ALPHA & OMEGA SEMICONDUCTOR

AOD4454

150V N-Channel MOSFET

General Description

The AOD4454 combines advanced trench MOSFET technology with a low resistance package to provide extremely low $R_{DS(ON)}$.This device is ideal for boost converters and synchronous rectifiers for consumer, telecom, industrial power supplies and LED backlighting.

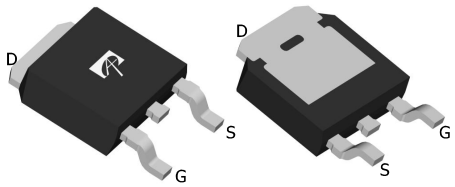
Product Summary

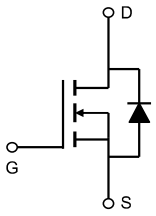
V_{DS}	150V
I_D (at V_{GS}=10V)	20A
$R_{DS(ON)}$ (at V_{GS}=10V)	< 94mΩ
$R_{DS(ON)}$ (at V_{GS}=7V)	< 110mΩ

100% UIS Tested
100% R_g Tested

Green Product

TO252
DPAK





Absolute Maximum Ratings T_A=25°C unless otherwise noted

Parameter		Symbol	Maximum	Units
Drain-Source Voltage		V_{DS}	150	V
Gate-Source Voltage		V_{GS}	±20	V
Continuous Drain Current	T_C=25°C	I_D	20	A
	T_C=100°C		14	
Pulsed Drain Current [C]		I_{DM}	40	
Continuous Drain Current	T_A=25°C	I_{DSM}	3	A
	T_A=70°C		2.5	
Avalanche Current [C]		I_{AS}, I_{AR}	5	A
Avalanche energy L=0.1mH [C]		E_{AS}, E_{AR}	1.3	mJ
Power Dissipation [B]	T_C=25°C	P_D	100	W
	T_C=100°C		50	
Power Dissipation [A]	T_A=25°C	P_{DSM}	2.5	W
	T_A=70°C		1.6	
Junction and Storage Temperature Range		T_J, T_{STG}	-55 to 175	°C

Thermal Characteristics

Parameter		Symbol	Typ	Max	Units
Maximum Junction-to-Ambient [A]	t ≤ 10s	$R_{\theta JA}$	16	20	°C/W
Maximum Junction-to-Ambient [A D]	Steady-State		41	50	°C/W
Maximum Junction-to-Case	Steady-State	$R_{\theta JC}$	1.2	1.5	°C/W