



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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# 2SC4381/4382

Silicon NPN Triple Diffused Planar Transistor (Complement to type 2SA1667/1668)

Application : TV Vertical Output, Audio Output Driver and General Purpose

■ Absolute maximum ratings (Ta=25°C)

Symbol	Ratings		Unit
	2SC4381	2SC4382	
V <sub>CB0</sub>	150	200	V
V <sub>CE0</sub>	150	200	V
V <sub>EBO</sub>	6		V
I <sub>c</sub>	2		A
I <sub>B</sub>	1		A
P <sub>C</sub>	25(T <sub>C</sub> =25°C)		W
T <sub>J</sub>	150		°C
T <sub>stg</sub>	-55 to +150		°C

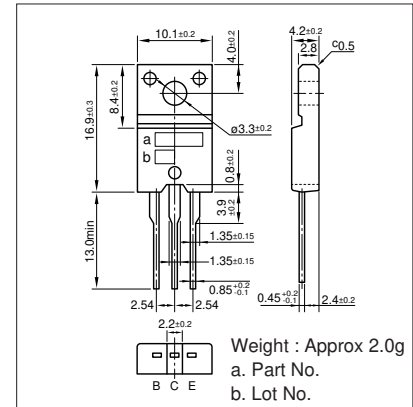
■ Electrical Characteristics (Ta=25°C)

Symbol	Conditions	Ratings		Unit
		2SC4381	2SC4382	
I <sub>CB0</sub>	V <sub>CB</sub> =	150	200	μA
I <sub>EBO</sub>	V <sub>EB</sub> =6V	10max		μA
V <sub>(BR)CEO</sub>	I <sub>c</sub> =25mA	150min	200min	V
h <sub>FE</sub>	V <sub>CE</sub> =10V, I <sub>c</sub> =0.7A	60min		
V <sub>CE(sat)</sub>	I <sub>c</sub> =0.7A, I <sub>B</sub> =0.07A	1.0max		V
f <sub>T</sub>	V <sub>CE</sub> =12V, I <sub>E</sub> =-0.2A	15typ		MHz
COB	V <sub>CB</sub> =10V, f=1MHz	35typ		pF

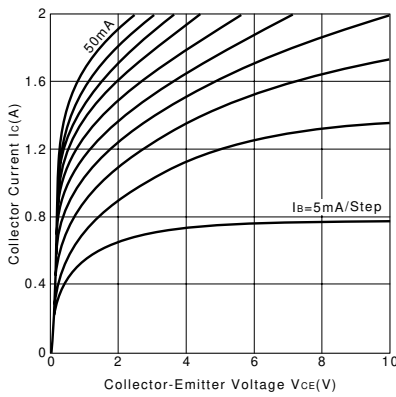
■ Typical Switching Characteristics (Common Emitter)

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> (mA)	I <sub>B2</sub> (mA)	t <sub>on</sub> (μs)	t <sub>stg</sub> (μs)	t <sub>f</sub> (μs)
20	20	1	10	-5	100	-100	1.0typ	3.0typ	1.5typ

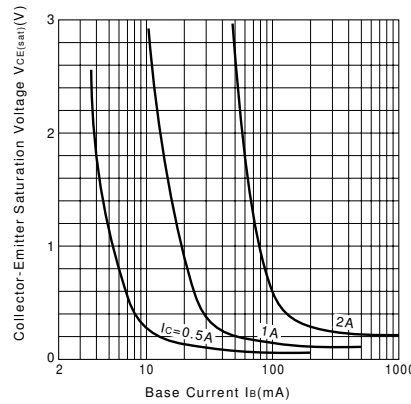
External Dimensions FM20(TO220F)



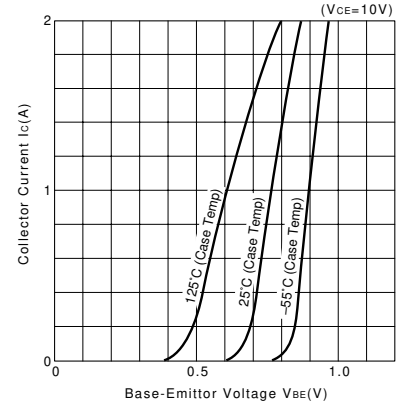
I<sub>c</sub>-V<sub>CE</sub> Characteristics (Typical)



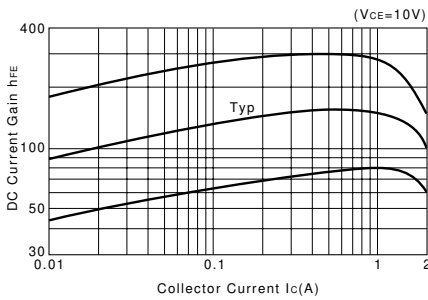
V<sub>CE(sat)</sub>-I<sub>B</sub> Characteristics (Typical)



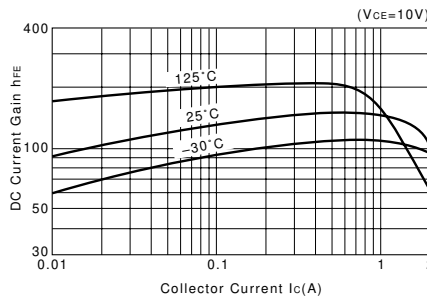
I<sub>c</sub>-V<sub>BE</sub> Temperature Characteristics (Typical)



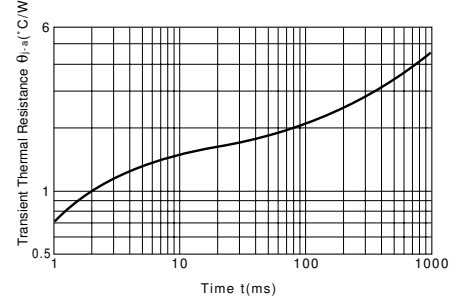
h<sub>FE</sub>-I<sub>c</sub> Characteristics (Typical)



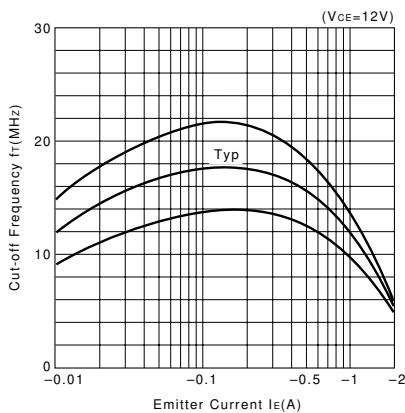
h<sub>FE</sub>-I<sub>c</sub> Temperature Characteristics (Typical)



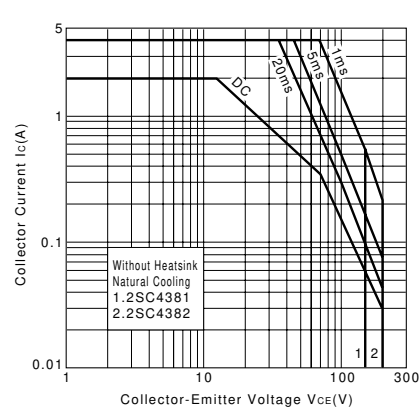
θ<sub>j-a</sub>-t Characteristics



f<sub>T</sub>-I<sub>E</sub> Characteristics (Typical)



Safe Operating Area (Single Pulse)



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

