

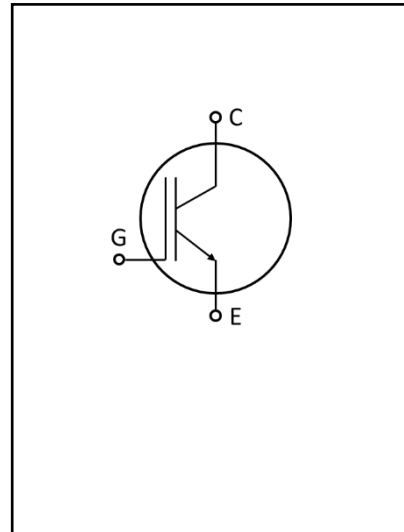
IGBT Chip

Features:

- 600V Trench & Field stop technology
- Low switching losses
- Positive temperature coefficient
- Easy paralleling

Applications:

- EV/HEV
- Low/medium power drives
- inverter



Mechanical parameters

Die size	9.73×10.23	mm ²
Emitter pad size	See chip drawing	
Gate pad size	1.762×0.852	
Area total	99.54	μm
Thickness	65	
Scribe line Size	80	mm
Wafer size	200	
Max. possible chips per wafer	248	
Passivation front side	Polyimide	
Pad metal	AlCu with Ti/TiN (4.5μm & 400A/1000A)	
Backside metal	Al/Ti/Ni/Ag	

Maximum Ratings

Parameter	Symbol	Value	Unit
Collector-Emitter voltage	V_{CE}	600	V
DC collector current	I_C	200	A
Operating junction temperature	T_{vj}	-40 ... +175	°C
Gate emitter voltage	V_{GE}	± 20	V
Short circuit data	tsc	10	μs

Electrical Characteristics, $T_{vj}=25^\circ C$

Parameter	Symbol	Conditions	Value			Unit
			Min.	Typ.	Max.	
Collector-Emitter breakdown voltage	$V_{(BR)CES}$	$V_{GE}=0V, I_C=1mA$	600			V
Collector-Emitter saturation voltage	V_{CEsat}	$V_{GE}=15V, I_C=200A$		1.85	2.25	
Gate-Emitter threshold voltage	$V_{GE(th)}$	$I_C=6mA, V_{GE}=V_{CE}$	4.7	5.3	5.9	
Zero gate voltage collector current	I_{CES}	$V_{CE}=600V, V_{GE}=0V$			10	μA
Gate-Emitter leakage current	I_{GES}	$V_{CE}=0V, V_{GE}=20V$			200	nA
Integrated gate resistor	r_G			2.0		Ω
Input capacitance	C_{ies}	$V_{CE}=25V, V_{GE}=0V,$ $f=1MHz$		11.7		nF
Reverse transfer capacitance	C_{res}			0.52		

Chip Drawing

