



THE DATASHEET OF 2SC4024



High h_{FE}
Low $V_{CE(sat)}$

2SC4024

Silicon NPN Epitaxial Planar Transistor

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

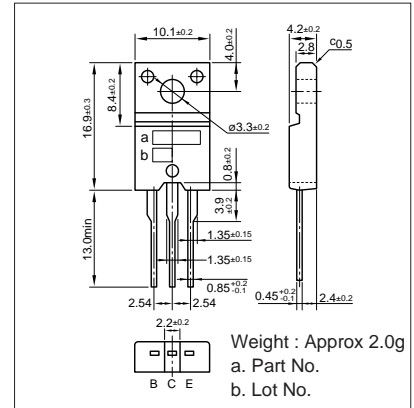
■ Absolute maximum ratings (Ta=25°C)

Symbol	Ratings	Unit
V _{CB0}	100	V
V _{CE0}	50	V
V _{EB0}	15	V
I _C	10	A
I _B	3	A
P _C	35(T _C =25°C)	W
T _J	150	°C
T _{stg}	-55 to +150	°C

■ Electrical Characteristics (Ta=25°C)

Symbol	Conditions	Ratings	Unit
I _{CB0}	V _{CB} =100V	10max	μA
I _{EB0}	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 _r	V _{CE} =12V, I _E =-0.5A	24typ	MHZ
COB	V _{CB} =10V, f=1MHZ	150typ	pF

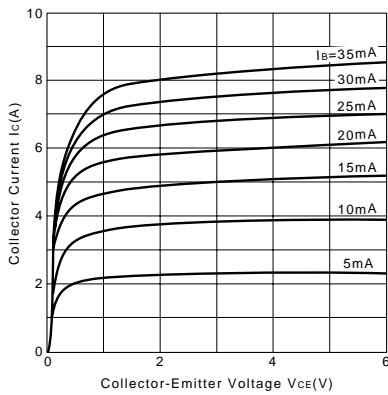
External Dimensions FM20(TO220F)



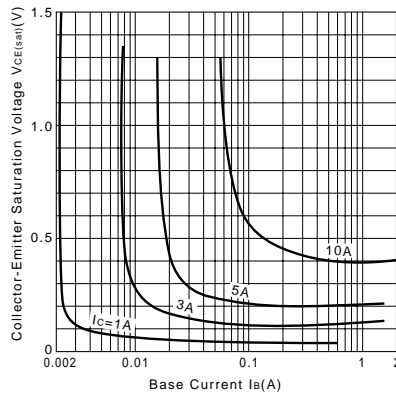
■ Typical Switching Characteristics (Common Emitter)

V _{CC} (V)	R _L (Ω)	I _C (A)	I _{B1} (A)	I _{B2} (A)	t _{on} (μs)	t _{stg} (μs)	t _f (μs)
20	4	5	0.1	-0.1	0.5typ	2.0typ	0.5typ

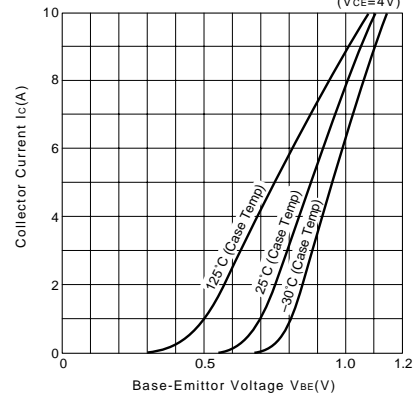
I_C-V_{CE} Characteristics (Typical)



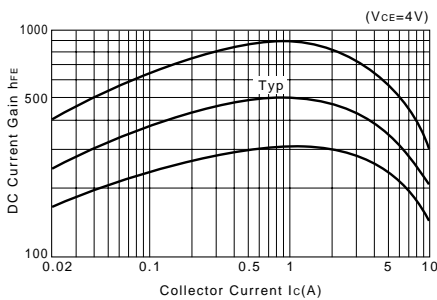
V_{CE(sat)}-I_B Characteristics (Typical)



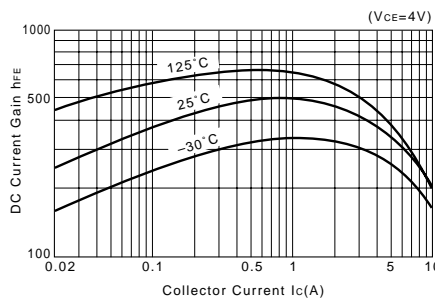
I_C-V_{BE} Temperature Characteristics (Typical)



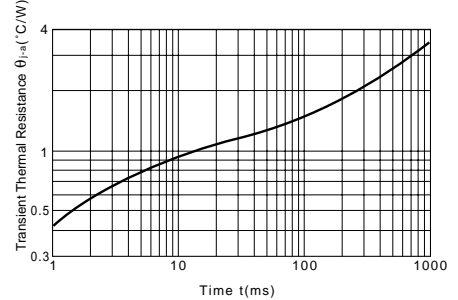
h_{FE}-I_C Characteristics (Typical)



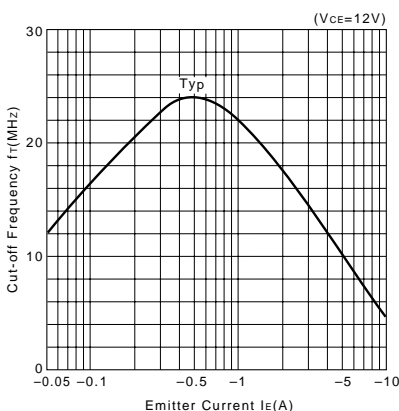
h_{FE}-I_C Temperature Characteristics (Typical)



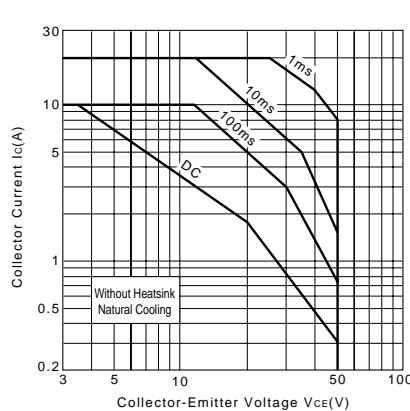
θ_{j-a}-t Characteristics



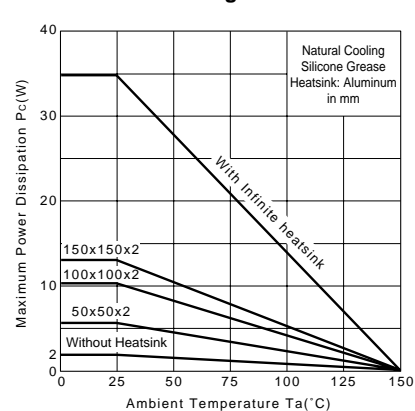
f_r-I_E Characteristics (Typical)



Safe Operating Area (Single Pulse)





P_C-T_a Derating



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