

500V MOSFET Wafer

Ordering Information

Wafer Name	CDJX490N500A	Chip Name	/
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Die outline and Info.

	$V_{DS}=500V, I_D=20A$ $R_{DS(ON)} < 310m\Omega$ Die Size: 6000 μm * 4000 μm (含划片槽) Gate Pad Size: 355 μm * 502 μm Source Pad Size: 5203 μm * 3504 μm, With PA Layer Back Metal: TiNiAg, 1.4μm Front Metal, Thickness: AlSiCu, 4μm Gross Die: 630
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Mechanical Data

Nominal Back Metal Composition:	TiNiAg 1.4 μm
Nominal Front Metal Composition, Thickness:	AlSiCu(98.5%-1%-0.5%) 4 μm
Wafer Diameter:	150 mm (6 inch)
Wafer Thickness:	300 μm +/-20 μm
Minimum Street Width	60 μm
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 ; $T_J=25^{\circ}\text{C}$ unless otherwise specified.)

Parameter	Description	Min.	Typ.	Max.	Test Conditions	Unit
$V_{(BR)DSS}$	Drain-to-Source Breakdown Voltage	500	--	--	$V_{GS} = 0V, I_D = 250\mu A$	V
V_{GSS}	Gate-to-Source Voltage	--	--	± 30	NA	V
$R_{DS(on)}$	Static Drain-to-Source On-Resistance	--	258	310	$V_{GS} = 10V, I_D = 8A$	m Ω
$V_{GS(th)}$	Gate Threshold Voltage	2.0	--	4.0	$V_{DS} = V_{GS}, I_D = 250\mu A$	V
I_{DSS}	Drain-to-Source Leakage Current	--	--	1	$V_{DS} = 500V, V_{GS} = 0V, T_J = 25^{\circ}\text{C}$	μA
I_{GSS}	Gate-to-Source Leakage Current	--	--	± 100	$V_{GS} = \pm 30V$	nA
V_{SD}	Body Diode Voltage	--	--	1.5	$V_{GS} = 0V, I_{SD} = 16A$	V
T_j	Operating Junction and	-55 $^{\circ}\text{C}$ to 150 $^{\circ}\text{C}$ Max.				$^{\circ}\text{C}$
T_{STG}	Storage Temperature Range					

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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