

2SC5002

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

Application : Display Horizontal Deflection Output, Switching Regulator and General Purpose

Absolute maximum ratings (Ta=25°C)

Symbol	2SC5002	Unit
V _{CB0}	1500	V
V _{CEO}	800	V
V _{EBO}	6	V
I _c	7(Pulse14)	A
I _B	3.5	A
P _c	80(Tc=25°C)	W
T _J	150	°C
T _{stg}	-55 to +150	°C

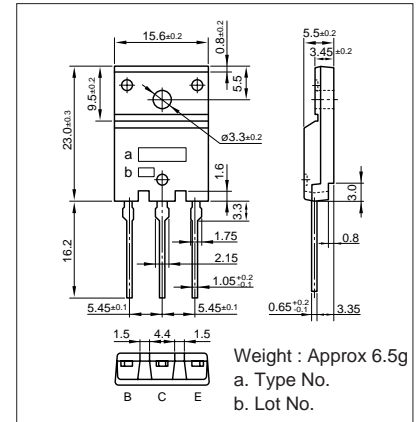
Electrical Characteristics (Ta=25°C)

Symbol	Conditions	2SC5002	Unit
I _{CB01}	V _{CB} =1200V	100max	μA
I _{CB02}	V _{CB} =1500V	1max	mA
I _{EBO}	V _{EB} =6V	100max	μA
V(BR)CEO	I _c =10mA	800min	V
hFE1	V _{CE} =5V, I _c =1A	8min	
hFE2	V _{CE} =5V, I _c =5A	4 to 9	
V _{CE(sat)}	I _c =5A, I _B =1.2A	5max	V
V _{BE(sat)}	I _c =5A, I _B =1.2A	1.5max	V
f _r	V _{CE} =12V, I _e =-0.5A	4typ	MHz
COB	V _{CB} =10V, f=1MHz	100typ	pF

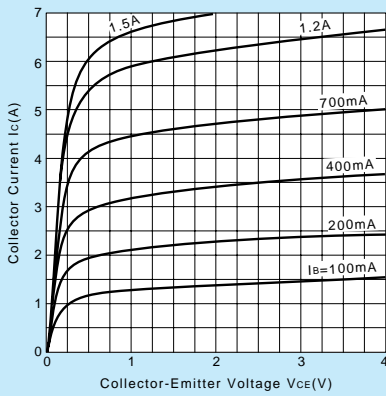
Typical Switching Characteristics (Common Emitter)

V _{CC} (V)	R _L (Ω)	I _c (A)	V _{BB1} (V)	V _{BB2} (V)	I _{B1} (A)	I _{B2} (A)	t _{stg} (μs)	t _f (μs)
200	50	4	10	-5	0.8	-1.6	4.0max	0.2max

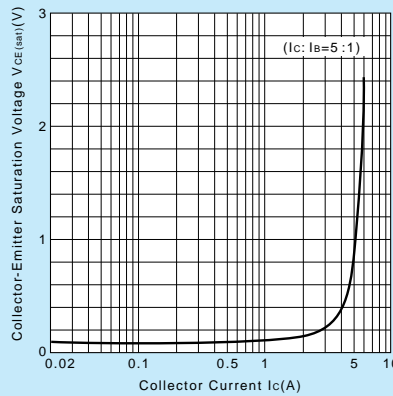
External Dimensions FM100(TO3PF)



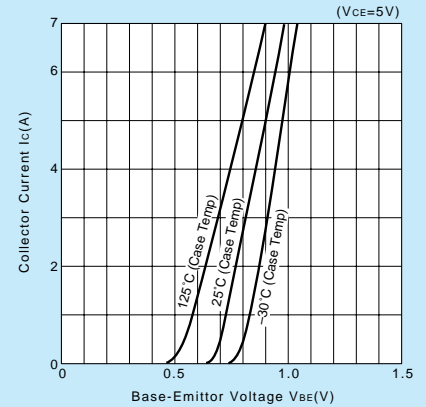
I_c-V_{CE} Characteristics (Typical)



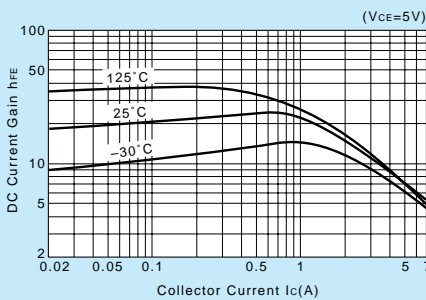
V_{CE(sat)}-I_c Characteristics (Typical)



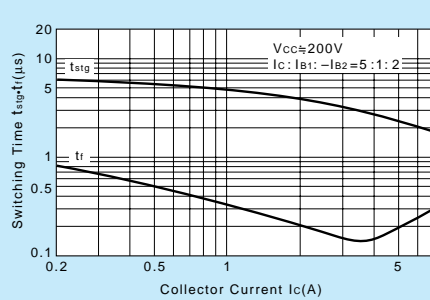
I_c-V_{BE} Temperature Characteristics (Typical)



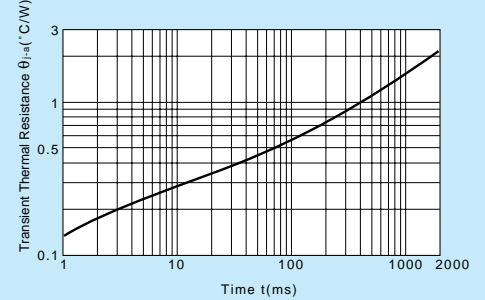
h_{FE}-I_c Characteristics (Typical)



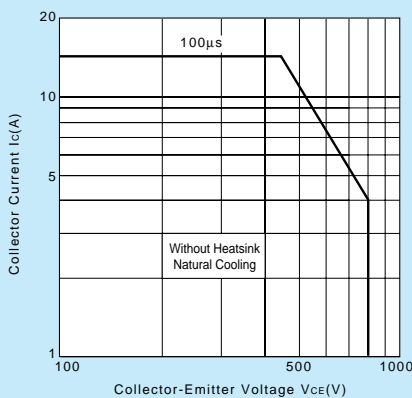
t_{stg}*t_f-I_c Characteristics (Typical)



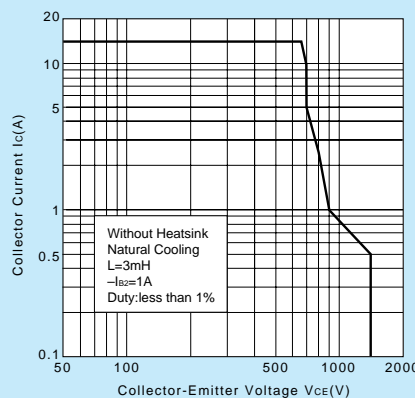
θ_{j-a}-t Characteristics



Safe Operating Area (Single Pulse)



Reverse Bias Safe Operating Area



P_c-T_a Derating

