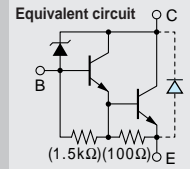


# Built-in Avalanche Diode for Surge Absorbing Darlington

# 2SD2141



Silicon NPN Triple Diffused Planar Transistor

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

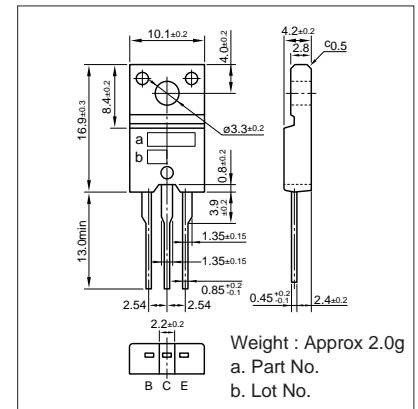
### Absolute maximum ratings (Ta=25°C)

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

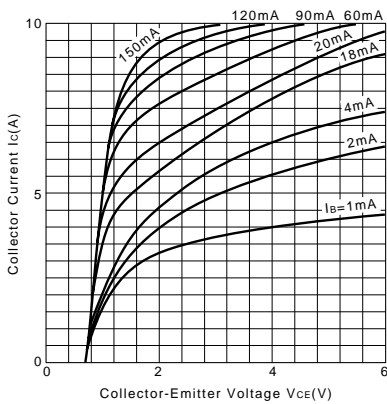
### Electrical Characteristics (Ta=25°C)

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

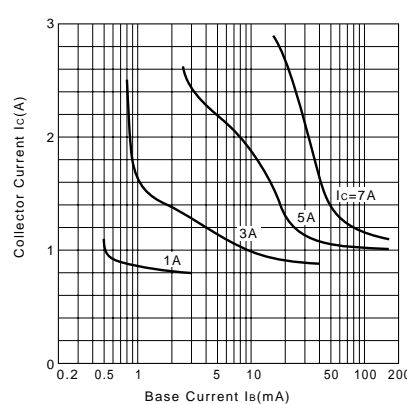
### External Dimensions FM20(TO220F)



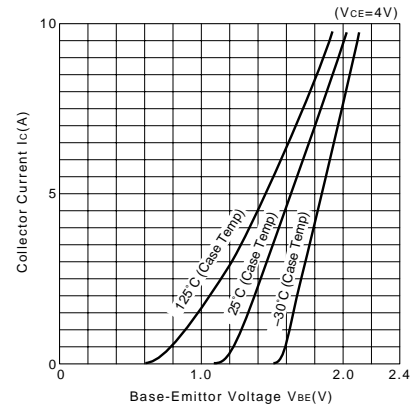
I<sub>C</sub>-V<sub>CE</sub> Characteristics (Typical)



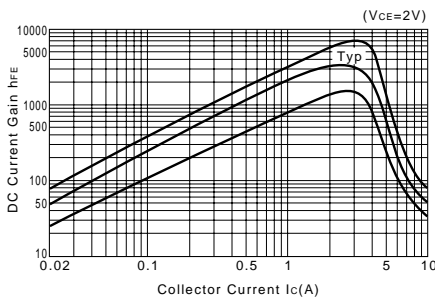
V<sub>CE(sat)</sub>-I<sub>B</sub> Characteristics (Typical)



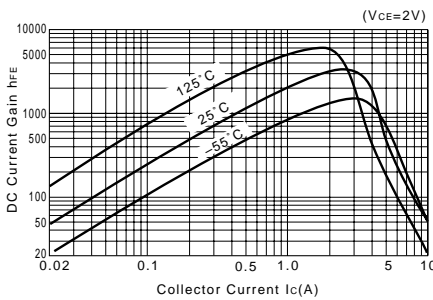
I<sub>C</sub>-V<sub>BE</sub> Temperature Characteristics (Typical)



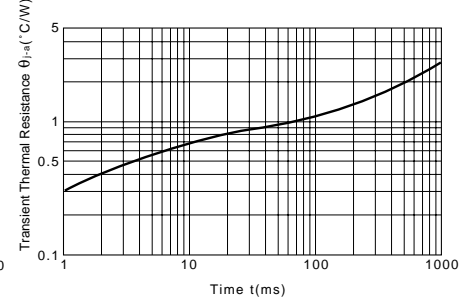
h<sub>FE</sub>-I<sub>C</sub> Characteristics (Typical)



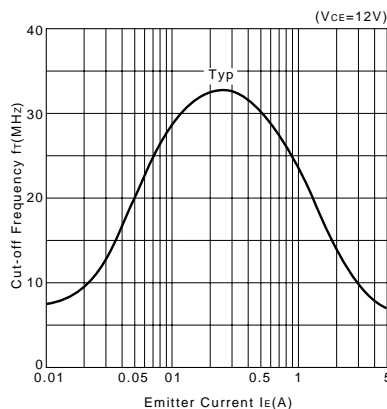
h<sub>FE</sub>-I<sub>C</sub> Temperature Characteristics (Typical)



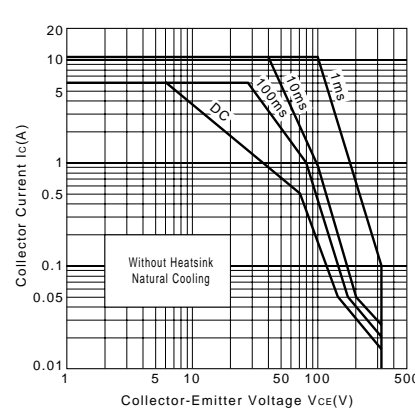
θ<sub>j-a</sub>-t Characteristics



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



Safe Operating Area (Single Pulse)



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

