High hFE Low VCE (sat) 2SC3852/3852A

Silicon NPN Epitaxial Planar Transistor

Application : Driver for Solenoid and Motor, Series Regulator and General Purpose

■**Absolute maximum ratings** (Ta=25°C)

Symbol	Ratings 2SC3852	Ratings 2SC3852A	Unit
V_{CBO}	80	100	V
V_{CEO}	60	80	V
V_{EBO}	6		V
I_C	3		A
I_B	1		A
P_C	25(Tc=25°C)		W
T_j	150		°C
T_{stg}	–55 to +150		°C

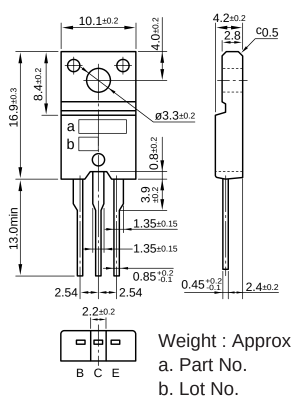
■**Electrical Characteristics** (Ta=25°C)

Symbol	Conditions	Ratings 2SC3852	Ratings 2SC3852A	Unit
I_{CBO}		10max		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=0.5A	500min		
$V_{CE(sat)}$	I_C=2A, I_B=50mA	0.5max		V
f_T	V_{CE}=12V, I_E=–0.2A	15typ		MHz
C_{OB}	V_{CB}=10V, f=1MHz	50typ		pF

■**Typical Switching Characteristics (Common Emitter)**

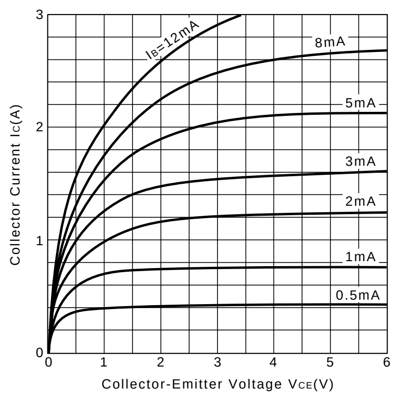
V_{CC} (V)	R_L (Ω)	I_C (A)	V_{BB1} (V)	V_{BB2} (V)	I_{B1} (mA)	I_{B2} (mA)	ton (μs)	tstg (μs)	tf (μs)
20	20	1.0	10	–5	15	–30	0.8typ	3.0typ	1.2typ

External Dimensions FM20(TO220F)

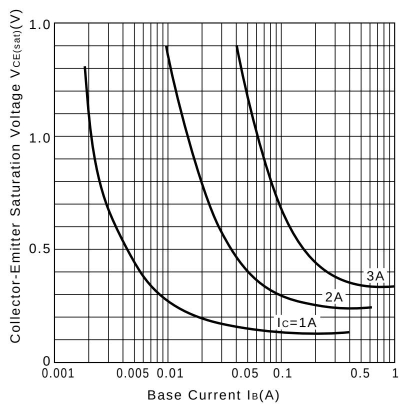


Weight : Approx 2.0g
a. Part No.
b. Lot No.

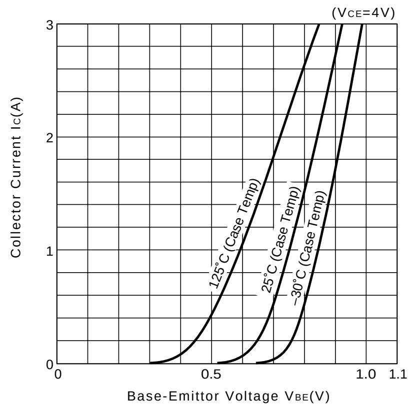
I_C–V_{CE} Characteristics (Typical)



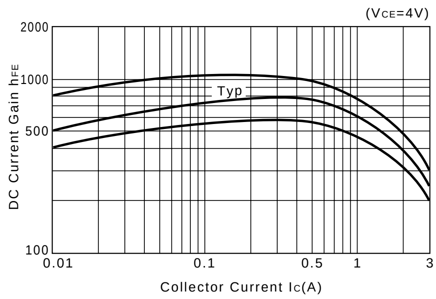
$V_{CE(sat)}$–I_B Characteristics (Typical)



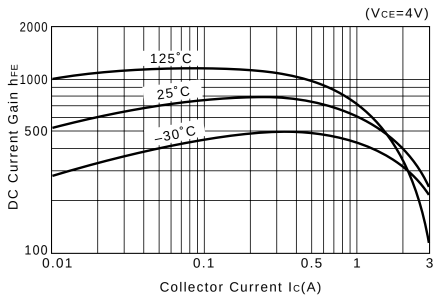
I_C–V_{BE} Temperature Characteristics (Typical)



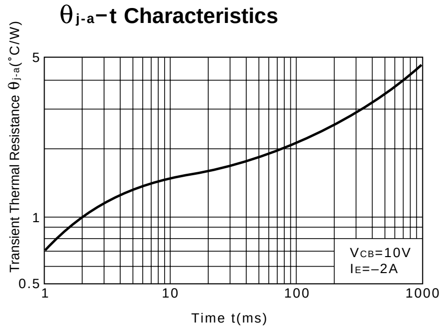
h_{FE}–I_C Characteristics (Typical)



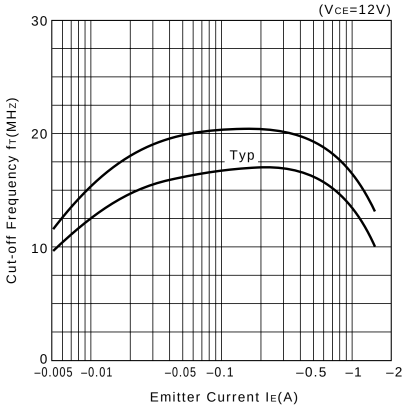
h_{FE}–I_C Temperature Characteristics (Typical)



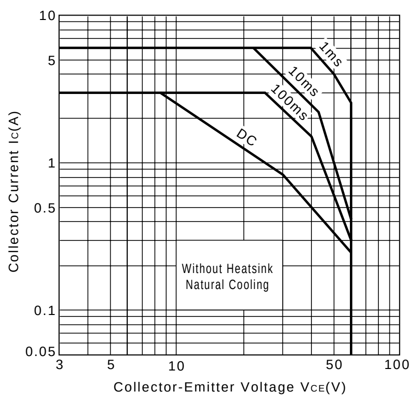
θ_{j-a}–t Characteristics



f_T–I_E Characteristics (Typical)



Safe Operating Area (Single Pulse)



Pc–Ta Derating