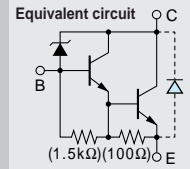


# Built-in Avalanche Diode for Surge Absorbing Darlington

# 2SD2141



**Silicon NPN Triple Diffused Planar Transistor**

**Application :** Ignitor, Driver for Solenoid and Motor, and General Purpose

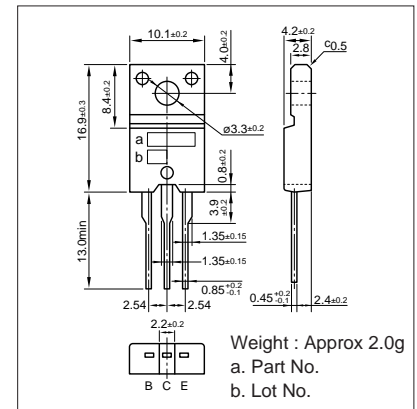
**■Absolute maximum ratings** (Ta=25°C)

Symbol	Ratings	Unit
V <sub>CB0</sub>	380±50	V
V <sub>CE0</sub>	380±50	V
V <sub>EB0</sub>	6	V
I <sub>C</sub>	6(Pulse10)	A
I <sub>B</sub>	1	A
P <sub>c</sub>	35(T <sub>c</sub> =25°C)	W
T <sub>j</sub>	150	°C
T <sub>stg</sub>	-55 to +150	°C

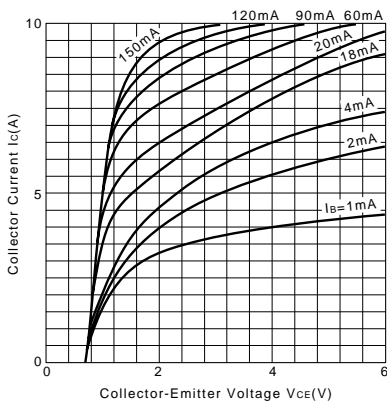
**■Electrical Characteristics** (Ta=25°C)

Symbol	Conditions	Ratings	Unit
I <sub>CB0</sub>	V <sub>CB</sub> =330V	10max	μA
I <sub>EB0</sub>	V <sub>EB</sub> =6V	20max	mA
V <sub>(BR)CEO</sub>	I <sub>C</sub> =25mA	330 to 430	V
h <sub>FE</sub>	V <sub>CE</sub> =2V, I <sub>C</sub> =3A	1500min	
V <sub>CE(sat)</sub>	I <sub>C</sub> =4A, I <sub>B</sub> =20mA	1.5max	V
f <sub>T</sub>	V <sub>CE</sub> =12V, I <sub>E</sub> =-0.5A	20typ	MHz
COB	V <sub>CB</sub> =10V, f=1MHz	95typ	pF

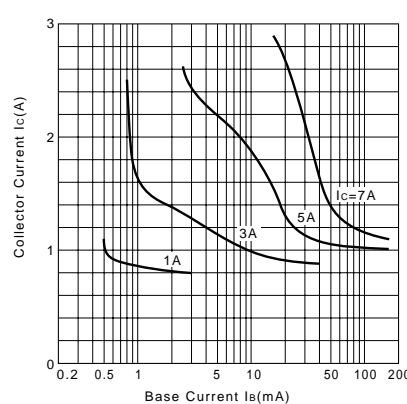
**External Dimensions FM20(TO220F)**



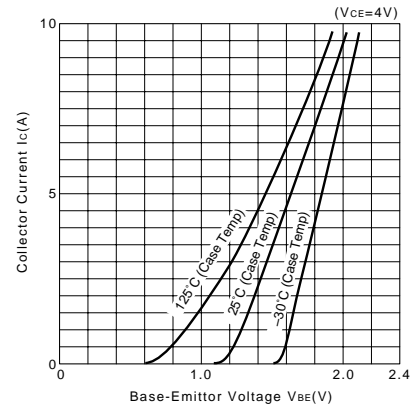
**I<sub>C</sub>-V<sub>CE</sub> Characteristics (Typical)**



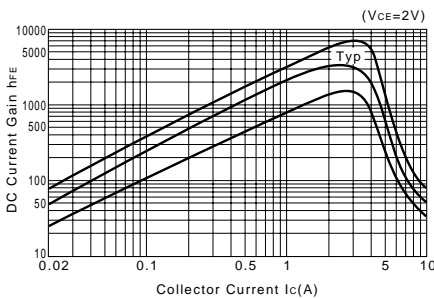
**V<sub>CE(sat)</sub>-I<sub>B</sub> Characteristics (Typical)**



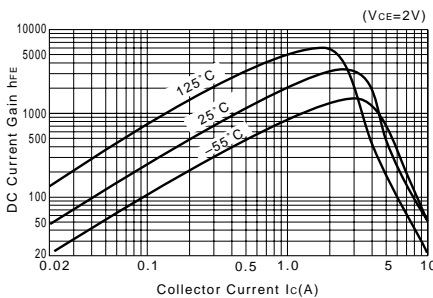
**I<sub>C</sub>-V<sub>BE</sub> Temperature Characteristics (Typical)**



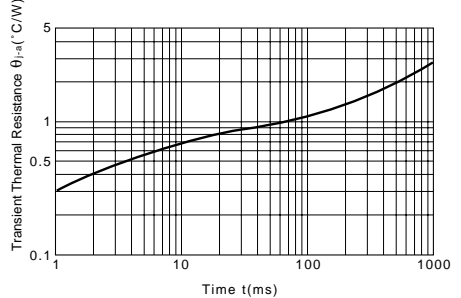
**h<sub>FE</sub>-I<sub>C</sub> Characteristics (Typical)**



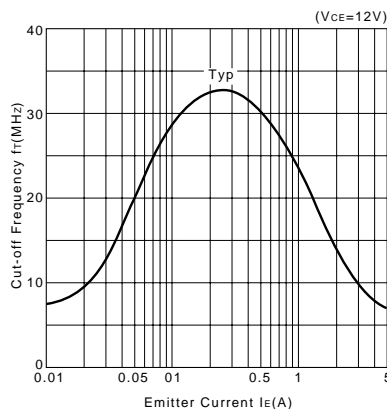
**h<sub>FE</sub>-I<sub>C</sub> Temperature Characteristics (Typical)**



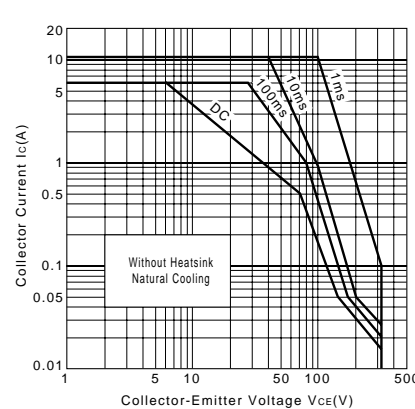
**θ<sub>j-a</sub>-t Characteristics**



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



**Safe Operating Area (Single Pulse)**



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

