

# 2SC4064

## LOW $V_{CE(sat)}$

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

Application : DC Motor Driver and General Purpose

### Absolute maximum ratings ( $T_a=25^\circ\text{C}$ )

Symbol	2SC4064	Unit
$V_{CBO}$	50	V
$V_{CEO}$	50	V
$V_{EBO}$	6	V
$I_C$	12	A
$I_B$	3	A
$P_C$	35( $T_c=25^\circ\text{C}$ )	W
$T_J$	150	$^\circ\text{C}$
$T_{stg}$	-55 to +150	$^\circ\text{C}$

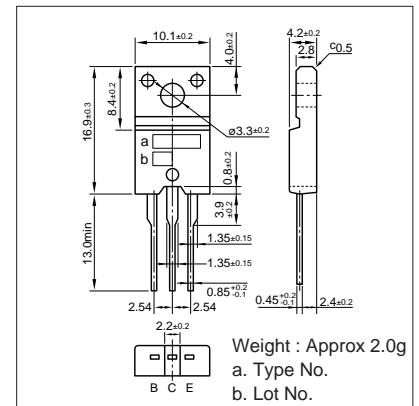
### Electrical Characteristics ( $T_a=25^\circ\text{C}$ )

Symbol	Conditions	2SC4064	Unit
$I_{CBO}$	$V_{CB}=50\text{V}$	100max	$\mu\text{A}$
$I_{EBO}$	$V_{EB}=6\text{V}$	10max	$\mu\text{A}$
$V_{(BR)CEO}$	$I_C=25\text{mA}$	50min	V
$h_{FE}$	$V_{CE}=1\text{V}$ , $I_C=6\text{A}$	50min	
$V_{CE(sat)}$	$I_C=6\text{A}$ , $I_E=-0.3\text{A}$	0.35max	V
$f_T$	$V_{CE}=12\text{V}$ , $I_E=-0.5\text{A}$	40typ	MHz
$C_{OB}$	$V_{CB}=12\text{V}$ , $f=1\text{MHz}$	180typ	pF

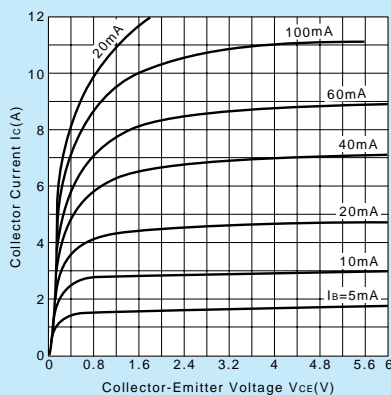
### Typical Switching Characteristics (Common Emitter)

$V_{CC}$ (V)	$R_L$ ( $\Omega$ )	$I_C$ (A)	$V_{BB1}$ (V)	$V_{BB2}$ (V)	$I_{B1}$ (A)	$I_{B2}$ (A)	$t_{on}$ ( $\mu\text{s}$ )	$t_{stg}$ ( $\mu\text{s}$ )	$t_f$ ( $\mu\text{s}$ )
24	4	6	10	-5	0.12	-0.12	0.6typ	1.4typ	0.4typ

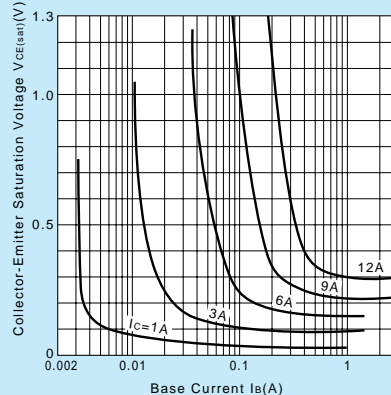
### External Dimensions FM20(TO220F)



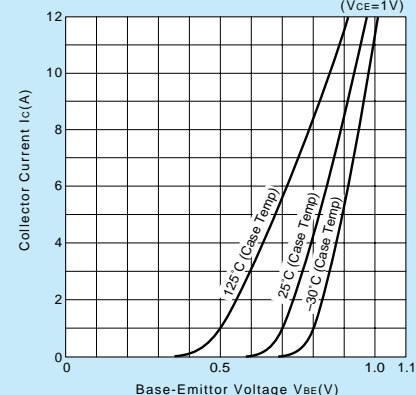
### $I_C-V_{CE}$ Characteristics (Typical)



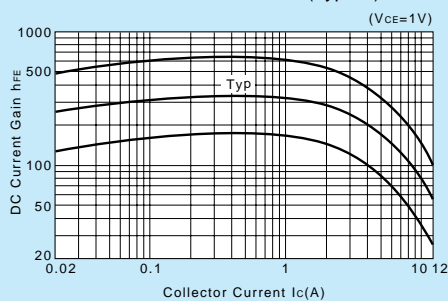
### $V_{CE(sat)}-I_B$ Characteristics (Typical)



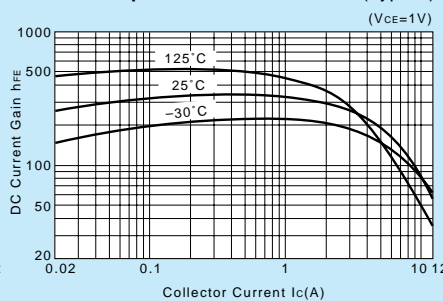
### $I_C-V_{BE}$ Temperature Characteristics (Typical)



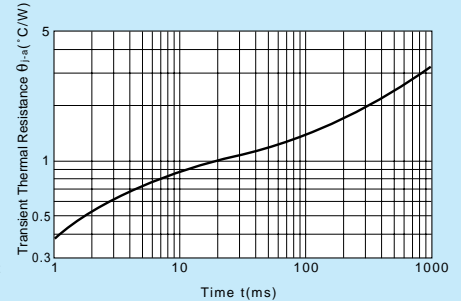
### $h_{FE}-I_C$ Characteristics (Typical)



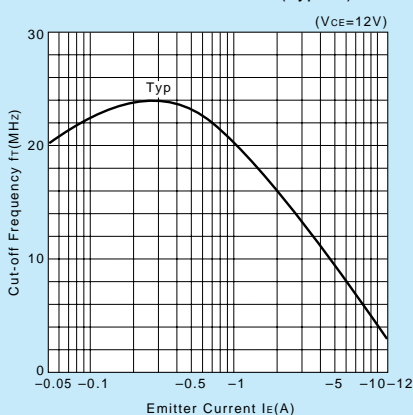
### $h_{FE}-I_C$ Temperature Characteristics (Typical)



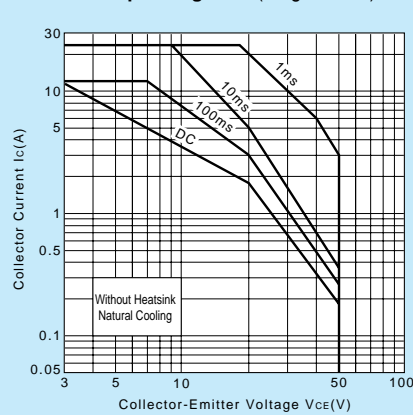
### $\theta_{j-a}-t$ Characteristics



### $f_T-I_E$ Characteristics (Typical)



### Safe Operating Area (Single Pulse)



### $P_C-T_a$ Derating

