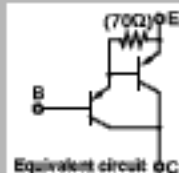


Darlington

2SB1686



Silicon PNP Epitaxial Planar Transistor (Complement to type 2SD2642)

Application : Audio, Series Regulator and General Purpose

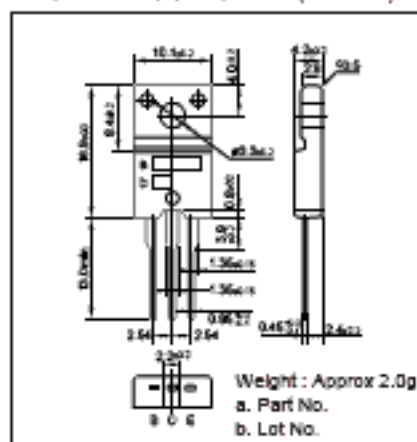
Absolute maximum ratings (Ta=25°C)

Symbol	Rating	Unit
V _{ceo}	-110	V
V _{eco}	-110	V
V _{ebo}	-5	V
I _c	-5	A
I _e	-1	A
P _c	30(Tc=25°C)	W
T _j	150	°C
T _{stg}	-55 to +150	°C

Electrical Characteristics (Ta=25°C)

Symbol	Conditions	Rating	Unit
I _{ceo}	V _{ce} =-110V	-100max	μA
I _{eco}	V _{ce} =-5V	-100max	μA
V _{be(sat)}	I _c =-30mA	-110min	V
h _{FE}	V _{ce} =-4V, I _c =-5A	5000min*	
V _{ce(sat)}	I _c =-5A, I _b =-5mA	-2.5max	V
V _{ce(sat)}	I _c =-5A, I _b =-5mA	-3.0max	V
f _T	V _{ce} =-12V, I _c =0.5A	100typ	MHz
C _{ob}	V _{ce} =-10V, f=1MHz	110typ	pF

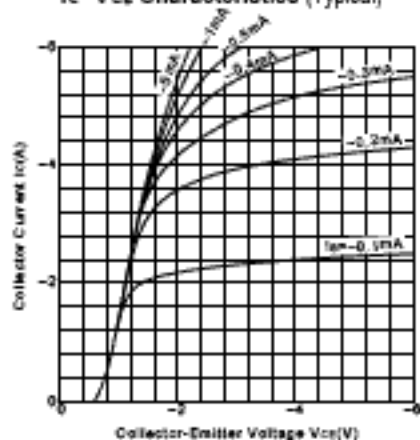
External Dimensions FM20(TO220F)



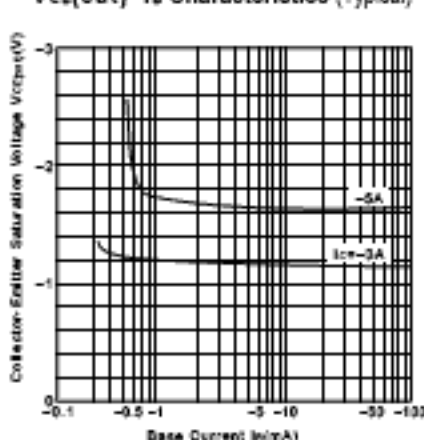
Typical Switching Characteristics (Common Emitter)

V _{cc} (V)	R _b (Ω)	I _c (A)	V _{ce(sat)} (V)	V _{be(sat)} (V)	I _{b1} (mA)	I _{b2} (mA)	t _{on} (μs)	t _{stg} (μs)	t _f (μs)
-30	6	-5	-10	5	-5	5	1.1typ	3.2typ	1.1typ

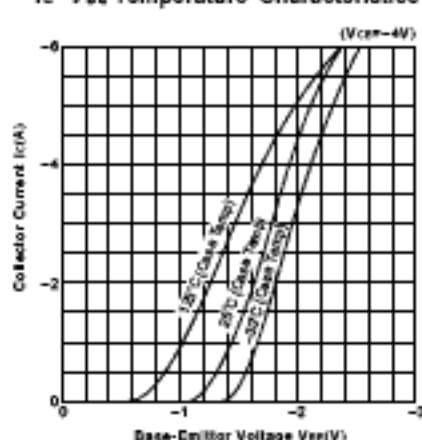
I_c-V_{ce} Characteristics (Typical)



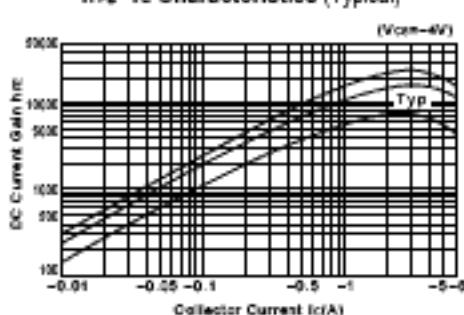
V_{ce(sat)}-I_b Characteristics (Typical)



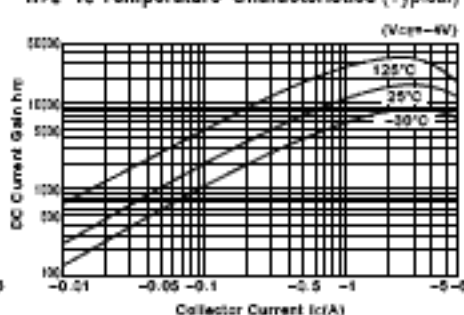
I_c-V_{be} Temperature Characteristics (Typical)



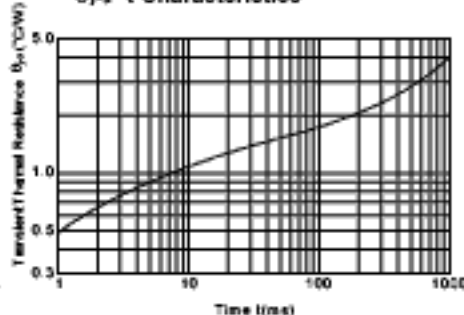
h_{FE}-I_c Characteristics (Typical)



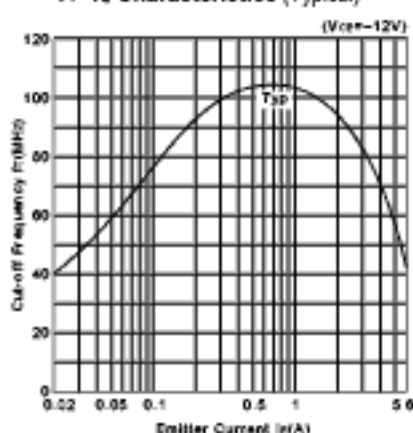
h_{FE}-I_c Temperature Characteristics (Typical)



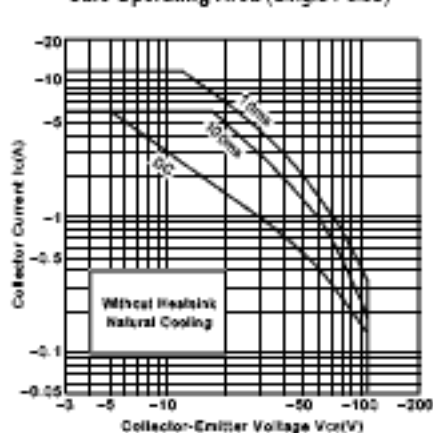
θ_{J-c}-t Characteristics



f_T-I_c Characteristics (Typical)



Safe Operating Area (Single Pulse)



P_c-T_a Derating

