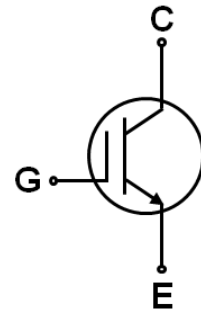
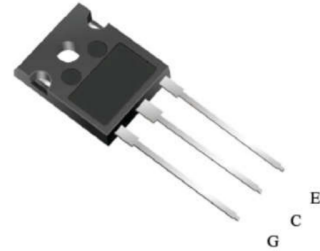




SPT200N65F1A1**650V 200A Trench IGBT****Features**

- Max Junction Temperature 175°C
- Positive Temperature Co-efficient
- Ease of Paralleling
- Short Circuit Rated
- Very Low Saturation Voltage:
 $V_{CE(SAT)} = 1.65V$ (Typ.) @ $I_C = 200A$
- Optimized for Motor Control Applications

**Applications**

Automotive Traction Modules

General Power Modules



Absolute Maximum Ratings (T_J = 25 °C unless otherwise noted)

Symbol	Parameter	Ratings	Units
V _{CES}	Collector to Emitter Voltage	650	V
V _{GES}	Gate-to-Emmitter Voltage	± 20	V
I _C	Collector Current, limited by T _c =100°C	200	A
I _{CM}	Pulsed Collector Current, V _{GE} =15V, limited by T _J max	600	A
S _{CWT}	Short Circuit Withstand Time, V _{GE} = 15V, V _{CE} ≤ 400V, T _J ≤ 150°C	5	μs
T _J	Operating Junction Temperature	-40 to +175	°C

Electrical Characteristics of the IGBT (T_J = 25°C unless otherwise noted)

Symbol	Parameter	Test Conditions	Min.	Typ.	Max.	Units
Static Characteristics (Tested on wafers)						
BV _{CES}	Collector to Emitter Breakdown Voltage	V _{GE} = 0V, I _C = 1mA	650	-	-	V
V _{CE(SAT)}	Collector to Emitter Saturation Voltage	I _C = 200A, V _{GE} = 15V	-	1.65	1.9	V
V _{GE(th)}	G-E Threshold Voltage	V _{GE} = V _{CE} , I _C = 200mA	4.5	5.5	6.5	V
I _{CES}	Collector Cut-Off Current	V _{CE} = 650V, V _{GE} = 0V	-	-	40	μA
I _{GES}	G-E Leakage Current	V _{GE} = 20V, V _{CE} = 0V	-	-	± 400	nA

Physical Dimensions Dimensions in micrometer unless otherwise noted