

2SC2023

Silicon NPN Triple Diffused Planar Transistor

Application : Series Regulator, Switch, and General Purpose

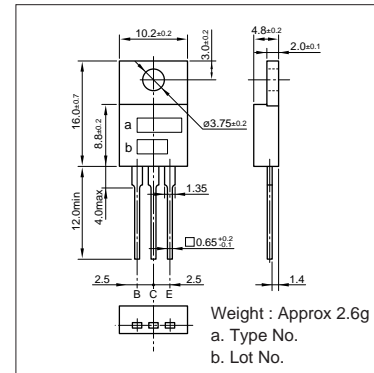
Absolute maximum ratings (Ta=25°C)

Symbol	2SC2023	Unit
V _{CB0}	300	V
V _{CEO}	300	V
V _{EB0}	6	V
I _c	2	A
I _B	0.2	A
P _c	40(T _c =25°C)	W
T _j	150	°C
T _{stg}	-55 to +150	°C

Electrical Characteristics (Ta=25°C)

Symbol	Conditions	2SC2023	Unit
I _{CB0}	V _{CB} =300V	1.0max	mA
I _{EB0}	V _{EB} =6V	1.0max	mA
V _{(BR)CEO}	I _c =25mA	300min	V
h _{FE}	V _{CE} =4V, I _c =0.5A	30min	
V _{CE(sat)}	I _c =1.0A, I _B =0.2A	1.0max	V
f _T	V _{CE} =12A, I _E =-0.2A	10typ	MHz
COB	V _{CB} =10V, f=1MHz	75typ	pF

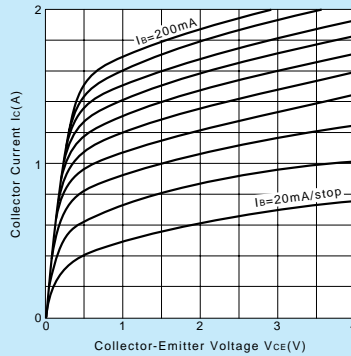
External Dimensions MT-25(TO220)



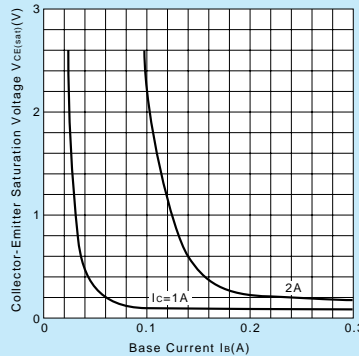
Typical Switching Characteristics (Common Emitter)

V _{CC} (V)	R _L (Ω)	I _c (A)	V _{B2} (V)	I _{B1} (mA)	I _{B2} (mA)	t _{on} (μs)	t _{stg} (μs)	t _f (μs)
100	100	1.0	-5	100	-200	0.3typ	4.0typ	1.0typ

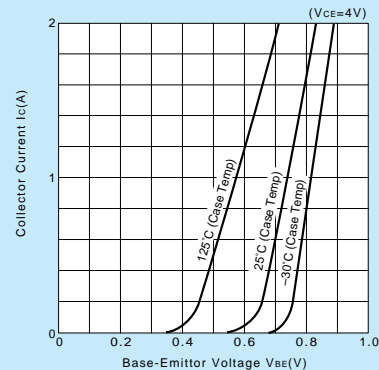
I_c-V_{CE} Characteristics (Typical)



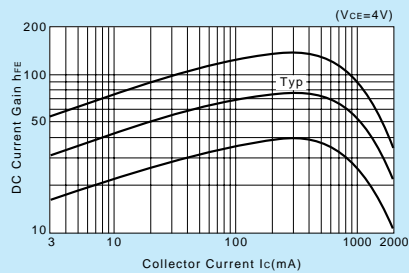
V_{CE(sat)}-I_B Characteristics (Typical)



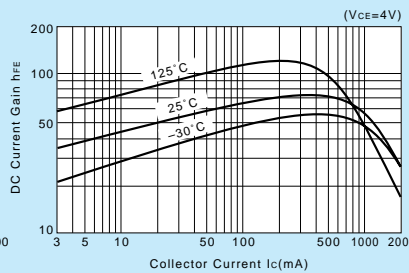
I_c-V_{BE} Temperature Characteristics (Typical)



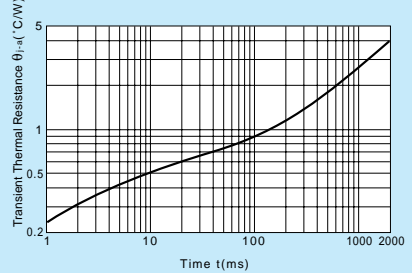
h_{FE}-I_c Characteristics (Typical)



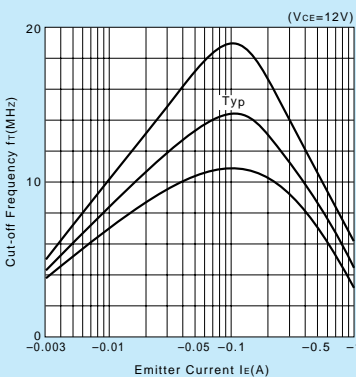
h_{FE}-I_c Temperature Characteristics (Typical)



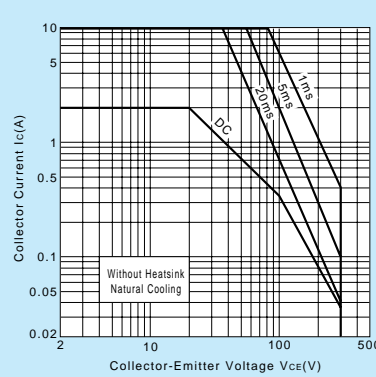
θ_{j-a}-t Characteristics



f_T-I_E Characteristics (Typical)



Safe Operating Area (Single Pulse)



P_c-T_a Derating

