

2SC4517/4517A

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

Application : Switching Regulator and General Purpose

Absolute maximum ratings (Ta=25°C)

Symbol	2SC4517	2SC4517A	Unit
V _{CB0}	900	1000	V
V _{CEO}	550		V
V _{EBO}	7		V
I _c	3(Pulse6)		A
I _B	1.5		A
P _c	30(Tc=25°C)		W
T _j	150		°C
T _{stg}	-55 to +150		°C

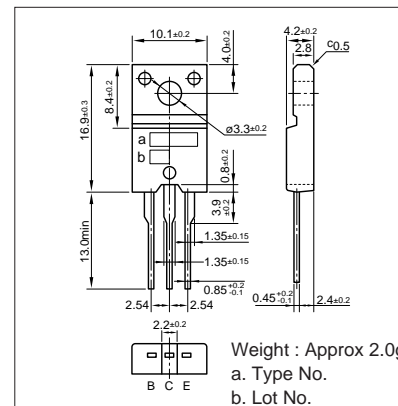
Electrical Characteristics (Ta=25°C)

Symbol	Conditions	2SC4517	2SC4517A	Unit
I _{CB0}	V _{CB} =800V	100max		μA
I _{EBO}	V _{EB} =7V	100max		μA
V _{(BR)CEO}	I _c =10mA	550min		V
h _{FE}	V _{CE} =4V, I _c =1A	10 to 30		
V _{CE(sat)}	I _c =1A, I _B =0.2A	0.5max		V
V _{BE(sat)}	I _c =1A, I _B =0.2A	1.2max		V
f _r	V _{CE} =12V, I _E =-0.25A	6typ		MHz
C _{OB}	V _{CB} =10V, f=1MHz	35typ		pF

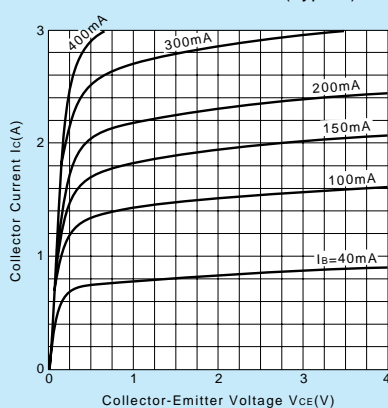
Typical Switching Characteristics (Common Emitter)

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)
250	250	1	10	-5	0.15	-0.45	0.7max	4max	0.5max

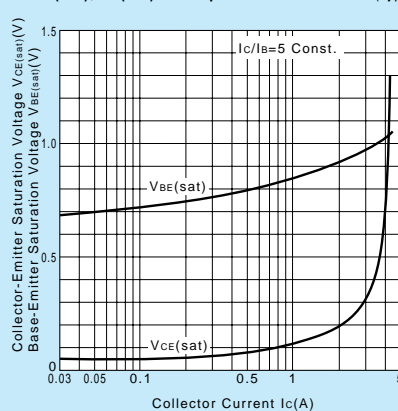
External Dimensions FM20(TO220F)



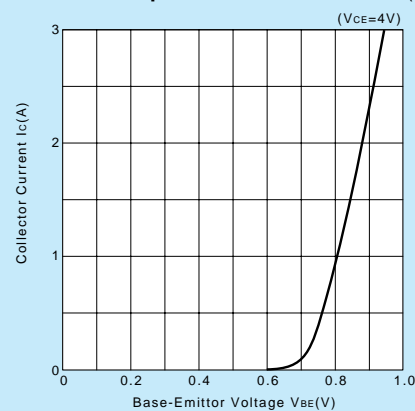
I_c-V_{CE} Characteristics (Typical)



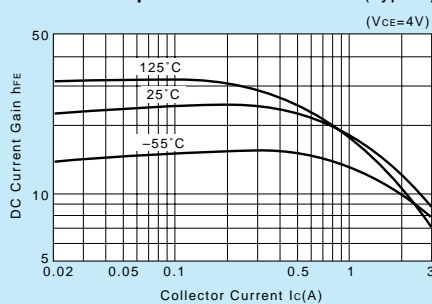
V_{CE(sat)}, V_{BE(sat)}-I_c Temperature Characteristics (Typical)



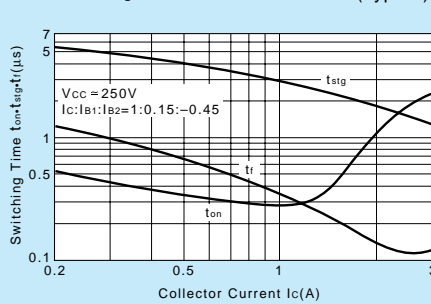
I_c-V_{BE} Temperature Characteristics (Typical)



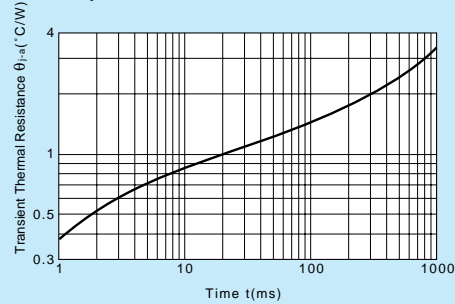
h_{FE}-I_c Temperature Characteristics (Typical)



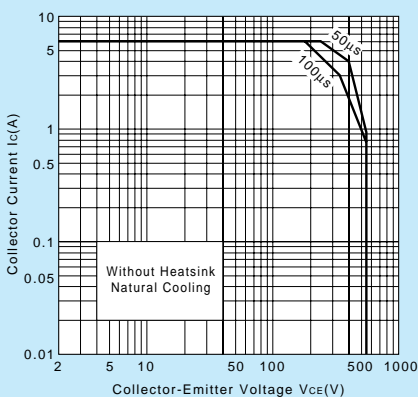
t_{on}*t_{stg}*t_r-I_c Characteristics (Typical)



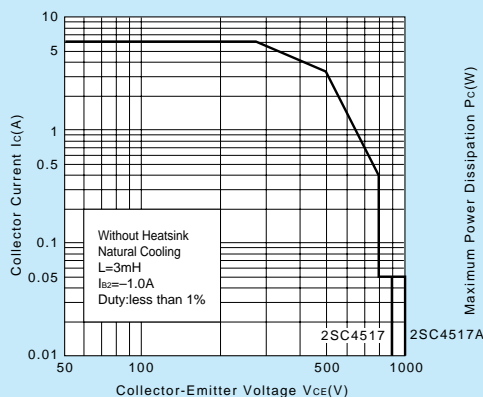
θ_{j-a}-t Characteristics



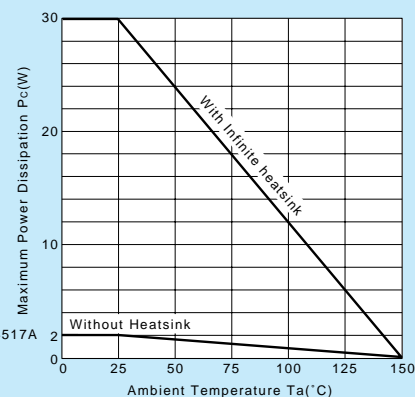
Safe Operating Area (Single Pulse)



Reverse Bias Safe Operating Area



P_c-T_a Derating



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