

2SC5130

Silicon NPN Triple Diffused Planar Transistor (High Voltage and High Speed Switching Transistor)

Application : Switching Regulator and General Purpose

■ Absolute maximum ratings (Ta=25°C)

Symbol	Ratings	Unit
V _{CEO}	600	V
V _{CE0}	400	V
V _{EBO}	10	V
I _C	5(Pulse10)	A
I _B	2	A
P _C	30(T _C =25°C)	W
T _J	150	°C
T _{stg}	-55 to +150	°C

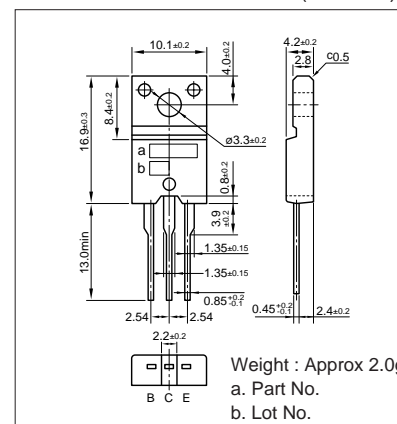
■Electrical Characteristics (Ta=25°C)

Symbol	Conditions	Ratings	Unit
ICBO	V _{CB} =500V	100max	μA
IEBO	V _{EB} =10V	10max	μA
V(BR)CEO	I _C =25mA	400min	V
h _{FE}	V _{CE} =4V, I _C =1.5A	10to30	
V _{CE(sat)}	I _C =1.5A, I _B =0.3A	0.5max	V
V _{BE(sat)}	I _C =1.5A, I _B =0.3A	1.3max	V
f _T	V _{CE} =12V, I _E =-0.3A	20typ	MHz
COB	V _{CB} =10V, f=1MHz	30typ	pF

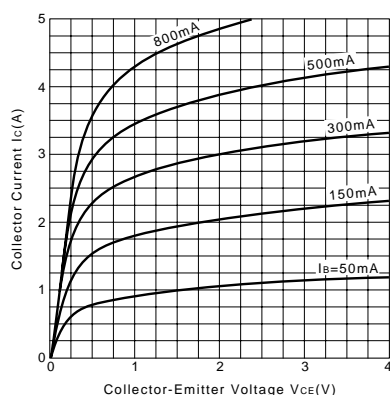
■ Typical Switching Characteristics (Common Emitter)

V _{CC} (V)	R _L (Ω)	I _C (A)	V _{BB1} (V)	V _{BB2} (V)	I _{B1} (A)	I _{B2} (A)	t _{on} (μs)	t _{stg} (μs)	t _f (μs)
200	133	1.5	10	-5	0.15	-0.3	1 _{max}	2 _{max}	0.3 _{max}

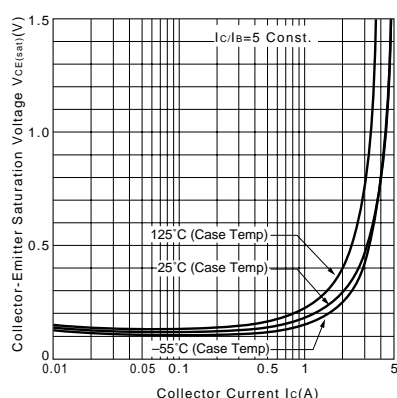
External Dimensions FM20(TO220F)



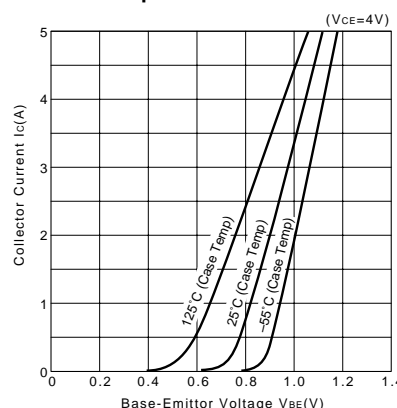
I_C-V_{CE} Characteristics (Typical)



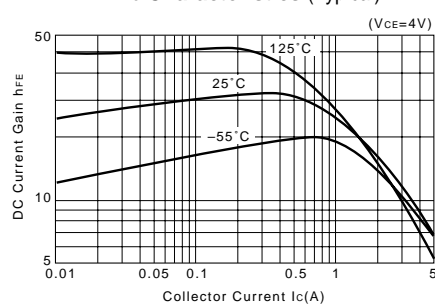
V_{CE(sat)}-I_C Characteristics (Typical)



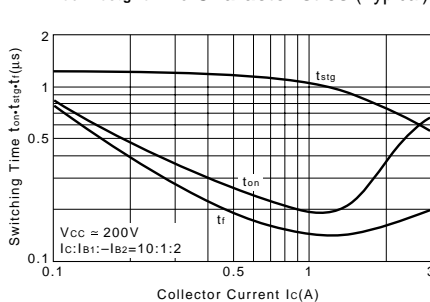
I_C-V_{BE} Temperature Characteristics (Typical)



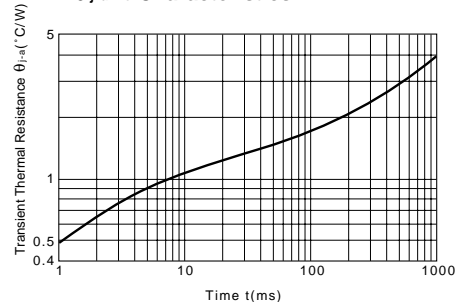
$h_{FE}-I_C$ Characteristics (Typical)



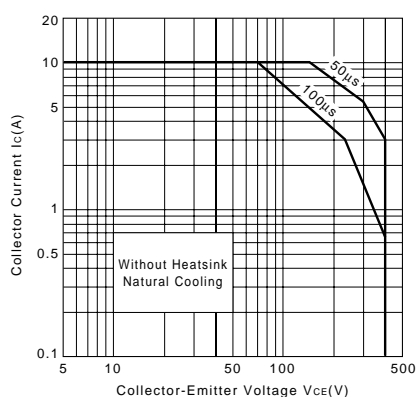
t_{on}•t_{stg}•t_f-I_C Characteristics (Typical)



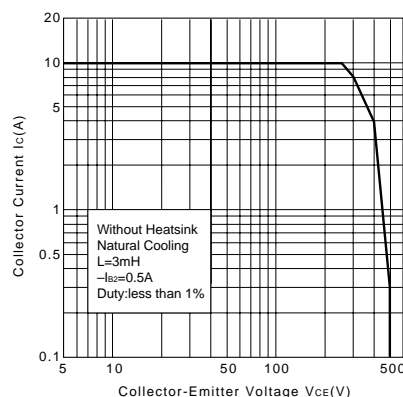
θ_{j-a-t} Characteristics



Safe Operating Area (Single Pulse)



Reverse Bias Safe Operating Area



Pc-Ta Derating

