



TR Graph

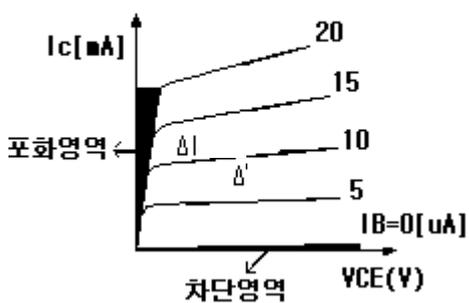
TR , range . Parameter static

Parameter

Cob	Collector Base 가 . collector (collector capacity) 가
fT	가 fT . 1 [가]
hFE	IB Ic Ic IB . (Ic/IB)
IC	(C)
PC	(Ta)=25 (C) ()
rbb'	Base (Base) . Base Base
Ta	(Ambient temperature) 가 si 150 가
VCEO	(B) (C) (E) [VCE .]

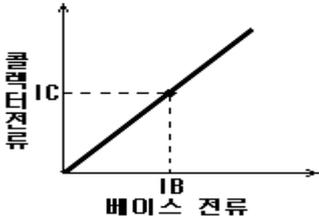
(static characteristics)

VCE - Ic ()



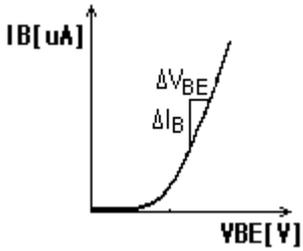
V_{CE} - I_C Collector-Emitter Base
I_C 가
Q-point
, Cut-off Region, Saturation Region, Active Region

IB - IC ()



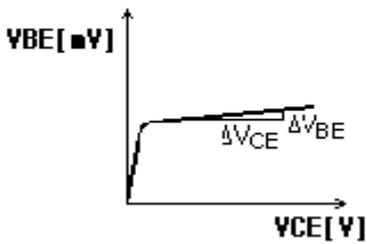
I_c , V_{CE} IB 가
 $= I_c / I_B$ 가 TR

V_{BE} - I_B ()



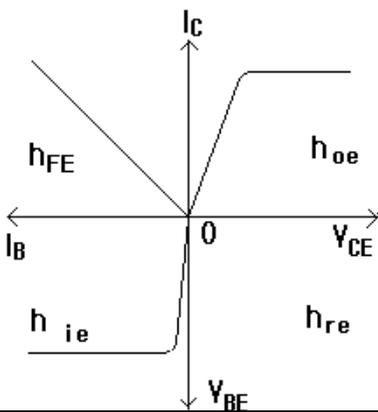
가 IB V_{CE} V_{BE}
 Base Emitter가 PN PN

V_{BE} - V_{CE} ()



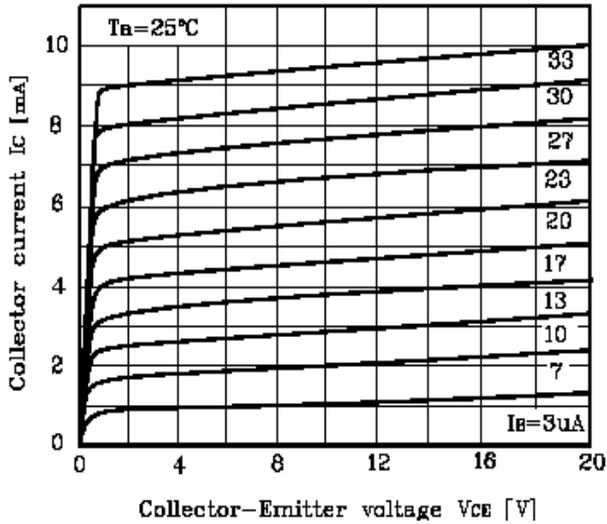
V_{CE} V_{BE}
 $0.6 \sim 0.8mV$

(static characteristics)



graph

TR TD



$V_{CE} - I_c$

I_B V_{CE} I_c

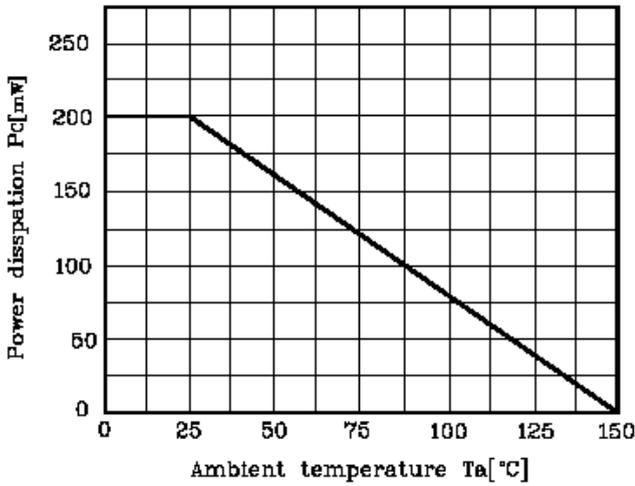
$V_{CE} - I_c$ ()

V_{CE}

TR (V_{CE})

(I_B) 가 BJT TR

TR



$P_c - T_a$

가 Package, Bonding

wire, 가 가

Bonding wire

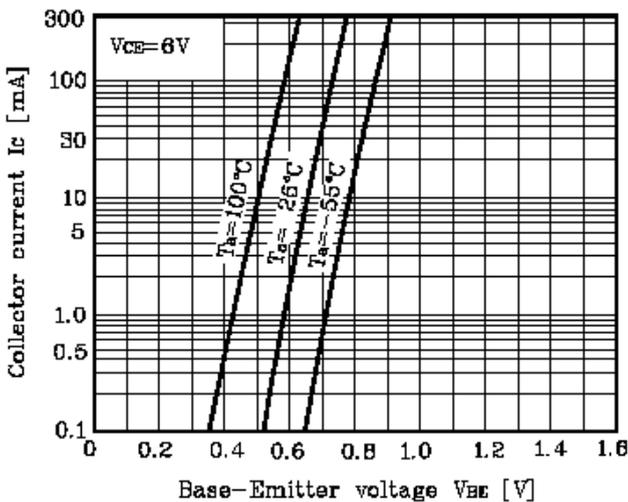
planar Type Si 125 ~150

Junction 150 ~180

가

P_c T_a

Graph



$V_{BE} - I_c$

Base Emitter -2mV/

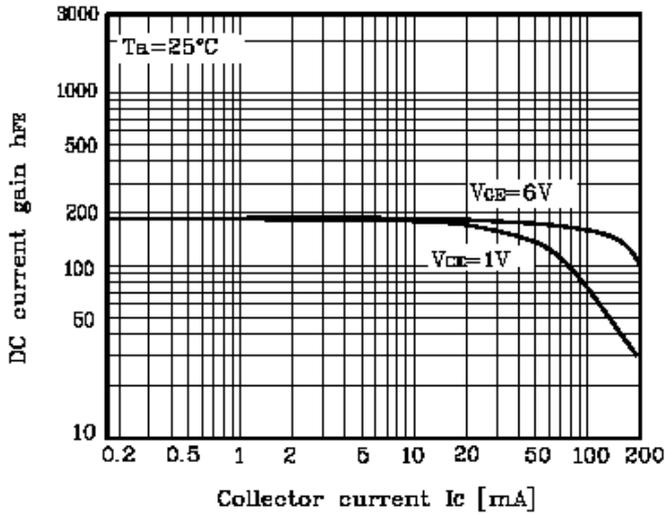
가

V_{BE} .25 -55

-75 가

-2mV/ X -75 = 150mV

h_{FE} - I_C



h_{FE}
TR Collector

I_C
가
h_{FE} - I_C
(linearity)
swing Collector

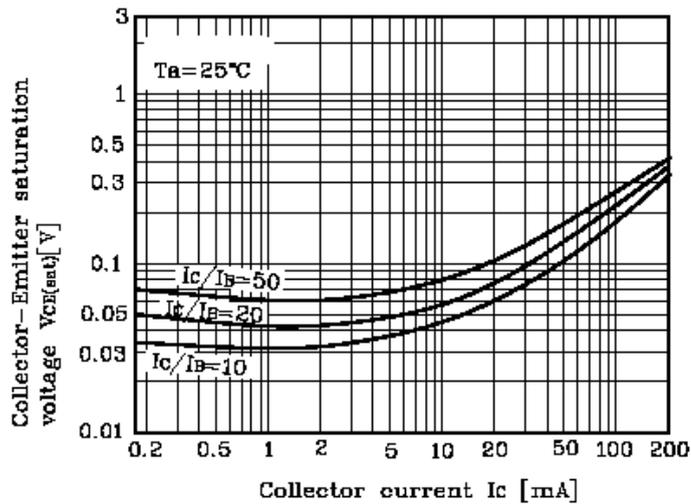
*V_{CE}=6V

*V_{CE}=1V
switching

graph

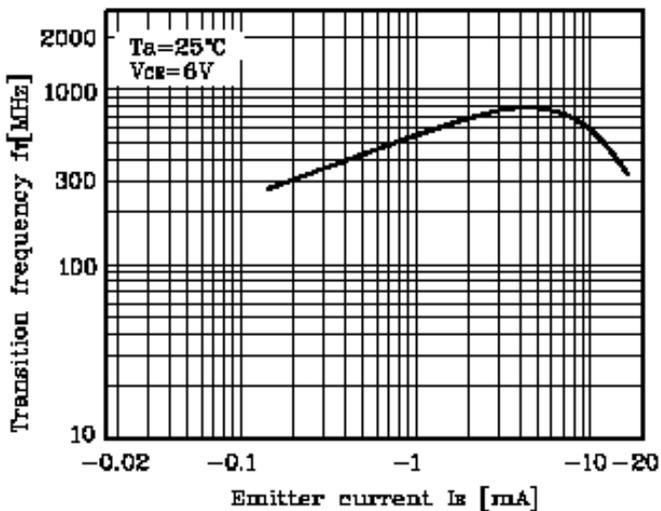
graph

V_{CE(sat)} - I_C



Collector Junction Frame
V_{CE(sat)}
, collector Back Side
saturation . TR

f_T - I_E



Transistor
f_T(Transition Frequency)
level

TR