High h_{FE} Low V_{CE} (sat) 2SC4024

Silicon NPN Epitaxial Planar Transistor

Application : DC-DC Converter, Emergency Lighting Inverter and General Purpose

■Absolute maximum ratings (Ta=25°C)

Symbol	Ratings	Unit
V_{CBO}	100	V
V_{CEO}	50	V
V_{EBO}	15	V
I_C	10	A
I_B	3	A
P_C	35(Tc=25°C)	W
Tj	150	°C
Tstg	–55 to +150	°C

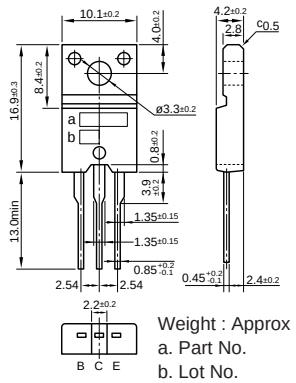
■Electrical Characteristics (Ta=25°C)

Symbol	Conditions	Ratings	Unit
I_{CBO}	V_{CB}=100V	10max	μA
I_{EBO}	V_{EB}=15V	10max	μA
$V_{(BR)CEO}$	I_C=25mA	50min	V
h_{FE}	V_{CE}=4V, I_C=1A	300to1600	
$V_{CE(sat)}$	I_C=5A, I_B=0.1A	0.5max	V
f_T	V_{CE}=12V, I_E=–0.5A	24typ	MHz
C_{OB}	V_{CB}=10V, f=1MHz	150typ	pF

■Typical Switching Characteristics (Common Emitter)

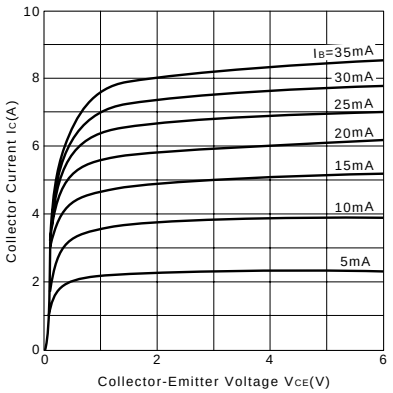
V_{CC} (V)	R_L (Ω)	I_C (A)	I_{B1} (A)	I_{B2} (A)	ton (μs)	tstg (μs)	tf (μs)
20	4	5	0.1	–0.1	0.5typ	2.0typ	0.5typ

External Dimensions FM20(TO220F)

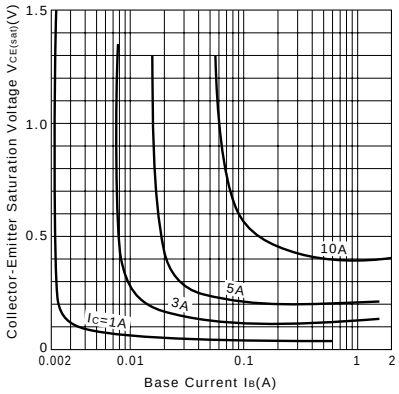


Weight : Approx 2.0g
a. Part No.
b. Lot No.

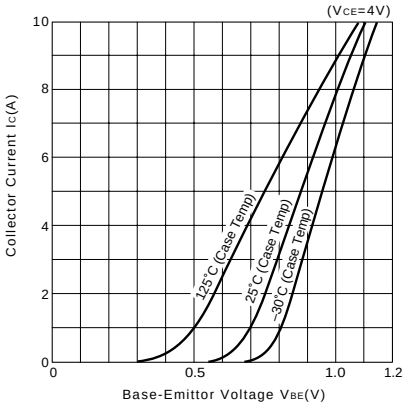
I_C–V_{CE} Characteristics (Typical)



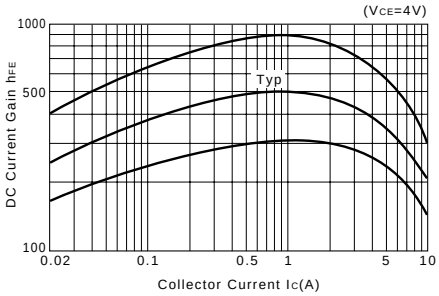
V_{CE}(sat)–I_B Characteristics (Typical)



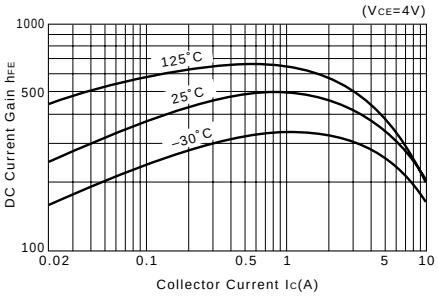
I_C–V_{BE} Temperature Characteristics (Typical)



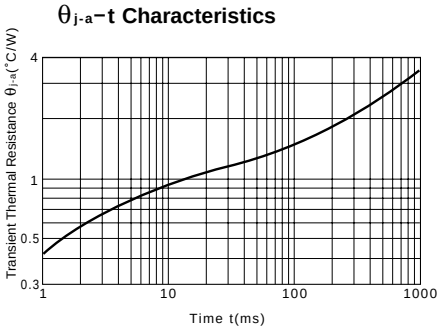
h_{FE}–I_C Characteristics (Typical)



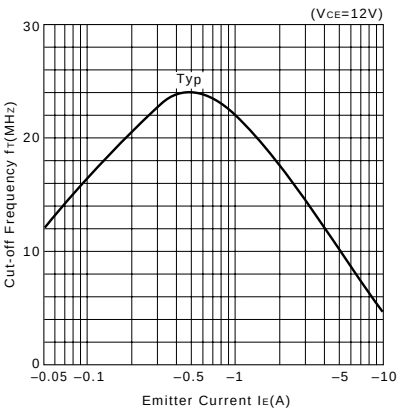
h_{FE}–I_C Temperature Characteristics (Typical)



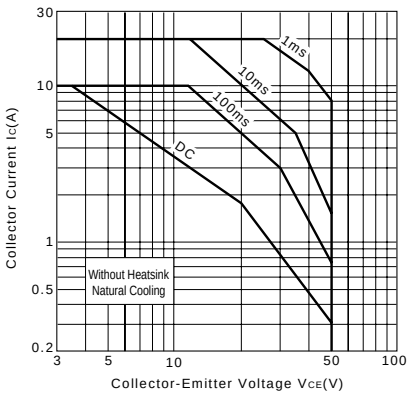
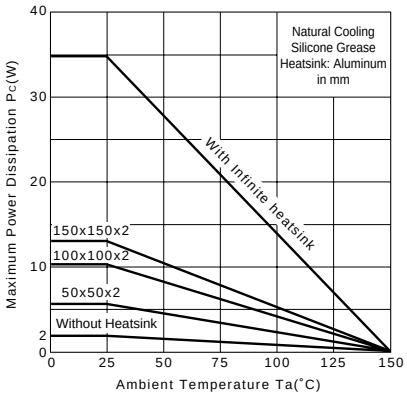
$\theta_{j\text{-}a}$–t Characteristics



f_T–I_E Characteristics (Typical)



Safe Operating Area (Single Pulse)



Pc–Ta Derating