

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

2SC4024

Silicon NPN Epitaxial Planar Transistor

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

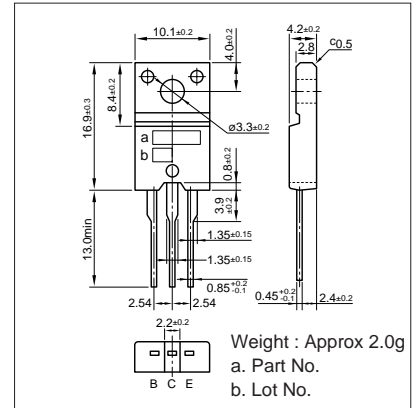
■ Absolute maximum ratings (Ta=25°C)

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(Tc=25°C)	W
T_J	150	°C
T_{stg}	-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}	$V_{CE}=4V, I_c=1A$	300 to 1600	
$V_{CE(sat)}$	$I_c=5A, I_B=0.1A$	0.5max	V
f_T	$V_{CE}=12V, I_E=-0.5A$	24typ	MHz
COB	$V_{CB}=10V, f=1MHz$	150typ	pF

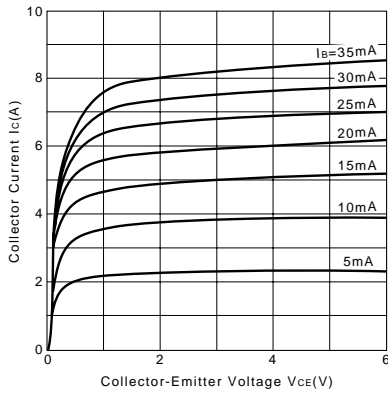
External Dimensions FM20(TO220F)



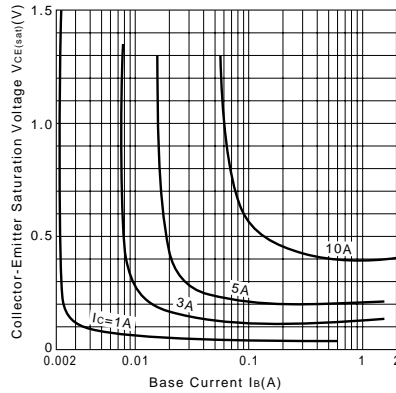
■ Typical Switching Characteristics (Common Emitter)

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

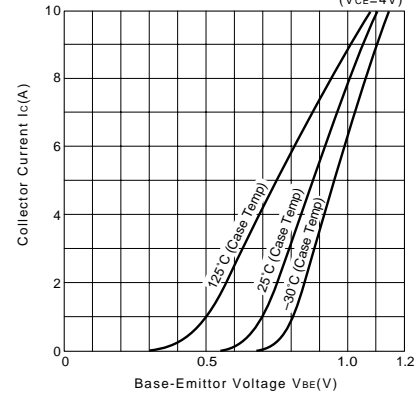
I_c-V_{CE} Characteristics (Typical)



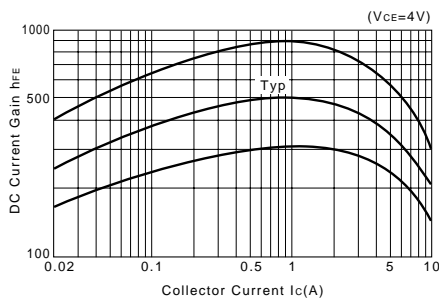
$V_{CE(sat)}-I_B$ Characteristics (Typical)



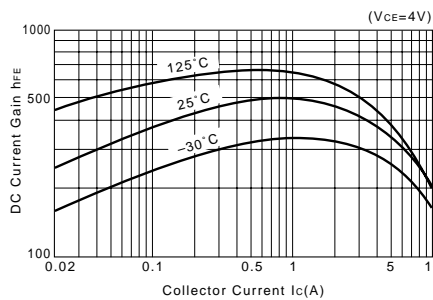
I_c-V_{BE} Temperature Characteristics (Typical)



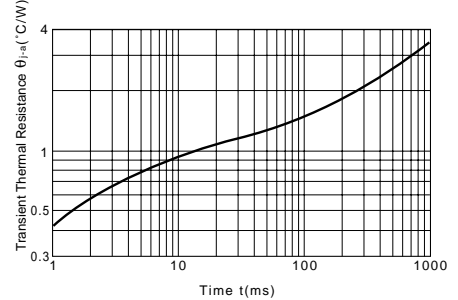
$h_{FE}-I_c$ Characteristics (Typical)



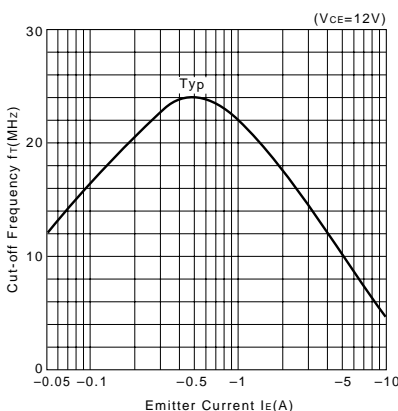
$h_{FE}-I_c$ Temperature Characteristics (Typical)



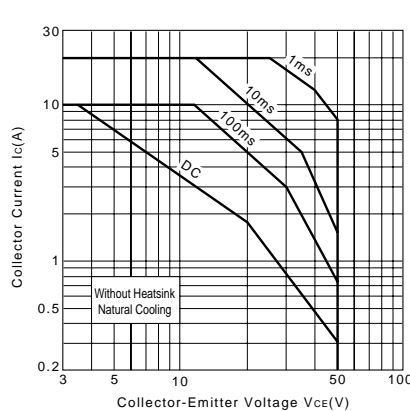
$\theta_{j-a}-t$ Characteristics



f_T-I_E Characteristics (Typical)



Safe Operating Area (Single Pulse)



P_c-T_a Derating

