

## N-Channel Trench Power MOSFET

### Features

- N-channel
- $V_{DS} = 30V, I_D = 80A$   
 $R_{DS(ON)} < 5.2m\Omega @ V_{GS} = 10V$
- Pb-free lead plating; RoHS compliant

### Application

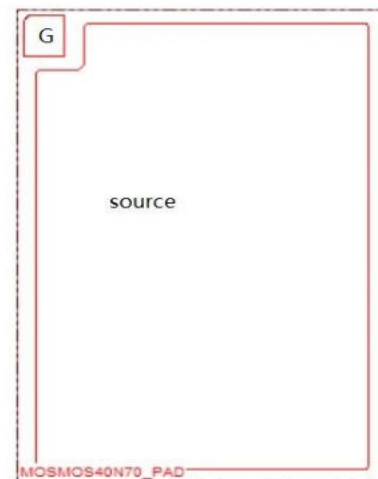
- Load Switch
- PWM Application
- Power management

### Physical Characteristics:

Wafer Size (inch)	8
Chip Size with scribe line (mm)	1.375x1.980
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
Source Wires recommended	$\Phi 12mil$ AL*2
Gross Die	10463
Source Pad Dimensions( $\mu m$ )	1185*1805
Gate Pad Dimensions( $\mu m$ )	140*170

## 30V N-Ch Power MOSFET

Parameter	Value	Unit
$V_{DS}$	30	V
$R_{DS(on),typ}$   $V_{GS}=10V$	3.5	$m\Omega$
$R_{DS(on),typ}$   $V_{GS}=4.5V$	5.2	$m\Omega$
$I_{D\_MAX}$	80	A



G: 140X170 S: 1185X1805  
die size: 1375X1980

## Electrical Characteristics at T<sub>j</sub>=25°C (unless otherwise specified under TO-252 package)

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	30	34		V
Gate Threshold Voltage	V <sub>GS(th)</sub>	V <sub>GS</sub> =V <sub>DS</sub> , I <sub>D</sub> =250μA	1.1	1.4	2.4	V
Zero Gate Voltage Drain Current	I <sub>DSS</sub>	V <sub>GS</sub> =0V, V <sub>DS</sub> =30V, T <sub>j</sub> =25°C	-	-	1	μA
		V <sub>GS</sub> =0V, V <sub>DS</sub> =30V, 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> =30A	-	3.5	5.2	mΩ
		V <sub>GS</sub> =4.5V, I <sub>D</sub> =20A	-	5.2	8.5	
Gate Resistance	R <sub>G</sub>	V <sub>GS</sub> =0V, V <sub>DS</sub> =0V, f=1MHz	-	1.8	-	Ω