

# LOW V<sub>CE</sub> (sat) 2SC4064

Silicon NPN Epitaxial Planar Transistor (Complement to type 2SA1567)

Application : DC Motor Driver and General Purpose

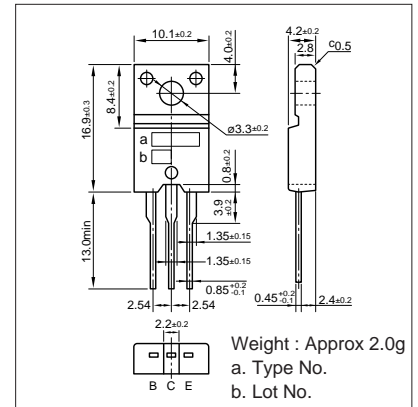
### Absolute maximum ratings (T<sub>a</sub>=25°C)

Symbol	2SC4064	Unit
V <sub>CB0</sub>	50	V
V <sub>CEO</sub>	50	V
V <sub>EB0</sub>	6	V
I <sub>C</sub>	12	A
I <sub>B</sub>	3	A
P <sub>C</sub>	35(T <sub>C</sub> =25°C)	W
T <sub>J</sub>	150	°C
T <sub>stg</sub>	-55 to +150	°C

### Electrical Characteristics (T<sub>a</sub>=25°C)

Symbol	Conditions	2SC4064	Unit
I <sub>CB0</sub>	V <sub>CB</sub> =50V	100max	μA
I <sub>EB0</sub>	V <sub>EB</sub> =6V	10max	μA
V <sub>(BR)CEO</sub>	I <sub>C</sub> =25mA	50min	V
h <sub>FE</sub>	V <sub>CE</sub> =1V, I <sub>C</sub> =6A	50min	
V <sub>CE(sat)</sub>	I <sub>C</sub> =6A, I <sub>B</sub> =0.3A	0.35max	V
f <sub>r</sub>	V <sub>CE</sub> =12V, I <sub>E</sub> =-0.5A	40typ	MHz
COB	V <sub>CB</sub> =12V, f=1MHz	180typ	pF

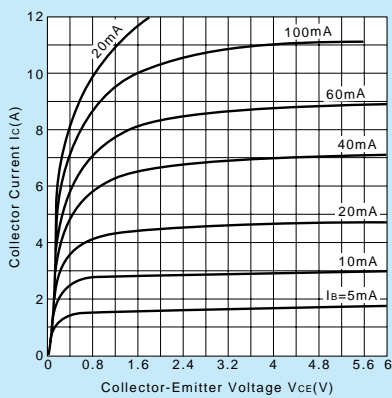
### External Dimensions FM20(TO220F)



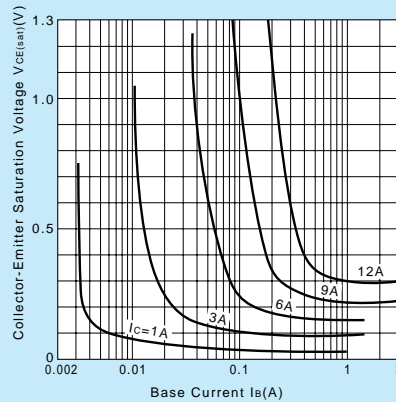
### Typical Switching Characteristics (Common Emitter)

V <sub>CC</sub> (V)	R <sub>L</sub> (Ω)	I <sub>C</sub> (A)	V <sub>BB1</sub> (V)	V <sub>BB2</sub> (V)	I <sub>B1</sub> (A)	I <sub>B2</sub> (A)	t <sub>on</sub> (μs)	t <sub>stg</sub> (μs)	t <sub>f</sub> (μs)
24	4	6	10	-5	0.12	-0.12	0.6typ	1.4typ	0.4typ

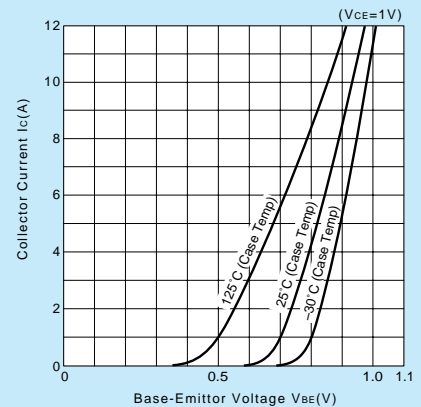
I<sub>C</sub>-V<sub>CE</sub> Characteristics (Typical)



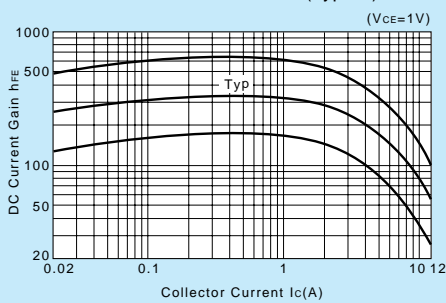
V<sub>CE(sat)</sub>-I<sub>B</sub> Characteristics (Typical)



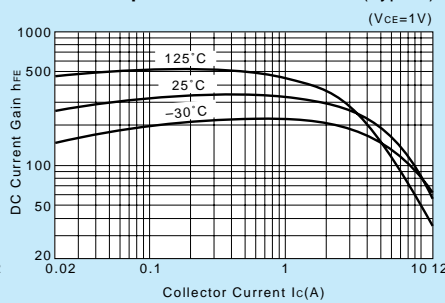
I<sub>C</sub>-V<sub>BE</sub> Temperature Characteristics (Typical)



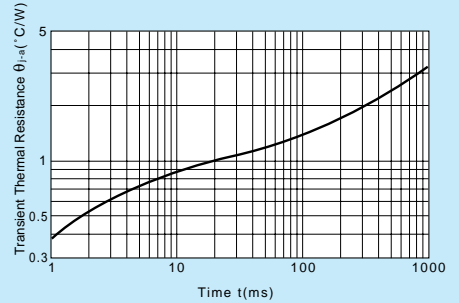
h<sub>FE</sub>-I<sub>C</sub> Characteristics (Typical)



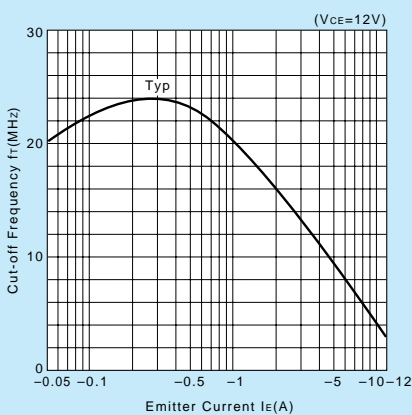
h<sub>FE</sub>-I<sub>C</sub> Temperature Characteristics (Typical)



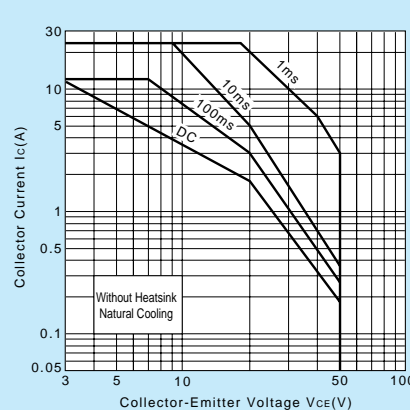
θ<sub>j-a</sub>-t Characteristics



f<sub>T</sub>-I<sub>E</sub> Characteristics (Typical)



Safe Operating Area (Single Pulse)



P<sub>C</sub>-T<sub>a</sub> Derating

