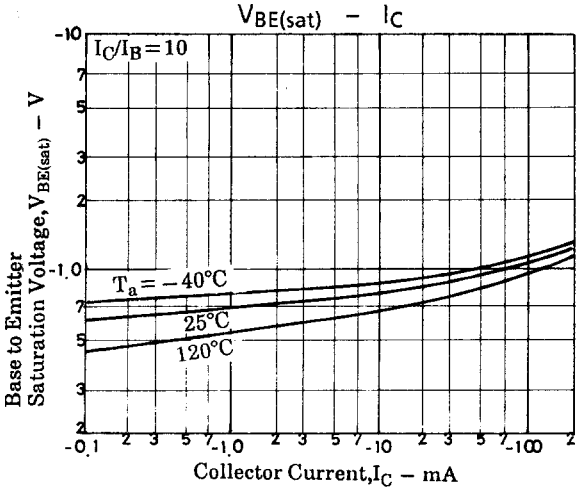


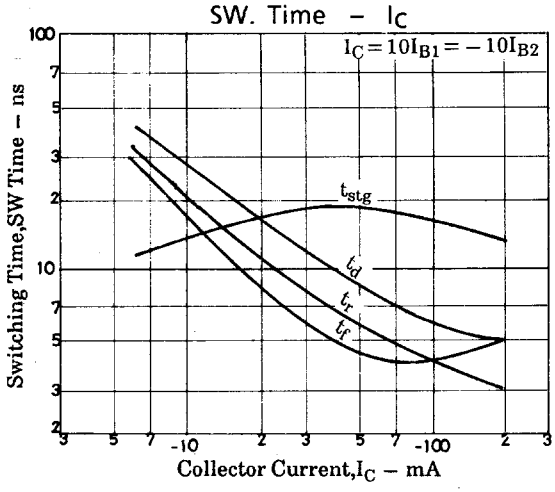


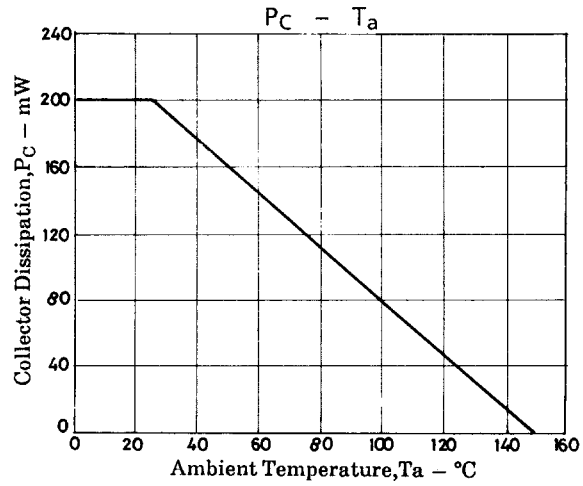



Cob – VCB
f=1MHz
Output Capacitance,Cob – pF
Collector to Base Voltage,VCB – V


VCE(sat) – IC
IC/IB=10
Collector to Emitter Saturation Voltage,VCE(sat) – V
Ta=–40°C
25°C
120°C
Collector Current,IC – mA


VBE(sat) – IC
IC/IB=10
Base to Emitter Saturation Voltage,VBE(sat) – V
Ta=–40°C
25°C
120°C
Collector Current,IC – mA


SW. Time – IC
IC=10IB1=–10IB2
Switching Time,SW Time – ns
tstg
td
tr
tf
Collector Current,IC – mA


PC – Ta
Collector Dissipation,PC – mW
Ambient Temperature,Ta – °C