

X0012

N-Channel Enhancement Mode MOSFET

20V(VDS) / ± 12 V(VGS) / 2.3A(ID)

Rev1.5



Wafer Specification

1. Order Information

Part No.	Description	Gross die / per 8" wafer
X0012	20V(V_{DS}) / ±12V(V_{GS}) / 2.3A(I_D) N-Channel Enhancement Mode MOSFET	154,660

2. Mechanical Data

Nominal Back Metal Composition, Thickness	Ti-Ni-Ag-Sn (36kÅ°)
Nominal Front Metal Composition, Thickness	AlCu (4µm)
Wafer Diameter	200mm, with 010 notch
Wafer Thickness	150µm±10µm
Scribe Line Width	60µm
Passivation	SRO+SiN

3. Key Electrical Characteristics of Die (at T_J = 25 °C, unless otherwise specified)

Parameter	Description	Min.	Typ.	Max.	Unit	Test Conditions
V _{(BR)DSS}	Drain-to-Source Breakdown Voltage	20			V	V _{GS} =0V, I _D =250µA
I _{D(Device Ref)}	Continuous Drain Current			2.3	A	T _J =25°C
R _{DS(on)} (CP)	Static Drain-to-Source On-Resistance		42	50	mΩ	V _{GS} =4.5V, I _D =1A
			53	60	mΩ	V _{GS} =2.5V, I _D =1A
R _{DS(on)} (FT)	Static Drain-to-Source On-Resistance		47	55	mΩ	V _{GS} =4.5V, I _D =2.3A
			58	65	mΩ	V _{GS} =2.5V, I _D =2A
V _{GS(th)}	Gate Threshold Voltage	0.5	0.7	1.0	V	V _{DS} =V _{GS} , I _D =250µA
I _{DSS}	Drain-to-Source Leakage Current			1	µA	V _{DS} =20V, V _{GS} =0V
I _{GSS}	Gate-to-Source Leakage Current			±100	nA	V _{GS} =±12V, V _{DS} =0V
T _J , T _{STG}	Operating and Storage Temperature	-55°C to 150°C Max				

4. Die Outline

	Die Size: 449µm × 422µm (including scribe line)
	Gate: 130µm × 130µm
	For SOT-23 package Suggest Bonding wire: Gate: 1 × 1.0 mil Cu Source: 3 × 1.65 mil Cu