

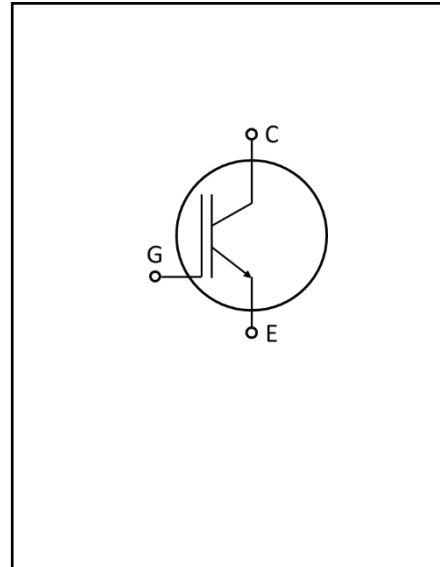
IGBT Chip

Features:

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

Applications:

- Welding machine
- Induction heating



Mechanical parameters

Die size	7.2×9.88	mm ²
Emitter pad size	See chip drawing	
Gate pad size	1.32×0.82	
Area total	71.14	μm
Thickness	120	
Scribe line Size	80	
Wafer size	200	mm
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	$V_{(BR)CES}$	$V_{GE}=0\text{V}, I_C=1\text{mA}$	1200			V
Collector-Emitter saturation voltage	V_{CEsat}	$V_{GE}=15\text{V}, I_C=75\text{A}$		1.95	2.35	
Gate-Emitter threshold voltage	$V_{GE(th)}$	$I_C=3\text{mA}, V_{GE}=V_{CE}$	5.3	5.9	6.5	
Zero gate voltage collector current	I_{CES}	$V_{CE}=1200\text{V}, V_{GE}=0\text{V}$			10	uA
Gate-Emitter leakage current	I_{GES}	$V_{CE}=0\text{V}, V_{GE}=20\text{V}$			100	nA
Integrated gate resistor	r_G			6.1		Ω
Input capacitance	C_{ies}	$V_{CE}=25\text{V}, V_{GE}=0\text{V},$		4.70		nF
Reverse transfer capacitance	C_{res}	$f=1\text{MHz}$		0.20		

Chip Drawing

