2SC4304

Silicon NPN Triple Diffused Planar Transistor (High Voltage High Speed Switchihg Transistor)

Application : Switching Regulator and General Purpose

■Absolute maximum ratings (Ta=25°C)

Symbol	Ratings	Unit
V_{CBO}	900	V
V_{CEO}	800	V
V_{EBO}	7	V
I_C	3(Pulse6)	A
I_B	1.5	A
P_C	35(Tc=25°C)	W
Tj	150	°C
Tstg	–55 to +150	°C

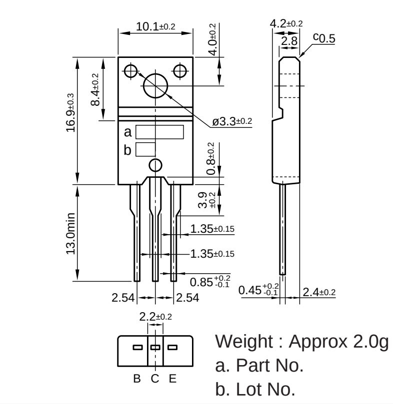
■Electrical Characteristics (Ta=25°C)

Symbol	Conditions	Ratings	Unit
I_{CBO}	V_{CB}=800V	100max	μA
I_{EBO}	V_{EB}=7V	100max	μA
$V_{(BR)CEO}$	I_C=10mA	800min	V
h_{FE}	V_{CE}=4V, I_C=0.7A	10 to 30	
V_{CE}(sat)	I_C=0.7A, I_B=0.14A	0.5max	V
V_{BE}(sat)	I_C=0.7A, I_B=0.14A	1.2max	V
f_T	V_{CE}=12V, I_E=–0.3A	15typ	MHz
C_{OB}	V_{CB}=10V, f=1MHz	50typ	pF

■Typical Switching Characteristics (Common Emitter)

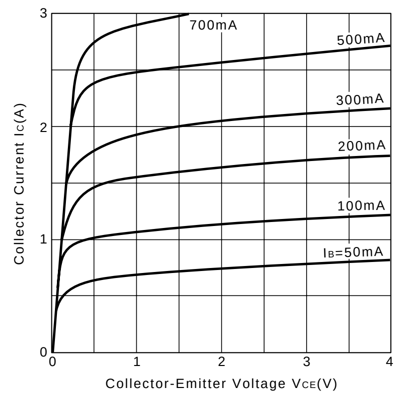
V_{CC} (V)	R_L (Ω)	I_C (A)	V_{BB1} (V)	V_{BB2} (V)	I_{B1} (A)	I_{B2} (A)	ton (μs)	tstg (μs)	tf (μs)
250	357	0.7	10	–5	0.1	–0.35	0.7max	4.0max	0.7max

External Dimensions FM20(TO220F)

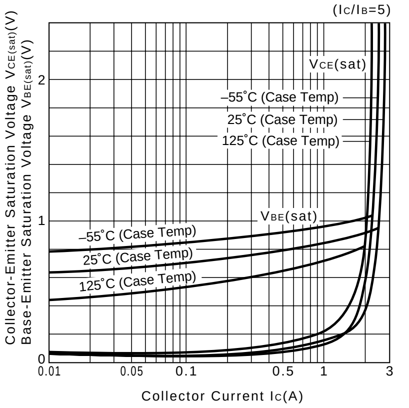


Weight : Approx 2.0g
a. Part No.
b. Lot No.

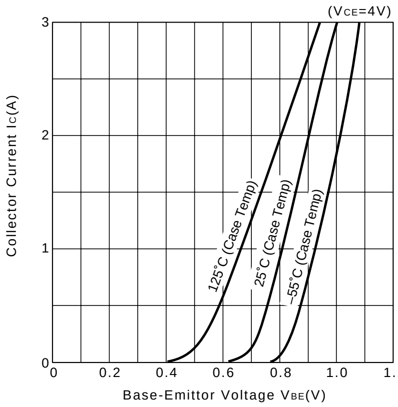
I_C–V_{CE} Characteristics (Typical)



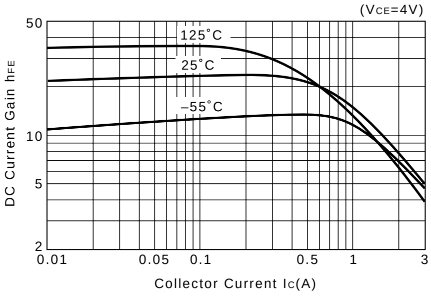
V_{CE}(sat),V_{BE}(sat)–I_C Temperature Characteristics (Typical)



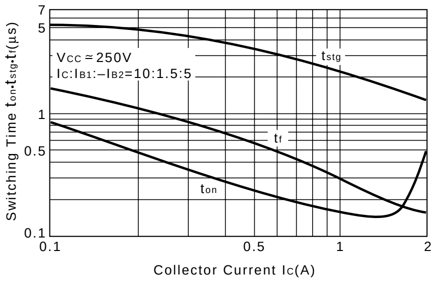
I_C–V_{BE} Temperature Characteristics (Typical)



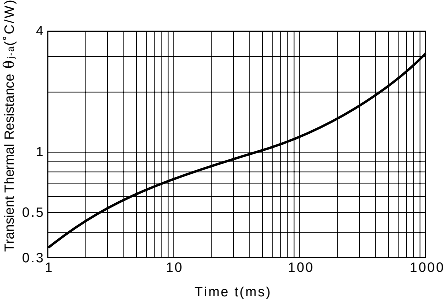
h_{FE}–I_C Characteristics (Typical)



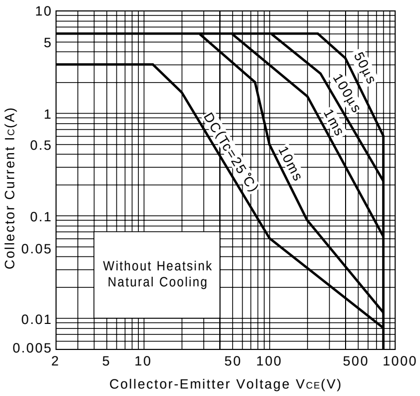
t_{on}•t_{stg}•t_f–I_C Characteristics (Typical)



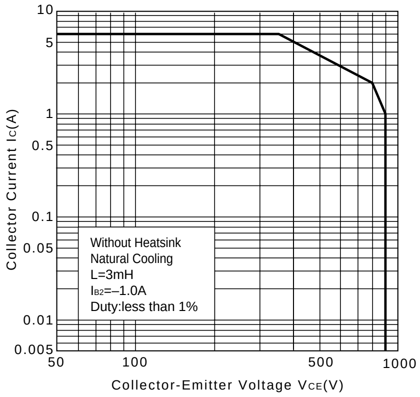
θj-a–t Characteristics



Safe Operating Area (Single Pulse)



Reverse Bias Safe Operating Area



P_C–Ta Derating