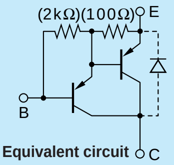
Darlington 2SB1351



Equivalent circuit

Silicon PNP Epitaxial Planar Transistor

Application : Driver for Printer Head, Solenoid, Relay, Motor and General Purpose

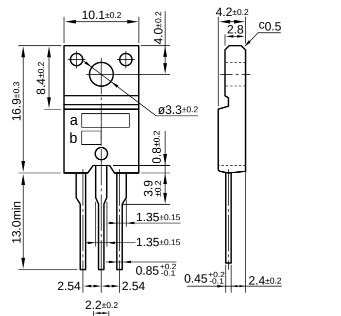
Absolute maximum ratings (Ta=25°C)

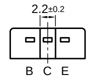
Symbol	2SB1351	Unit
V_{CBO}	–60	V
V_{CEO}	–60	V
V_{EBO}	–6	V
I_C	–12(Pulse–20)	A
I_B	–1	A
P_C	30(Tc=25°C)	W
Tj	150	°C
Tstg	–55 to +150	°C

Electrical Characteristics (Ta=25°C)

Symbol	Condition	2SB1351	Unit
I_{CBO}	V_{CB}=–60V	–10max	μA
I_{EBO}	V_{EB}=–6V	–10max	mA
$V_{(BR)CEO}$	I_C=–10mA	–60min	V
h_{FE}	V_{CE}=–4V, I_C=–10A	2000min	
$V_{CE(sat)}$	I_C=–10A, I_B=–20mA	–1.5max	V
$V_{BE(sat)}$	I_C=–10A, I_B=–20mA	–2.0max	V
f_T	V_{CE}=–12V, I_E=1A	130typ	MHz
C_{OB}	V_{CB}=–10V, f=1MHz	170typ	pF

External Dimensions FM20(TO220F)



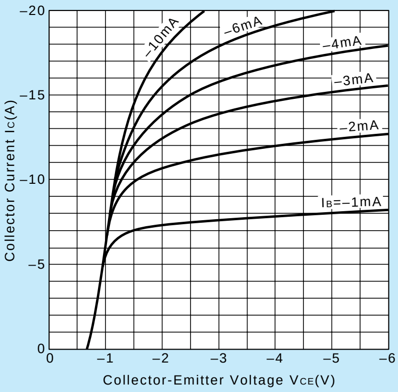


Weight : Approx 2.0g
a. Type No.
b. Lot No.

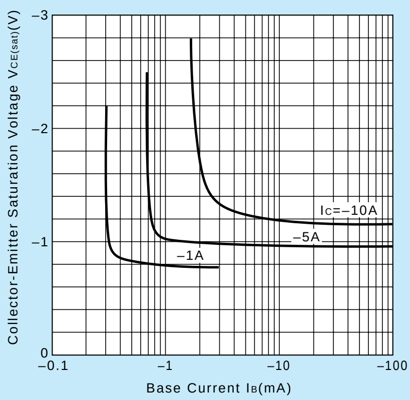
Typical Switching Characteristics (Common Emitter)

V_{CC} (V)	R_L (Ω)	I_C (A)	V_{BB1} (V)	V_{BB2} (V)	I_{B1} (mA)	I_{B2} (mA)	ton (μs)	tstg (μs)	tf (μs)
–40	4	–10	–10	5	–20	20	0.7typ	1.5typ	0.6typ

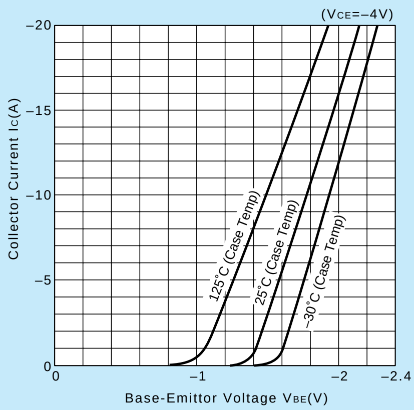
I_C–V_{CE} Characteristics (Typical)



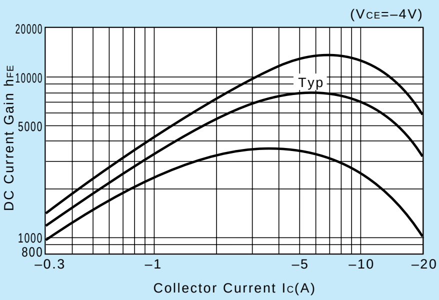
$V_{CE(sat)}$–I_B Characteristics (Typical)



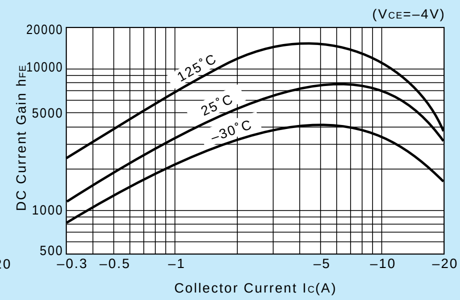
I_C–V_{BE} Temperature Characteristics (Typical)



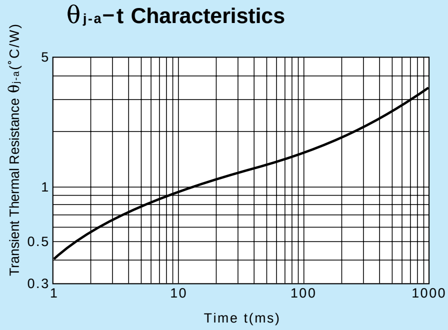
h_{FE}–I_C Characteristics (Typical)



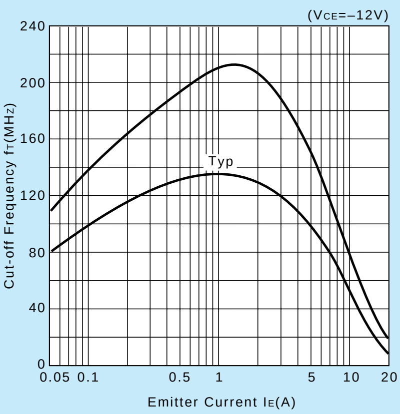
h_{FE}–I_C Temperature Characteristics (Typical)



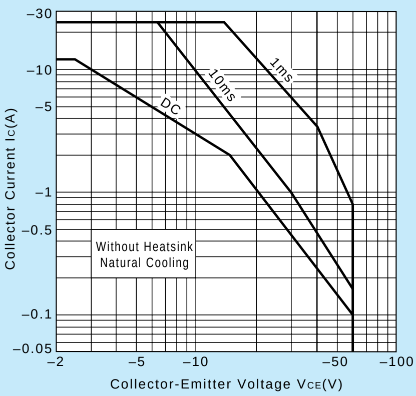
θ_{j-a}–t Characteristics



f_T–I_E Characteristics (Typical)



Safe Operating Area (Single Pulse)



P_C–Ta Derating