

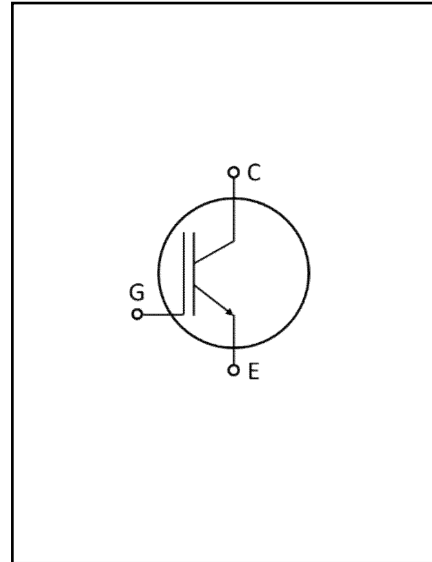
IGBT Chip

Features:

- 1700V Trench & Field stop technology
- Low switching losses
- Positive temperature coefficient
- Easy paralleling

Applications:

- Power drives



Mechanical parameters

Die size	5.5609 × 6.4589	mm ²
Emitter pad size	See chip drawing	
Gate pad size	0.753 × 0.682	
Area total	35.95	μm
Thickness	190	
Scribe line Size	80	mm
Wafer size	200	
Max. possible chips per wafer	712	
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}	1700	V
DC collector current	I_C	20	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 (tested on wafer), $T_{vj}=25^{\circ}\text{C}$

Parameter	Symbol	Conditions	Value			Unit
			Min.	Typ.	Max.	
Collector-Emitter breakdown voltage	$V_{(BR)CES}$	$V_{CE}=0V, I_C=10\mu A$	1700			V
Collector-Emitter saturation voltage	V_{CEsat}	$V_{GE}=15V, I_C=10A$		1.60	2.00	
Gate-Emitter threshold voltage	$V_{GE(th)}$	$I_C=2mA, V_{GE}=V_{CE}$	5.20	5.85	6.40	
Zero gate voltage collector current	I_{CES}	$V_{CE}=1700V, V_{GE}=0V$			10	µA
Gate-Emitter leakage current	I_{GES}	$V_{CE}=0V, V_{GE}=20V$			100	nA
Integrated gate resistor	r _G			0		Ω
Input capacitance	C_{ies}	$V_{CE}=25V, V_{GE}=0V,$ $f=1MHz$		1.97		nF
Reverse transfer capacitance	C_{res}			0.08		

Chip Drawing

