ALPHA & OMEGA SEMICONDUCTOR

AO4413

30V P-Channel MOSFET

General Description

• The AO4413 uses advanced trench technology to provide excellent $R_{DS(ON)}$, and ultra-low low gate charge with a 25V gate rating. This device is suitable for use as a load switch or in PWM applications.

• RoHS and Halogen-Free Compliant

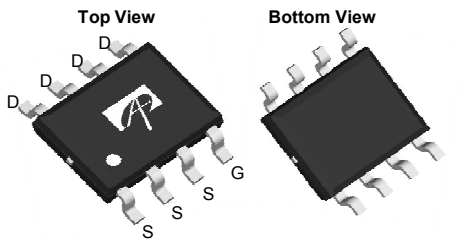
Product Summary

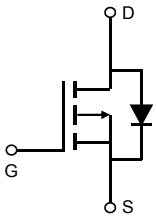
V_{DS}	-30V
I_D (at V_{GS}=-20V)	-15A
$R_{DS(ON)}$ (at V_{GS}=-20V)	< 7mΩ
$R_{DS(ON)}$ (at V_{GS} = -10V)	< 8.5mΩ

100% UIS Tested
100% R_g Tested

Green Product

SOIC-8





Absolute Maximum Ratings T_A=25°C unless otherwise noted

Parameter		Symbol	Maximum	Units
Drain-Source Voltage		V_{DS}	-30	V
Gate-Source Voltage		V_{GS}	±25	V
Continuous Drain Current	T_A=25°C	I_D	-15	A
	T_A=70°C		-12.8	
Pulsed Drain Current [C]		I_{DM}	-120	
Avalanche Current [C]		I_{AS}, I_{AR}	50	A
Avalanche energy L=0.1mH [C]		E_{AS}, E_{AR}	125	mJ
Power Dissipation [B]	T_A=25°C	P_D	3.1	W
	T_A=70°C		2	
Junction and Storage Temperature Range		T_J, T_{STG}	-55 to 150	°C

Thermal Characteristics

Parameter		Symbol	Typ	Max	Units
Maximum Junction-to-Ambient [A]	t ≤ 10s	$R_{\theta JA}$	31	40	°C/W
Maximum Junction-to-Ambient [A D]	Steady-State		59	75	°C/W
Maximum Junction-to-Lead	Steady-State	$R_{\theta JL}$	16	24	°C/W