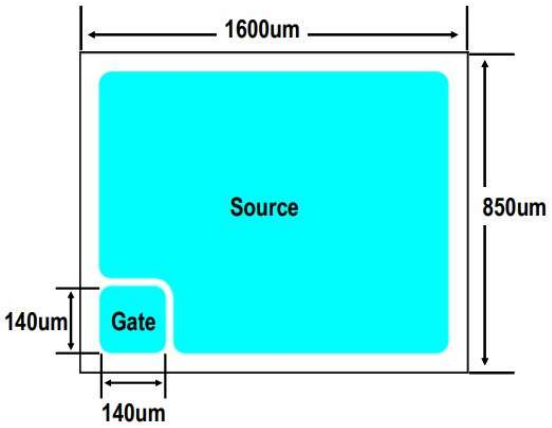
MOSFET Metal-Oxide-Semiconductor Field-Effect Transistor

20V N-Channel MOSFET

Bonding Pad Information	Chip Information		
	Die Size (with Scribe Line)		1,650μm x 900μm
	Gate Pad Size		140μm x 140μm
	Source Pad Size		Full metalized surface of source region
	Scribe Line Size		50μm
	Wafer Size		6inches
	Wafer Thickness		5mils
	Metallization	Front Side	Al/Si/Cu : 4μm
		Back Side	Ti/Ni/Ag : 1.4μm
	Recommended Wire Bonding		
	Gate Pad		1.5 mil x 1 (Cu wire)
	Source Pad		2.0 mil x 16 (Cu wire)
	Gross Die		10,000ea

Maximum Ratings (T_A=25°C unless otherwise noted)

Parameter	Symbol	Value	Unit
Drain-Source Voltage	V_{DSS}	20	V
Gate-Source Voltage	V_{GSS}	±12	V
Drain Current-Continuous @ T_C=25°C	I_D	11	A
Drain Current-Pulsed	I_{DM}	70	A
Operating Junction Temperature Range	T_J	-55 to +150	°C

Electrical Characteristics (T_A=25°C unless otherwise noted)

Parameter	Symbol	Conditions	Min.	Typ.	Max.	Unit
OFF CHARACTERISTIC						
Drain-Source Breakdown Voltage	BV_{DSS}	V_{GS}=0V, I_D=250uA	20	-	-	V
Drain-Source Leakage Current	I_{DSS}	V_{GS}=0V, V_{DS}=16V	-	-	1	uA
Gate-Source Leakage Current	I_{GSS}	V_{GS}=±12V, V_{DS}=0V	-	-	±10	uA
ON CHARACTERISTIC						
Gate Threshold Voltage	$V_{GS(TH)}$	V_{GS}=V_{DS}, I_D=250uA	0.5	0.8	1.2	V
Static Drain-Source On-Resistance	$R_{DS(ON)}$	V_{GS}=4.5V, I_D=5.5A	4.5	6.0	7.2	mΩ
		V_{GS}=3.7V, I_D=5.5A	5.0	7.0	8.2	
		V_{GS}=2.5V, I_D=5.5A	6.0	9.0	10.2	
DYNAMIC CHARACTERISTICS						
Input Capacitance	C_{iss}	V_{GS}=0V, V_{DS}=10V, f=1MHz	-	1310	-	pF
Output Capacitance	C_{oss}		-	264	-	
Reverse Transfer Capacitance	C_{rss}		-	235	-	
DRAIN-SOURCE DIODE CHARACTERISTICS AND MAXIMUM RATINGS						
Drain-Source Diode Forward Voltage	V_{SD}	V_{GS}=0V, I_S=1A	-	0.85	1.2	V

NOTE:
1. **The data tested by pulsed, pulse with ≦ 300us, duty cycle ≦ 2%.**
2. **$R_{DS(ON)}$ calculated by DFN3x3-6L package type.**
3. **ESD protected 2kV for DFN3x3-6L.**