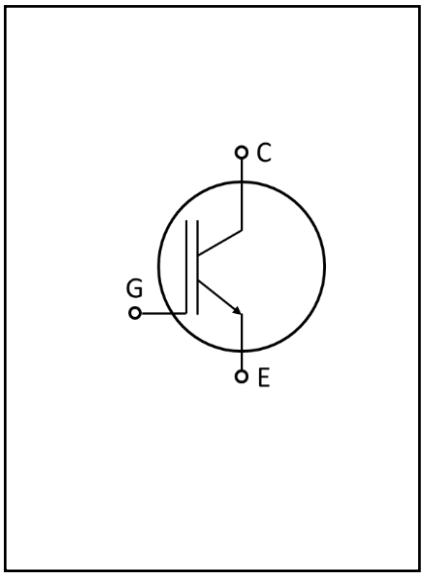
IGBT Chip

Features:

- 1200V Trench & Field stop technology
- Low switching losses
- Positive temperature coefficient
- Easy paralleling



Applications:

- Energy storage inverter
- Uninterruptible power supplies
- Solar inverters

Mechanical parameters

Die size	6.80×11.00	mm^2
Emitter pad size	See chip drawing	
Gate pad size	0.63×0.35	
Area total	74.80	
Thickness	110	μm
Wafer size	200	mm
Max. possible chips per wafer	345	
Passivation front side	Polyimide	
Pad metal	AlCu with Ti/TiN (5μm & 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	120	A
Operating junction temperature	T_{vj}	-40 … +175	°C
Gate emitter voltage	V_{GE}	±20	V

Static Characteristics (tested on wafer), T_{vj}=25°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=120A		1.88	2.28	
Gate-Emitter threshold voltage	$V_{GE(th)}$	I_C=2.34mA, V_{GE}= V_{CE}	5.23	5.83	6.43	
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 a)			N/A		Ω
Input capacitance	C_{ies} a)	V_{CE}=25V, V_{GE}=0V, f=100kHz		17.07		nF
Reverse transfer capacitance	C_{res} a)			0.13		

Chip Drawing

Note：all dimension are shown in μm