Low V_{CE} (sat) 2SC4131

Silicon NPN Epitaxial Planar Transistor

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

Absolute maximum ratings (Ta=25°C)

Symbol	2SC4131	Unit
V_{CBO}	100	V
V_{CEO}	50	V
V_{EBO}	15	V
I_C	15(Pulse25)	A
I_B	4	A
P_C	60(Tc=25°C)	W
Tj	150	°C
Tstg	–55 to +150	°C

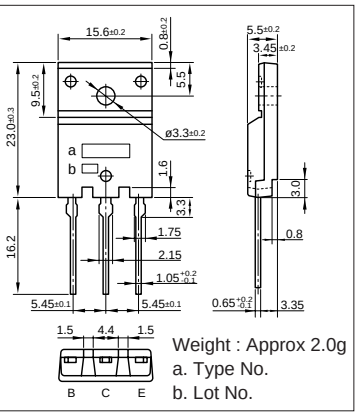
Electrical Characteristics (Ta=25°C)

Symbol	Conditions	2SC4131	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}=1V, I_C=5A	60 to 360	
$V_{CE(sat)}$	I_C=5A, I_B=80mA	0.5max	V
$V_{BE(sat)}$	I_C=5A, I_B=80mA	1.2max	V
f_T	V_{CE}=12V, I_E=–1A	18typ	MHz
C_{OB}	V_{CB}=10V, f=1MHz	210typ	pF

Typical Switching Characteristics (Common Emitter)

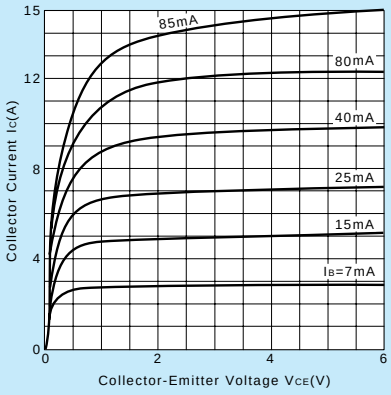
V_{CC} (V)	R_L (Ω)	I_C (A)	V_{BB1} (V)	V_{BB2} (V)	I_{B1} (A)	I_{B2} (A)	ton (μs)	tstg (μs)	tf (μs)
20	4	5	10	–5	0.08	–0.08	0.5typ	2.0typ	0.4typ

External Dimensions FM100(TO3PF)

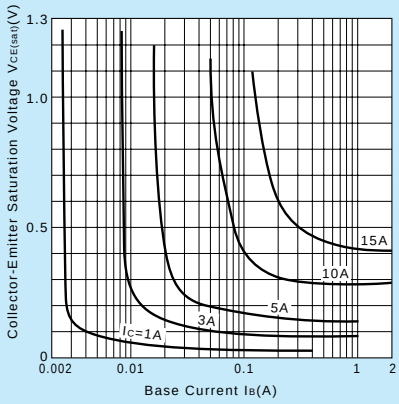


Weight : Approx 2.0g
a. Type No.
b. Lot No.

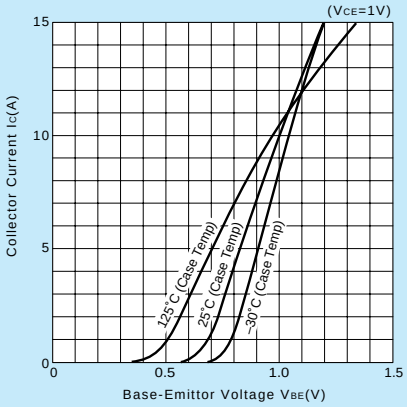
I_C–V_{CE} Characteristics (Typical)



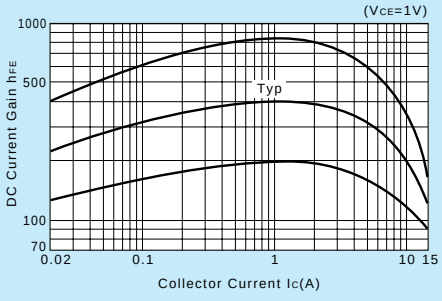
$V_{CE(sat)}$–I_B Characteristics (Typical)



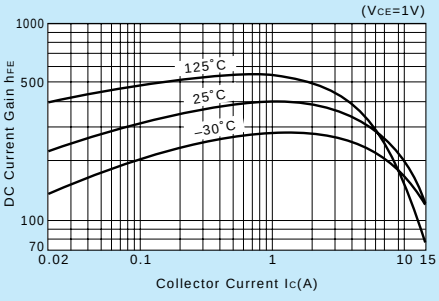
I_C–V_{BE} Temperature Characteristics (Typical)



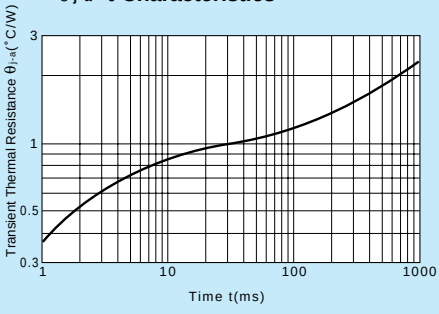
h_{FE}–I_C Characteristics (Typical)



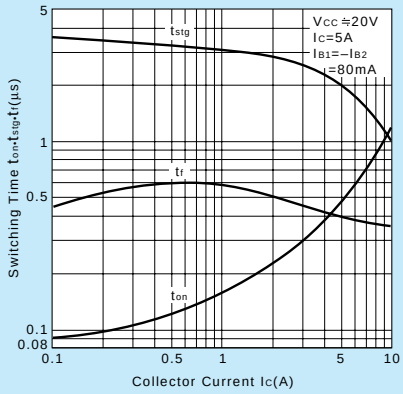
h_{FE}–I_C Temperature Characteristics (Typical)



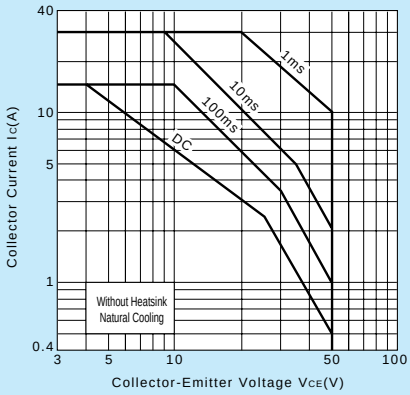
$\theta_{j\text{-}a$–t Characteristics



t_{on}•t_{stg}•t_f–I_C Characteristics (Typical)



Safe Operating Area (Single Pulse)



Pc–Ta Derating