

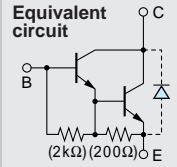


**THE DATASHEET OF  
2SD2081**



Darlington

# 2SD2081



Silicon NPN Triple Diffused Planar Transistor (Complement to type 2SB1259)

Application : Driver for Solenoid, Motor and General Purpose

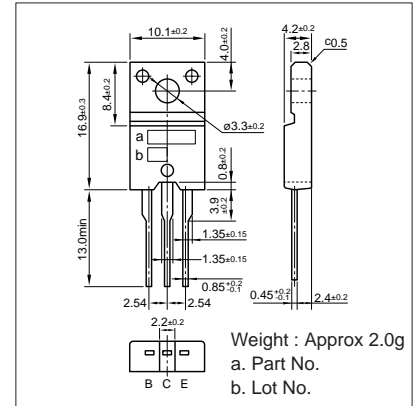
**Absolute maximum ratings** (Ta=25°C)

Symbol	Ratings	Unit
V <sub>CB0</sub>	120	V
V <sub>CE0</sub>	120	V
V <sub>EB0</sub>	6	V
I <sub>C</sub>	10(Pulse15)	A
I <sub>B</sub>	1	A
P <sub>C</sub>	30(Tc=25°C)	W
T <sub>j</sub>	150	°C
T <sub>stg</sub>	-55 to +150	°C

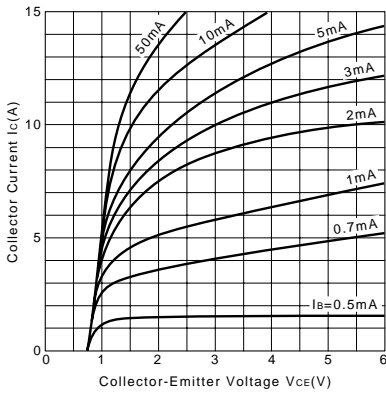
**Electrical Characteristics** (Ta=25°C)

Symbol	Conditions	Ratings	Unit
I <sub>CB0</sub>	V <sub>CB</sub> =120V	10max	μA
I <sub>EB0</sub>	V <sub>EB</sub> =6V	10max	mA
V(BR) <sub>CEO</sub>	I <sub>C</sub> =10mA	120min	V
h <sub>FE</sub>	V <sub>CE</sub> =4V, I <sub>C</sub> =5A	2000min	
V <sub>CE(sat)</sub>	I <sub>C</sub> =5A, I <sub>B</sub> =5mA	1.5max	V
V <sub>BE(sat)</sub>	I <sub>C</sub> =5A, I <sub>B</sub> =5mA	2.0max	V
f <sub>T</sub>	V <sub>CE</sub> =12V, I <sub>E</sub> =-0.5A	60typ	MHZ
C <sub>OB</sub>	V <sub>CB</sub> =10V, f=1MHZ	95typ	pF

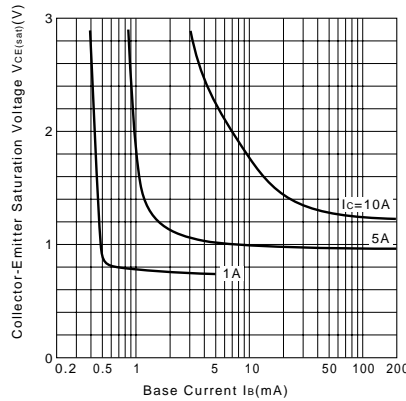
**External Dimensions FM20(TO220F)**



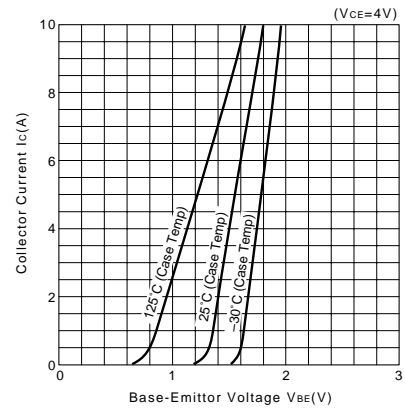
**I<sub>C</sub>-V<sub>CE</sub> Characteristics (Typical)**



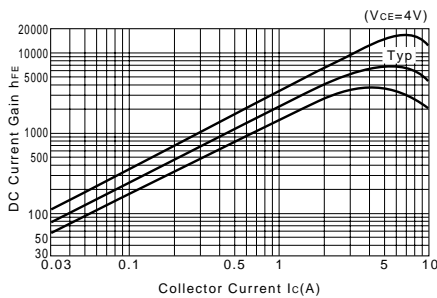
**V<sub>CE(sat)</sub>-I<sub>B</sub> Characteristics (Typical)**



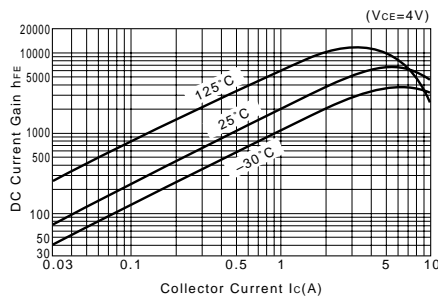
**I<sub>C</sub>-V<sub>BE</sub> Temperature Characteristics (Typical)**



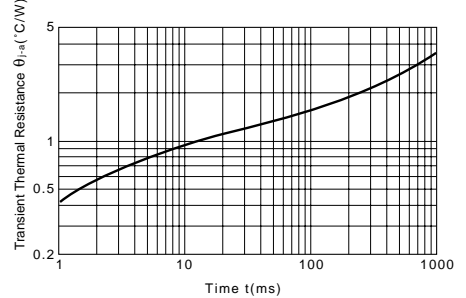
**h<sub>FE</sub>-I<sub>C</sub> Characteristics (Typical)**



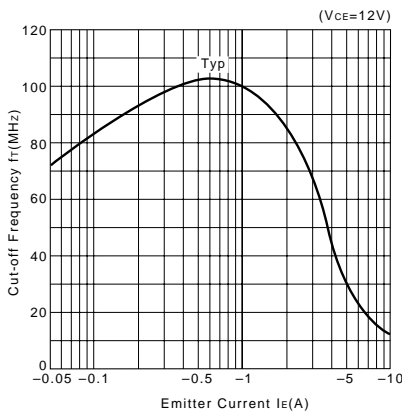
**h<sub>FE</sub>-I<sub>C</sub> Temperature Characteristics (Typical)**



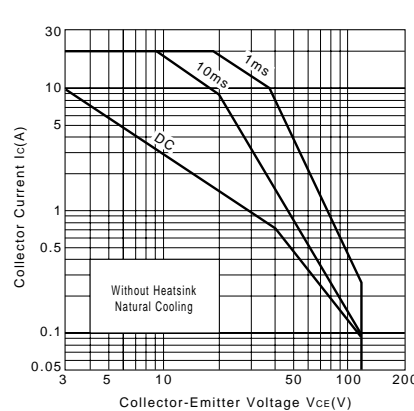
**θ<sub>j-a</sub>-t Characteristics**



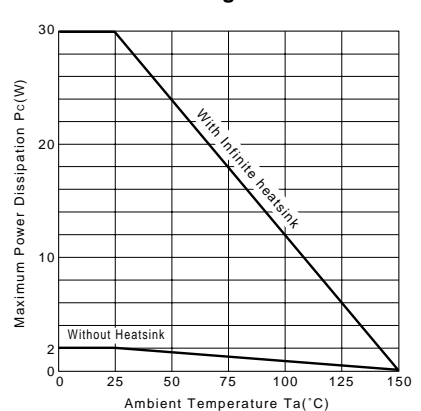
**f<sub>T</sub>-I<sub>E</sub> Characteristics (Typical)**



**Safe Operating Area (Single Pulse)**





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









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