ALPHA & OMEGA SEMICONDUCTOR

AOLV66935

100V N-Channel AlphaSGT™

Preliminary

General Description

- AlphaSGT™ 100V, N-Channel Power MOSFET
- Robust SOA for linear mode operation
- Low $R_{DS(ON)}$
- RoHS compliant
- Halogen free according to IEC61249 2 21
- MSL 1 classified according to J STD 020

Applications

- Hot swap
- Load switch
- Soft start
- 48 V systems

Product Summary

V_{DS}	100V
I_D (at V_{GS}=10V)	338A
$R_{DS(ON)}$ (at V_{GS}=10V)	< 1.85mΩ

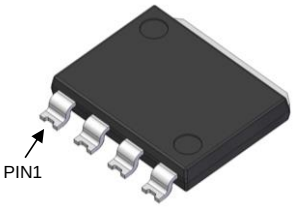
100% UIS Tested
100% Rg Tested

Max Tj=175°C

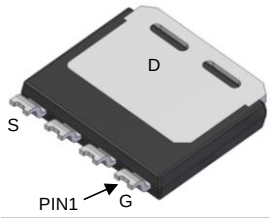
GREEN Product

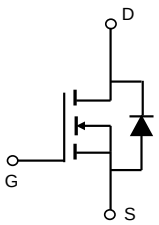
LFPAK8x8

Top View



Bottom View





Orderable Part Number	Package Type	Form	Minimum Order Quantity
AOLV66935	LFPAK8x8	Tape & Reel	2000

Absolute Maximum Ratings T_A=25°C unless otherwise noted

Parameter		Symbol	Maximum	Units
Drain-Source Voltage		V_{DS}	100	V
Gate-Source Voltage		V_{GS}	±20	V
Continuous Drain Current	T_C=25°C	I_D	338	A
	T_C=100°C		239	
Pulsed Drain Current [C]		I_{DM}	1352	
Continuous Drain Current	T_A=25°C	I_{DSM}	52	A
	T_A=70°C		43	
Avalanche Current [C]		I_{AS}	107	A
Avalanche energy	L=0.1mH [C]	E_{AS}	572	mJ
Power Dissipation [B]	T_C=25°C	P_D	428	W
	T_C=100°C		214	
Power Dissipation [A]	T_A=25°C	P_{DSM}	10	W
	T_A=70°C		7	
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	$R_{\theta JA}$	10	15	°C/W
Maximum Junction-to-Ambient [A D]	Steady-State		35	45	°C/W
Maximum Junction-to-Case	Steady-State	$R_{\theta JC}$	0.25	0.35	°C/W