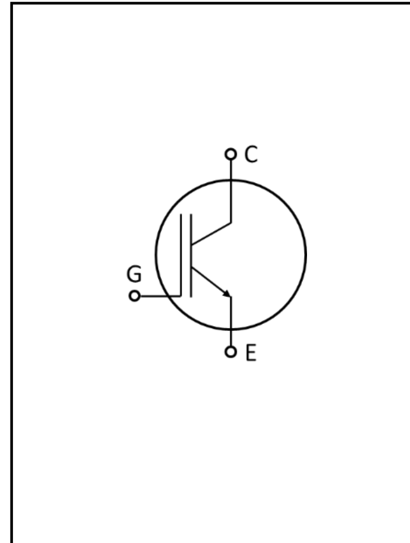
IGBT Chip

Features:

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



Applications:

- Power drives

Mechanical parameters

Die size	9.69×7.87	mm^2
Emitter pad size	See chip drawing	
Gate pad size	1.61×0.81	
Area total	76.26	
Thickness	65	µm
Scribe line Size	80	
Wafer size	200	mm
Max. possible chips per wafer	320	
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	150	A
Operating junction temperature	T_{vj}	-40 … +150	°C
Gate emitter voltage	V_{GE}	±20	V
Short circuit data	t_{SC}	10	µs

Static Characteristics, 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	600			V
Collector-Emitter saturation voltage	V_{CEsat}	V_{GE}=15V, I_C=150A		1.80	2.20	V
Gate-Emitter threshold voltage	$V_{GE(th)}$	I_C=2.4mA, V_{GE}= V_{CE}	5.1	5.7	6.3	V
Zero gate voltage collector current	I_{CES}	V_{CE}=600V, V_{GE}= 0V			10	uA
Gate-Emitter leakage current	I_{GES}	V_{CE}=0V, V_{GE}= 20V			150	nA
Integrated gate resistor	r_G			1.5		Ω
Input capacitance	C_{ies}	V_{CE}=25V, V_{GE}=0V, f=1MHz		9.0		nF
Reverse transfer capacitance	C_{res}	V_{CE}=25V, V_{GE}=0V, f=1MHz		0.4		nF

Chip Drawing