

## AK N-Channel Trench Power MOSFET

### Features

- N-channel
- $V_{DS} = 60V$ ,  $I_D = 70A$   
 $R_{DS(ON)} < 12m\Omega @ V_{GS} = 10V$
- Pb-free lead plating; RoHS compliant

### Application

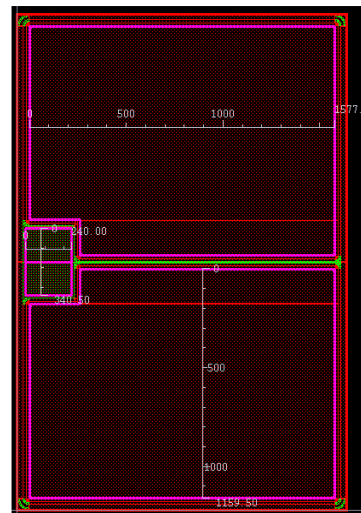
- Synchronous Rectification
- Power management

### Physical Characteristics:

Wafer Size (inch)	8
Chip Size with scribe (mm)	1.760x2.570
Wafer Thickness (mil)	6
Top Metal	AlCu
Top Metal Thickness ( $\mu m$ )	4
Back Metal	Ti/Ni/Ag
Scribe Line ( $\mu m$ )	60
Gate Wire recommended	42um Cu or 1mil Al
Source Wires recommended	$\Phi 15mil$ Al*2
Gross Die	6247
Source Pad Dimensions( $\mu m$ )	1577*1159*2
Gate Pad Dimensions( $\mu m$ )	240*340

## 60V N-Ch Power MOSFET

Parameter	Value	Unit
$V_{DS}$	60	V
$R_{DS(on),typ}$   $V_{GS} = 10V$	8.5	$m\Omega$
$R_{DS(on),typ}$   $V_{GS} = 4.5V$	11	$m\Omega$
$I_{D\_MAX}$	70	A



G-Pad:240\*340; S-Pad: 1577\*1159

**Electrical Characteristics at T<sub>j</sub>=25°C (unless otherwise specified)**

Parameter	Symbol	Test Condition	Value			Unit
			Min.	Typ.	Max.	
Drain to Source Breakdown Voltage	V <sub>(BR)DSS</sub>	V <sub>GS</sub> =0V, I <sub>D</sub> =250μA	60	67		V
Gate Threshold Voltage	V <sub>GS(th)</sub>	V <sub>GS</sub> =V <sub>DS</sub> , I <sub>D</sub> =250μA	1.1	1.5	2.5	V
Zero Gate Voltage Drain Current	I <sub>DSS</sub>	V <sub>GS</sub> =0V, V <sub>DS</sub> =60V, T <sub>j</sub> =25°C	-		1	μA
		V <sub>GS</sub> =0V, V <sub>DS</sub> =60V, T <sub>j</sub> =100°C		-	100	
Gate to Source Leakage Current	I <sub>GSS</sub>	V <sub>GS</sub> =±20V, V <sub>DS</sub> =0V	-		±100	nA
Drain to Source on Resistance	R <sub>DS(on)</sub>	V <sub>GS</sub> =10V, I <sub>D</sub> =20A	-	8.5	12	mΩ
		V <sub>GS</sub> =4.5V, I <sub>D</sub> =15A		11	15	mΩ
Gate Resistance	R <sub>G</sub>	V <sub>GS</sub> =0V, V <sub>DS</sub> =0V, f=1MHz	-	1.2	-	Ω