

**MOSFET Metal-Oxide-Semiconductor Field-Effect Transistor**  
**120V N-Channel MOSFET**

Bonding Pad Information		Chip Information		
	Die Size (with Scribe Line)	2,660 $\mu$ m x 2,030 $\mu$ m		
	Gate Pad Size	330 $\mu$ m x 460 $\mu$ m		
	Source Pad Size	Full metalized surface of source region <sup>a</sup>		
	Scribe Line Size	60 $\mu$ m		
	Wafer Size	6inches		
	Wafer Thickness	8mils		
	Metallization	Front Side	Al/Si/Cu : 4 $\mu$ m	
		Back Side	Ti/Ni/Ag : 1.4 $\mu$ m	
	Recommended Wire Bonding			
	Gate Pad	1.5 mil x 1 (Cu wire)		
	Source Pad	40 mil x 1 Stitch (Al Ribbon)		
	Gross Die	2,700ea		

**Maximum Ratings (T<sub>A</sub>=25°C unless otherwise noted)**

Parameter	Symbol	Value	Unit
Drain-Source Voltage	V <sub>DSS</sub>	120	V
Gate-Source Voltage	V <sub>GSS</sub>	±20	V
Operating Junction Temperature Range	T <sub>J</sub>	-55 to +150	°C

**Electrical Characteristics (T<sub>A</sub>=25°C unless otherwise noted)**

Parameter	Symbol	Conditions	Min.	Typ.	Max.	Unit
<b>OFF CHARACTERISTIC</b>						
Drain-Source Breakdown Voltage	BV <sub>DSS</sub>	V <sub>GS</sub> =0V, I <sub>D</sub> =250 $\mu$ A	120	-	-	V
Drain-Source Leakage Current	I <sub>DSS</sub>	V <sub>GS</sub> =0V, V <sub>DS</sub> =96V	-	-	1	$\mu$ A
Gate-Source Leakage Current	I <sub>GSS</sub>	V <sub>GS</sub> =±20V, V <sub>DS</sub> =0V	-	-	±100	nA
<b>ON CHARACTERISTIC</b>						
Gate Threshold Voltage	V <sub>GS(TH)</sub>	V <sub>GS</sub> =V <sub>DS</sub> , I <sub>D</sub> =250 $\mu$ A	2.0	-	4.0	V
Static Drain-Source On-Resistance	R <sub>DS(ON)</sub>	V <sub>GS</sub> =10V, I <sub>D</sub> =10A	-	15	20	m $\Omega$
<b>DRAIN-SOURCE DIODE CHARACTERISTICS AND MAXIMUM RATINGS</b>						
Drain-Source Diode Forward Voltage	V <sub>SD</sub>	V <sub>GS</sub> =0V, I <sub>S</sub> =1A	0.4	-	1.0	V

**NOTE:**

- The data tested by pulsed, pulse with  $\leq 300\mu$ s, duty cycle  $\leq 2\%$ .
- R<sub>DS(ON)</sub> calculated by DFN5x6-8L package type.