

# 2SC5124

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	Ratings	Unit
V <sub>CB0</sub>	1500	V
V <sub>CEO</sub>	800	V
V <sub>EB0</sub>	6	V
I <sub>c</sub>	10(Pulse20)	A
I <sub>B</sub>	5	A
P <sub>c</sub>	100(T <sub>c</sub> =25°C)	W
T <sub>J</sub>	150	°C
T <sub>stg</sub>	-55 to +150	°C

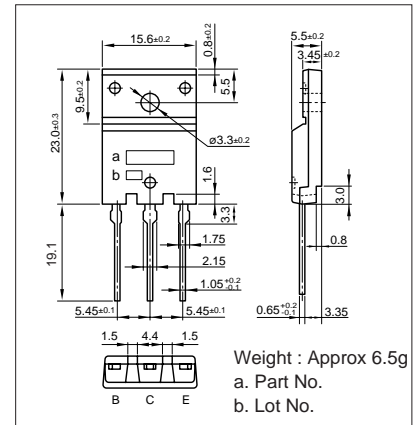
■ Electrical Characteristics (Ta=25°C)

Symbol	Conditions	Ratings	Unit
ICB01	V <sub>CB</sub> =1200V	100max	μA
ICB02	V <sub>CB</sub> =1500V	1max	mA
IEB0	V <sub>EB</sub> =6V	100max	μA
V <sub>(BR)CEO</sub>	I <sub>c</sub> =10mA	800min	V
h <sub>FE1</sub>	V <sub>CE</sub> =5V, I <sub>c</sub> =1A	8min	
h <sub>FE2</sub>	V <sub>CE</sub> =5V, I <sub>c</sub> =8A	4 to 9	
V <sub>CE(sat)</sub>	I <sub>c</sub> =8A, I <sub>B</sub> =2A	5max	V
V <sub>BE(sat)</sub>	I <sub>c</sub> =8A, I <sub>B</sub> =2A	1.5max	V
f <sub>r</sub>	V <sub>CE</sub> =12V, I <sub>E</sub> =-1A	3typ	MHZ
COB	V <sub>CB</sub> =10V, f=1MHZ	130typ	pF

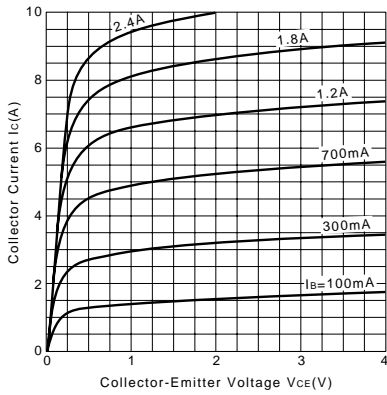
■ Typical Switching Characteristics (Common Emitter)

V <sub>CC</sub> (V)	R <sub>L</sub> (Ω)	I <sub>c</sub> (A)	V <sub>BB1</sub> (V)	V <sub>BB2</sub> (V)	I <sub>B1</sub> (A)	I <sub>B2</sub> (A)	t <sub>on</sub> (μs)	t <sub>stg</sub> (μs)	t <sub>f</sub> (μs)
200	33.3	6	10	-5	1.2	-2.4	0.1typ	4.0typ	0.2typ

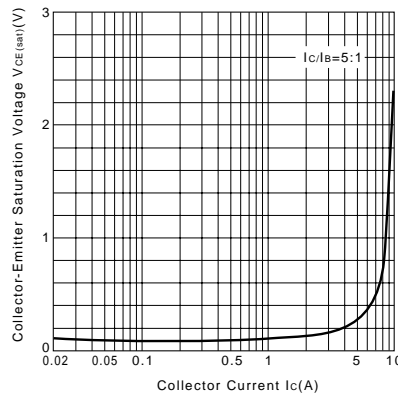
External Dimensions FM100(TO3PF)



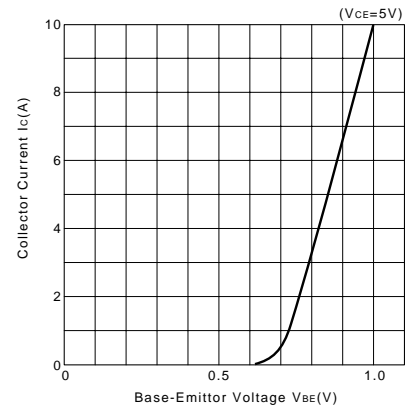
I<sub>c</sub>-V<sub>CE</sub> Characteristics (Typical)



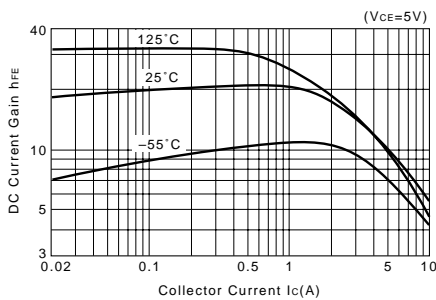
V<sub>CE(sat)</sub>-I<sub>c</sub> Characteristics (Typical)



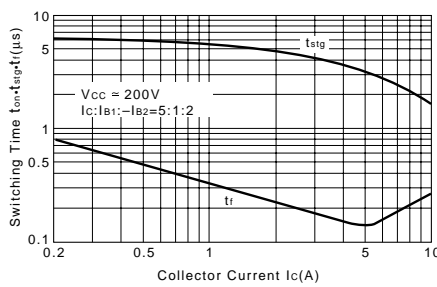
I<sub>c</sub>-V<sub>BE</sub> Temperature Characteristics (Typical)



h<sub>FE</sub>-I<sub>c</sub> Characteristics (Typical)

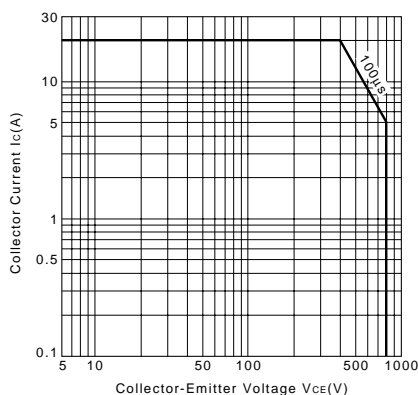


t<sub>sig</sub>\*t<sub>r</sub>-I<sub>c</sub> Characteristics (Typical)

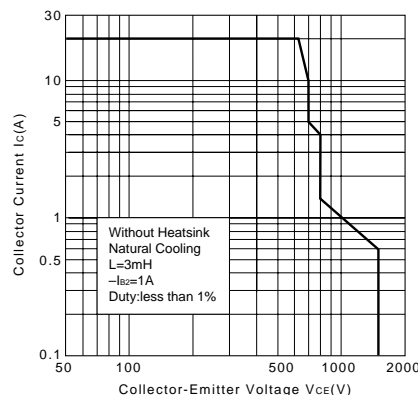


θ<sub>j-a</sub>-t Characteristics

Safe Operating Area (Single Pulse)



Reverse Bias Safe Operating Area



P<sub>c</sub>-T<sub>a</sub> Derating

