

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

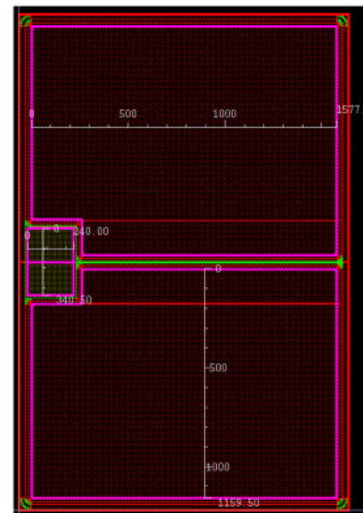
- Motor control and drive
- Power management

100V P-Ch Power MOSFET

Parameter	Value	Unit
V_{DS}	-100	V
$R_{DS(on), typ}$ $V_{GS} = 10V$	60	m Ω
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 (μm)	4
Back Metal	Ti/Ni/Ag
Scribe Line (μm)	60
Gate Wire recommended	42 μm Cu or 1mil Al
Source Wires recommended	$\Phi 15$ mil Al*2
Gross Die	6247
Source Pad Dimensions(μm)	1577*1159*2
Gate Pad Dimensions(μm)	240*340



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

Electrical Characteristics at T_j=25°C (unless otherwise specified)

Parameter	Symbol	Test Condition	Value			Unit
			Min.	Typ.	Max.	
Drain to Source Breakdown Voltage	V _{(BR)DSS}	V _{GS} =0V, I _D =-250μA	-100	-115		V
Gate Threshold Voltage	V _{GS(th)}	V _{GS} =V _{DS} , I _D =-250μA	-1.2	-2.0	-2.5	V
Zero Gate Voltage Drain Current	I _{DSS}	V _{GS} =0V, V _{DS} =-100V, T _j =25°C	-		1	μA
		V _{GS} =0V, V _{DS} =-100V, T _j =100°C			100	
Gate to Source Leakage Current	I _{GSS}	V _{GS} =±20V, V _{DS} =0V	-		±100	nA
Drain to Source on Resistance	R _{DS(on)_10V}	V _{GS} =-10V, I _D =-10A	-	60	80	mΩ
	R _{DS(on)_4.5V}	V _{GS} =-4.5V, I _D =-6A	-	70	95	mΩ
Gate Resistance	R _G	V _{GS} =0V, V _{DS} =0V, f=1MHz	-	5	-	Ω