

Features:

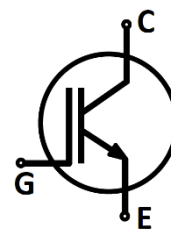
- 1200V Trench & field stop technology
- Low switching losses
- Positive Temperature coefficient

Recommended for:

Discrete components

Applications:

- UPS
- Solar inverters
- Welding
- PFC



Mechanical parameters

Die size	L x W	6.3×5.5	mm ²
Emitter pad size	L x W	See chip drawing	mm ²
Gate pad size	L x W	1.31×0.826	mm ²
Silicon thickness		115	μm
Wafer size		200	mm
Maximum possible chips per wafer		766	
Passivation frontside		Polyimide	
Pad Metallization	AlCu	4	μm
Backside Metallization	Al / Ti / Ni / Ag	1.7	μm

Maximum Ratings

Parameter	Symbol	Value	Unit
Collector-emitter voltage	V_{CE}	1200	V
DC collector current, limited by $T_{vj\ max}$	I_C	40 ¹	A
Pulsed collector current, t_p limited by $T_{vj\ max}$ ²	$I_{C\ puls}$	120	A
Gate-emitter voltage	V_{GE}	± 20	V
Operating junction temperature	$T_{vj\ op}$	-40~175	°C
Storage temperature	T_{stg}	-40~150	°C

Static Characteristic (T_j=25°C, unless otherwise noted)

Parameter	Symbol	Conditions	Min.	Typ.	Max.	Unit
Collector-emitter saturation voltage	$V_{CE(sat)}$	$V_{GE}=15V$, $I_C=25A$	1.25	1.55	1.75	V
Gate-emitter threshold voltage	$V_{GE(th)}$	$I_C=1.0mA$, $V_{CE}=V_{GE}$	4.50	5.00	5.50	V
Collector-emitter leakage	I_{CES}	$V_{CE}=1200V$, $V_{GE}=0V$	-	-	5	μA
Gate-emitter leakage	I_{GES}	$V_{CE}=0V$, $V_{GE}=20V$	-	-	120	nA

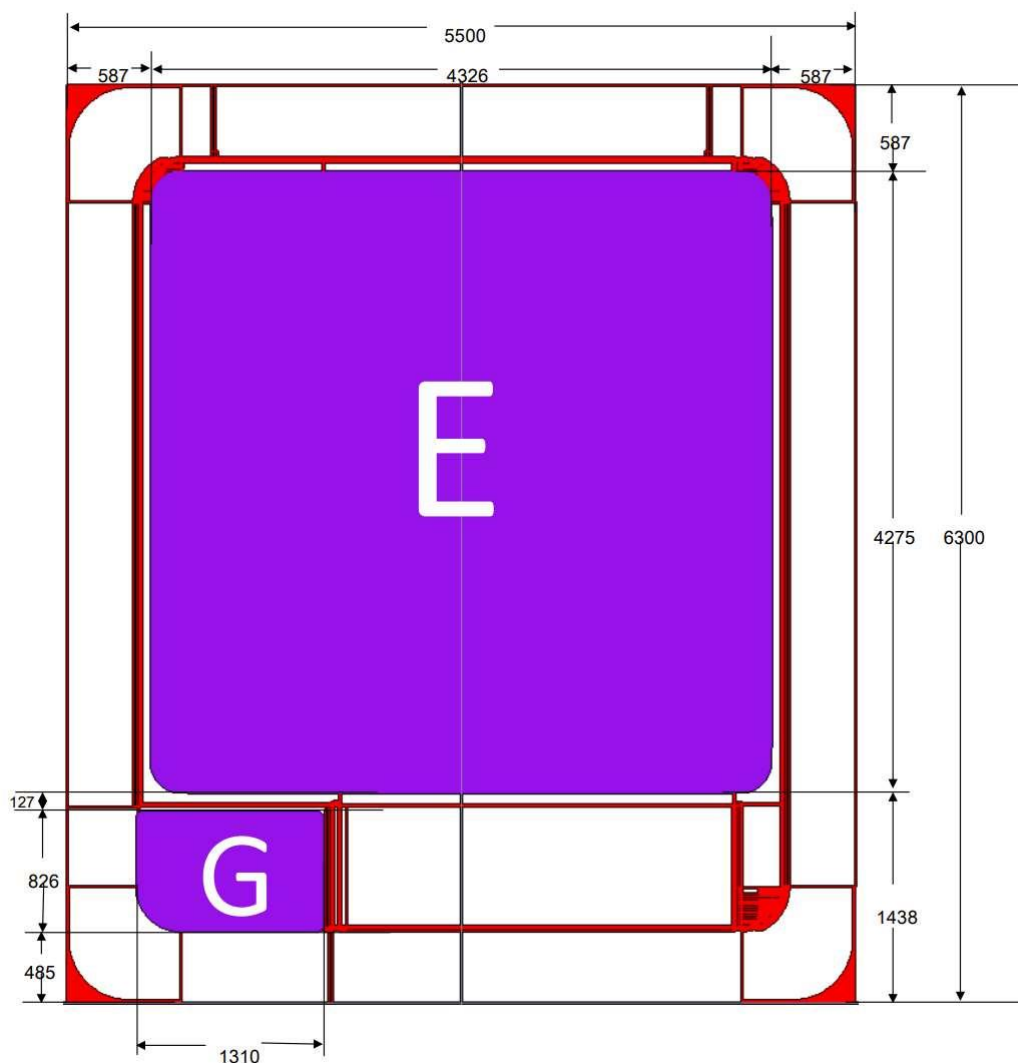
¹ Depending on thermal properties of assembly.

² Not subject to production test - verified by design/characterization.

Electrical Characteristic ¹

Parameter		Symbol	Conditions	Min.	Typ.	Max.	Unit
Collector-emitter saturation voltage	$T_{vj}=25^{\circ}\text{C}$	$V_{CE(sat)}$	$V_{GE}=15\text{V}$ $I_C=40\text{A}$	1.45	1.70	1.95	V
	$T_{vj}=150^{\circ}\text{C}$			-	2.30	-	
Input capacitance		C_{ies}	$V_{CE}=25\text{V}$ $V_{GE}=0\text{V}, f=100\text{kHz}$	-	5500	-	pF
Reverse transfer capacitance		C_{res}	$T_{vj}=25^{\circ}\text{C}$	-	45	-	pF

Chip Drawing (unit: μm)



¹ Not subject to production test-verified by design/characterization.

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