

## AK P-Channel Trench Power MOSFET

### Features

- P-channel
- $V_{DS} = -100V, I_D = -18A$   
 $R_{DS(ON)} < 80m\Omega @ V_{GS} = -10V$
- Pb-free lead plating; RoHS compliant

### Application

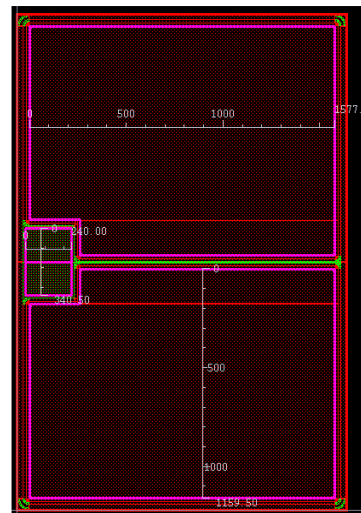
- Motor control and drive
- Power management

### 100V P-Ch Power MOSFET

Parameter	Value	Unit
$V_{DS}$	-100	V
$R_{DS(on), typ}$   $V_{GS} = 10V$	60	$m\Omega$
$I_{D\_MAX}$	-18	A

### 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



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	-100	-115		V
Gate Threshold Voltage	V <sub>GS(th)</sub>	V <sub>GS</sub> =V <sub>DS</sub> , I <sub>D</sub> =-250μA	-1.2	-2.0	-2.5	V
Zero Gate Voltage Drain Current	I <sub>DSS</sub>	V <sub>GS</sub> =0V, V <sub>DS</sub> =-100V, T <sub>j</sub> =25°C	-		1	μA
		V <sub>GS</sub> =0V, V <sub>DS</sub> =-100V, 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)_10V</sub>	V <sub>GS</sub> =-10V, I <sub>D</sub> =-10A	-	60	80	mΩ
	R <sub>DS(on)_4.5V</sub>	V <sub>GS</sub> =-4.5V, I <sub>D</sub> =-6A	-	70	95	mΩ
Gate Resistance	R <sub>G</sub>	V <sub>GS</sub> =0V, V <sub>DS</sub> =0V, f=1MHz	-	5	-	Ω