



Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



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# 2SC5101

Silicon NPN Triple Diffused Planar Transistor (Complement to type 2SA1909)

Application : Audio and General Purpose

**Absolute maximum ratings** (Ta=25°C)

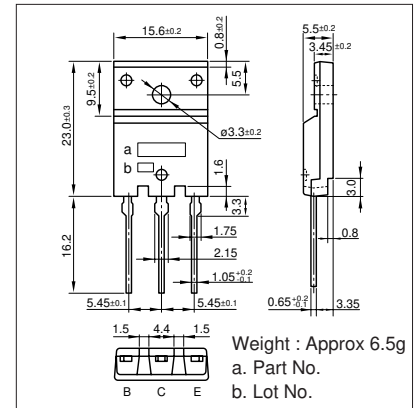
Symbol	Ratings	Unit
VcBO	200	V
VcEO	140	V
VEBO	6	V
Ic	10	A
IB	4	A
Pc	80(Tc=25°C)	W
Tj	150	°C
Tstg	-55 to +150	°C

**Electrical Characteristics** (Ta=25°C)

Symbol	Conditions	Ratings	Unit
IcBO	VcB=200V	10max	μA
IEBO	VEB=6V	10max	μA
V(BR)CEO	Ic=50mA	140min	V
hFE	VcE=4V, Ic=3A	50min*	
VcE(sat)	Ic=5A, IB=0.5A	0.5max	V
fr	VcE=12V, IE=-0.5A	20typ	MHz
COB	VcB=10V, f=1MHz	250typ	pF

\*hFE Rank  $\bar{O}$ (50 to 100), P(70 to 140), Y(90 to 180)

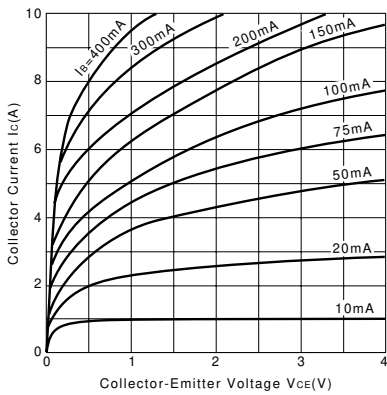
**External Dimensions FM100(TO3PF)**



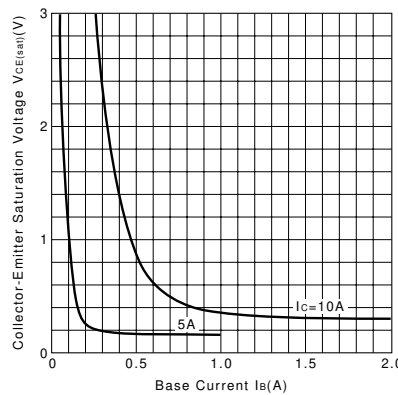
**Typical Switching Characteristics (Common Emitter)**

VcC (V)	RL (Ω)	Ic (A)	VBB1 (V)	VBB2 (V)	IB1 (A)	IB2 (A)	ton (μs)	tstg (μs)	tf (μs)
60	12	5	10	-5	0.5	-0.5	0.24typ	4.32typ	0.40typ

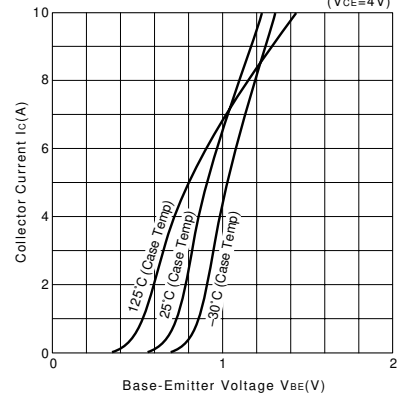
**Ic-VcE Characteristics (Typical)**



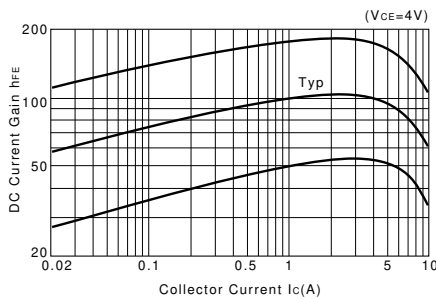
**VcE(sat)-Ib Characteristics (Typical)**



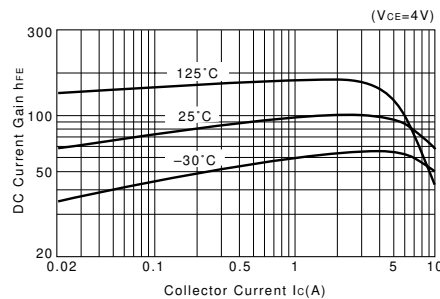
**Ic-VBE Temperature Characteristics (Typical)**



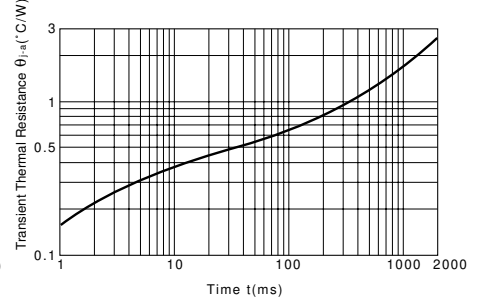
**hFE-Ic Characteristics (Typical)**



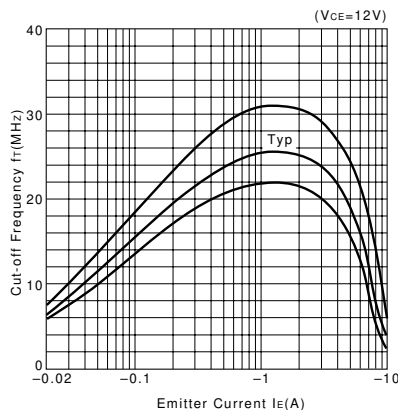
**hFE-Ic Temperature Characteristics (Typical)**



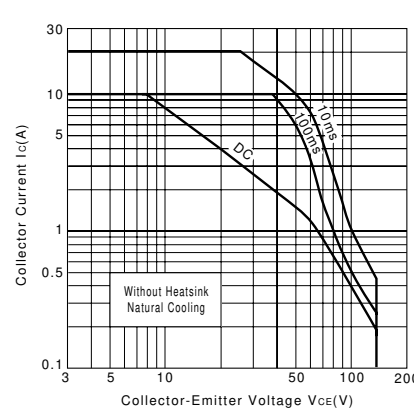
**θj-a-t Characteristics**



**fr-IE Characteristics (Typical)**



**Safe Operating Area (Single Pulse)**



**Pc-Ta Derating**

