2SC3851/3851A

Silicon NPN Epitaxial Planar Transistor (Complement to type 2SA1488/A)

Application : Audio and PPC High Voltage Power Supply, and General Purpose

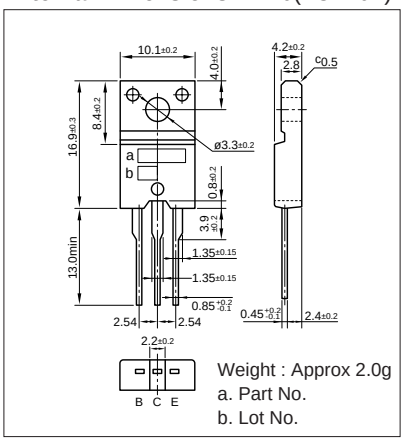
■Absolute maximum ratings (Ta=25°C)

Symbol	Ratings 2SC3851	Ratings 2SC3851A	Unit
V_{CBO}	80	100	V
V_{CEO}	60	80	V
V_{EBO}	6		V
I_C	4		A
I_B	1		A
P_C	25(Tc=25°C)		W
Tj	150		°C
Tstg	–55 to +150		°C

■Electrical Characteristics (Ta=25°C)

Symbol	Conditions	Ratings 2SC3851	Ratings 2SC3851A	Unit
I_{CBO}		100max		μA
	V_{CB}=	80	100	V
I_{EBO}	V_{EB}=6V	100max		μA
$V_{(BR)CEO}$	I_C=25mA	60min	80min	V
h_{FE}	V_{CE}=4V, I_C=1A	40 to 320		
$V_{CE(sat)}$	I_C=2A, I_B=0.2A	0.5max		V
f_T	V_{CE}=12V, I_E=–0.2A	15typ		MHz
C_{OB}	V_{CB}=10V, f=1MHz	60typ		pF

External Dimensions FM20(TO220F)

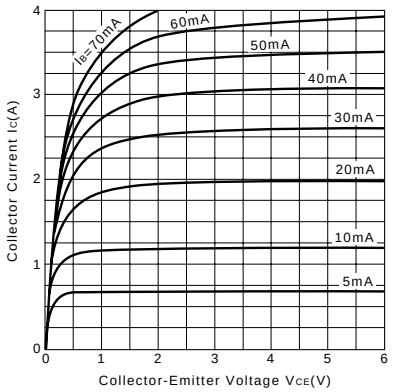


Weight : Approx 2.0g
a. Part No.
b. Lot No.

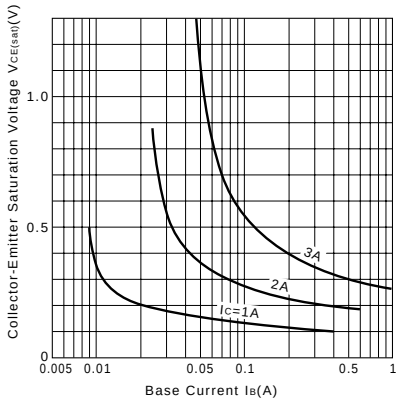
■Typical Switching Characteristics (Common Emitter)

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)
12	6	2	10	–5	200	–200	0.2typ	1typ	0.3typ

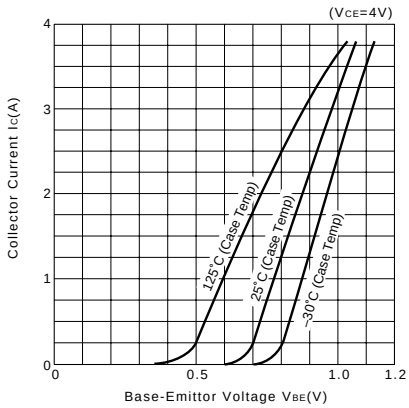
I_C–V_{CE} Characteristics (Typical)



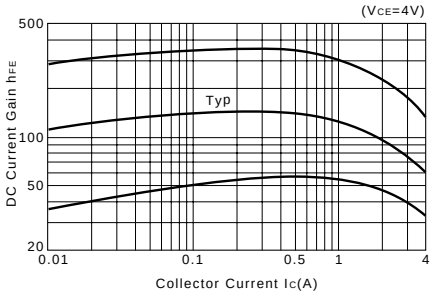
V_{CE}(sat)–I_B Characteristics (Typical)



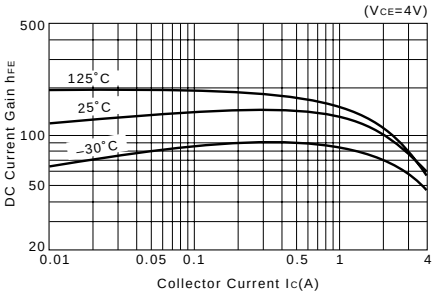
I_C–V_{BE} Temperature Characteristics (Typical)



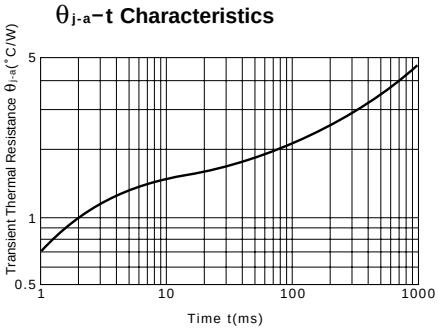
h_{FE}–I_C Characteristics (Typical)



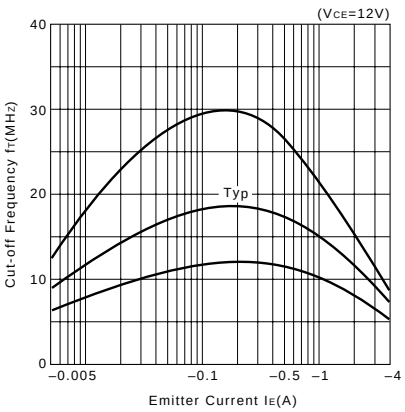
h_{FE}–I_C Temperature Characteristics (Typical)



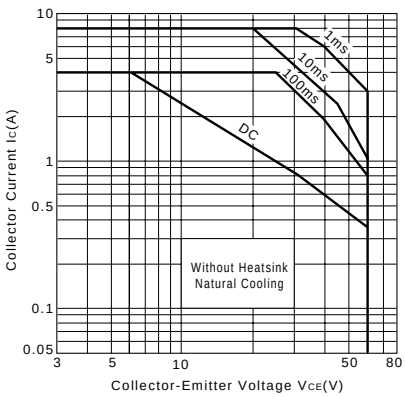
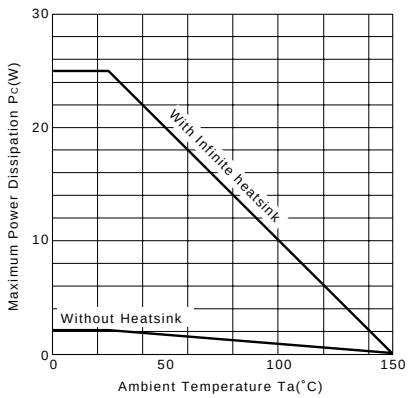
$\theta_{j\text{-}a}$–t Characteristics



f_T–I_E Characteristics (Typical)



Safe Operating Area (Single Pulse)



Pc–Ta Derating