

2SC2023

Silicon NPN Triple Diffused Planar Transistor

Application : Series Regulator, Switch, and General Purpose

Absolute maximum ratings (Ta=25°C)

Symbol	2SC2023	Unit
VCBO	300	V
VCEO	300	V
VEBO	6	V
IC	2	A
IB	0.2	A
Pc	40(Tc=25°C)	W
TJ	150	°C
Tstg	-55 to +150	°C

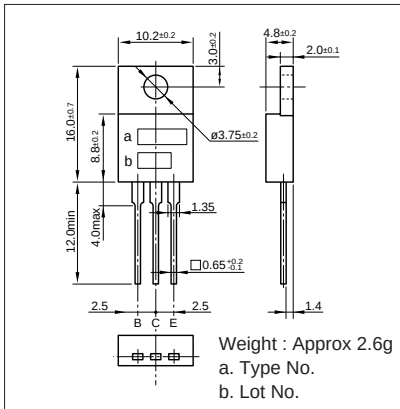
Electrical Characteristics (Ta=25°C)

Symbol	Conditions	2SC2023	Unit
ICBO	VCB=300V	1.0max	mA
IEBO	VEB=6V	1.0max	mA
V(BR)CEO	IC=25mA	300min	V
hFE	VCE=4V, IC=0.5A	30min	
VCE(sat)	IC=1.0A, IB=0.2A	1.0max	V
fT	VCE=12A, IE=-0.2A	10typ	MHz
COB	VCB=10V, f=1MHz	75typ	pF

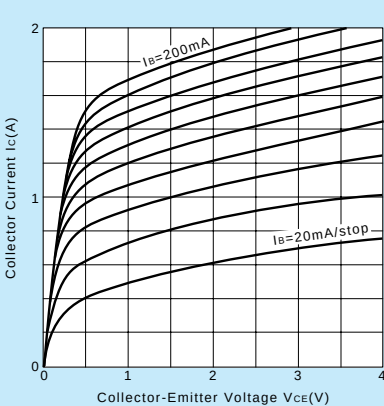
Typical Switching Characteristics (Common Emitter)

VCC (V)	RL (Ω)	IC (A)	VB2 (V)	IB1 (mA)	IB2 (mA)	ton (μs)	tstg (μs)	tf (μs)
100	100	1.0	-5	100	-200	0.3typ	4.0typ	1.0typ

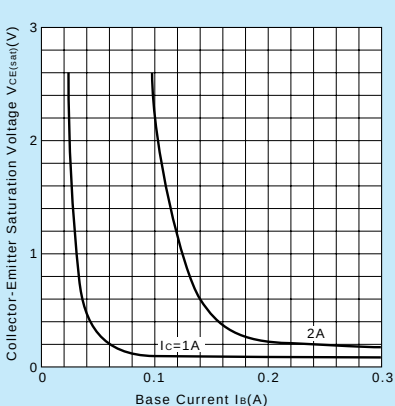
External Dimensions MT-25(TO220)



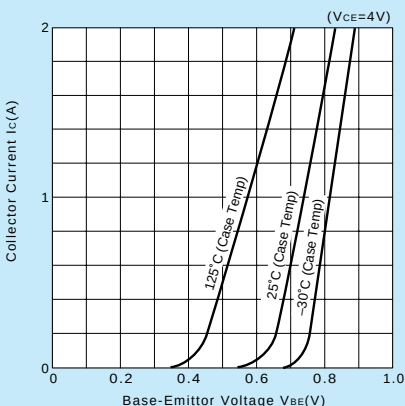
IC-VCE Characteristics (Typical)



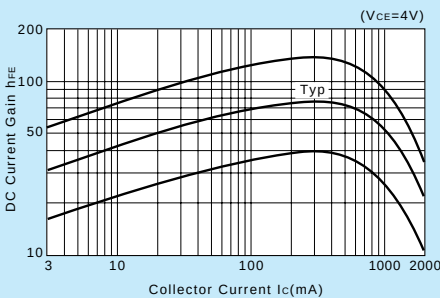
VCE(sat)-IB Characteristics (Typical)



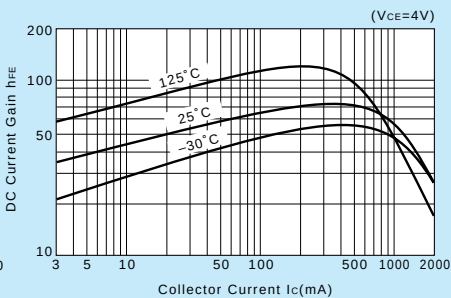
IC-VBE Temperature Characteristics (Typical)



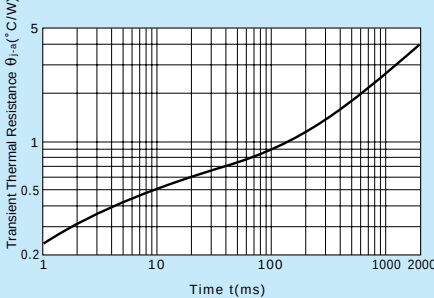
hFE-IC Characteristics (Typical)



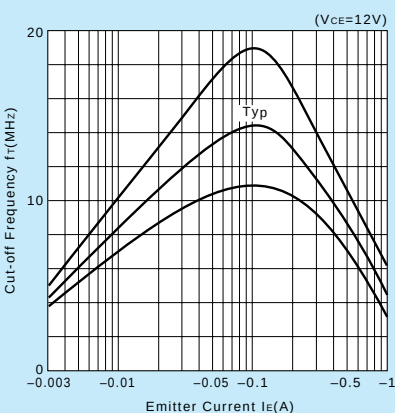
hFE-IC Temperature Characteristics (Typical)



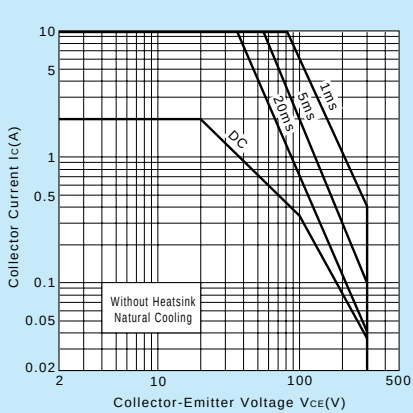
θj-a-t Characteristics



fT-IE Characteristics (Typical)



Safe Operating Area (Single Pulse)



Pc-Ta Derating

