1200V IGBT Wafer

Ordering Information

Wafer Name	CDJX536IG1200AF	Chip Name	/

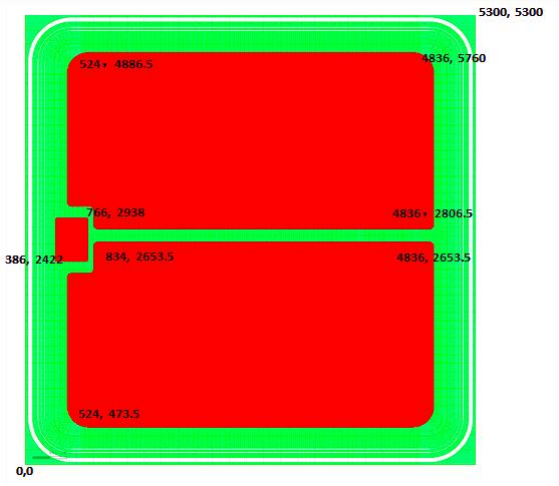
Applications

- Industrial Motor Drivers
- Inverter
- Welding
- UPS

Features

① Field Stop Planar Gate IGBT
② Low Collector-Emitter saturation voltage
③ High short circuit capability
④ Low swiching losses

Die outline and Info.



V_{CE}=1200V,I_C=25A

$V_{CE(sat)}$ =2.3V

Die Size: 5360 μm * 5360 μm (含划片槽)

Gate Pad Size: 380 μm * 516 μm

Source Pad Size: 4070 μm * 2822 μm* 2, With PA Layer

Back Metal: AlTiNiAg,1.5μm

Front Metal, Thickness: AlSiCu, 4μm

Gross Die: 508

Mechanical Data

Nominal Back Metal Composition:	AlTiNiAg 1.5μm
Nominal Front Metal Composition, Thickness:	AlSiCu(98.5%-1%-0.5%）4μm
Wafer Diameter:	150 mm (6 inch)
Wafer Thickness:	130μm
Minimum Street Width	60μm
Reject Ink Dot	ink
Recommended Storage Environment:	Store in original container, in desiccated nitrogen, with no contamination
Recommended Die Attach Conditions:	For optimum electrical results, die attach temperature should not exceed 300 °C

Electrical Characteristic Note*

（Device Major Electrical Characteristics for TO-247H package Reference；T_{vj}=25°C unless otherwise specified.)

Parameter	Description	Min.	Typ.	Max.	Test Conditions	Unit
$V_{(BR)CES}$	Collector-to-Emitter BV	1200	--	--	V_{GE} = 0V, I_C = 250μA	V
V_{GES}	Gate-to-Emitter Voltage	--	--	±30	NA	V
$V_{CE(sat)}$	Collector-to-Emitter saturation Voltage	--	2.3	2.8	V_{GE} = 15V, I_C = 25A	V
$V_{GE(th)}$	Gate-to-Emitter Threshold Voltage	4.8	--	6.6	V_{CE} = V_{GE}, I_C= 1mA	V
I_{CES}	Collector-to-Emitter Leakage Current	--	--	10	V_{CE} = 1200V, V_{GE} = 0V, T_{vj}= 25°C	μA
I_{GES}	Gate-to-Emitter Leakage Current	--	--	±100	V_{GE} = ±30V	nA
C_{ies}	Input capacitance	--	2043	--	V_{GE} = 0V, V_{CE}=25V, f=1MHz	pF
C_{res}	Reverse transfer capcitance	--	47	--		pF
$t_{d(on)}$	Switching time *Reference characteristics	--	146	--	V_{CC} = 600V, I_C =25A V_{GE} = 0/15V Rg = 25Ω	ns
t_r		--	34	--		ns
$t_{d(off)}$		--	154	--		ns
t_f		--	205	--		ns
T_{sc}	Short circuit withstand time	10	--	--		μs
T_{vj}	Operating Junction and Storage Temperature Range	-40°C to 175 °C Max.				°C
T_{STG}						

Note*

Electrical characteristics are reported for the reference packaged part (TO-247H) and can not be guaranteed in die sales form. Variations in customer packaging materials, dimensions and processes may affect parametric performance.

Shipping

- One shipping options is offered as standard.
- Un-sawn wafer

Handling

- Product must be handled only at ESD safe workstations. Standard ESD precautions and safe work environments are as defined in MIL-HDBK-263.
- Product must be handled only in a class 10,000 or better-designated clean room environment.

Wafer/Die Storage

- Proper storage conditions are necessary to prevent product contamination and/or degradation after shipment.
- Un-sawn wafers and singulated die can be stored for up to 12 months when in the original sealed packaging at room temperature (45% +/- 15% RH controlled environment).
- Un-sawn wafers and singulated die that have been opened can be stored when returned to their containers and placed in a Nitrogen purged cabinet, at room temperature (45% +/- 15% RH controlled environment).
- Note: To reduce the risk of contamination or degradation, it is recommended that product not being used in the assembly process be returned to their original containers and resealed with a vacuum seal process.
- Sawn wafers on a film frame are intended for immediate use and have a limited shelf life.

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