

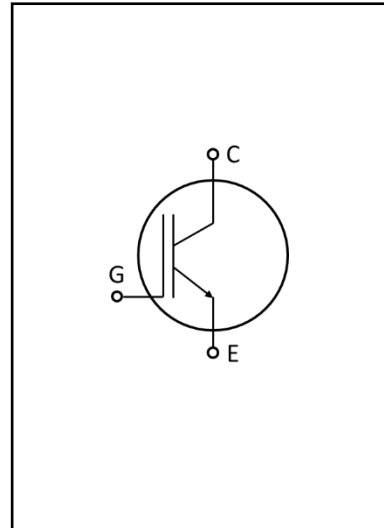
## IGBT Chip

### Features:

- 1200V Trench & Field stop technology
- Low  $v_{cesat}$
- Positive temperature coefficient
- Easy paralleling

### Applications:

- Power drives
- Inverter



### Mechanical parameters

Die size	7.2×9.88	mm <sup>2</sup>
Emitter pad size	See chip drawing	
Gate pad size	1.32×0.82	
Area total	71.14	μm
Thickness	120	
Scribe line Size	80	mm
Wafer size	200	
Max. possible chips per wafer	361	
Passivation front side	Polyimide	
Pad metal	AlCu with Ti/TiN (5.0μm & 200A/700A)	
Backside metal	Al/Ti/Ni/Ag	

**Maximum Ratings**

Parameter	Symbol	Value	Unit
Collector-Emitter voltage	$V_{CE}$	1200	V
DC collector current	$I_C$	75	A
Operating junction temperature	$T_{vj}$	-40 ... +175	°C
Gate emitter voltage	$V_{GE}$	±20	V
Short circuit data	$t_{SC}$	10	μs

**Static Characteristics (tested on wafer),  $T_{vj}=25^{\circ}\text{C}$** 

Parameter	Symbol	Conditions	Value			Unit
			Min.	Typ.	Max.	
Collector-Emitter breakdown voltage	$V_{(BR)CES}$	$V_{GE}=0V, I_C=1mA$	1200			V
Collector-Emitter saturation voltage	$V_{CESat}$	$V_{GE}=15V, I_C=75A$		1.75	2.15	
Gate-Emitter threshold voltage	$V_{GE(th)}$	$I_C=2.6mA, V_{GE}=V_{CE}$	5.2	5.8	6.4	
Zero gate voltage collector current	$I_{CES}$	$V_{CE}=1200V, V_{GE}=0V$			10	uA
Gate-Emitter leakage current	$I_{GES}$	$V_{CE}=0V, V_{GE}=20V$			100	nA
Integrated gate resistor	$r_G$			6.1		Ω
Input capacitance	$C_{ies}$	$V_{CE}=25V, V_{GE}=0V,$ $f=1MHz$		5.66		nF
Reverse transfer capacitance	$C_{res}$			0.24		

**Chip Drawing**

