ALPHA & OMEGA SEMICONDUCTOR

AONA66642

60V N-Channel AlphaSGT™

Preliminary

General Description

- Trench Power MV MOSFET Technology
- DFN5x6 Top Exposed
- Low $R_{DS(ON)}$
- Low Gate Charge
- RoHS 2.0 and Halogen-Free Compliant

Applications

- High-frequency Switching FET

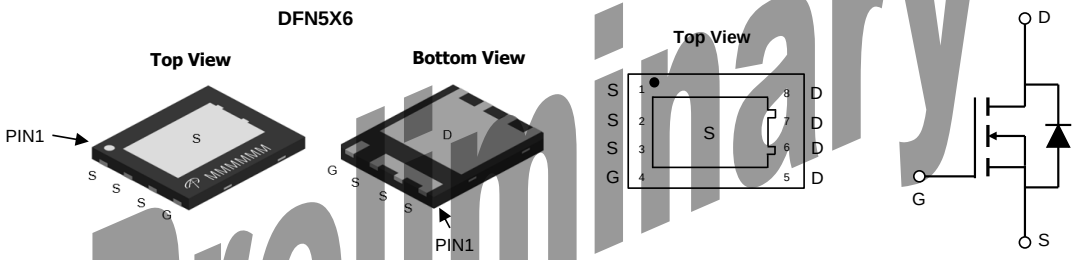
Product Summary

V_{DS}	60V
I_D (at V_{GS}=10V)	264A
$R_{DS(ON)}$ (at V_{GS}=10V)	< 1.35mΩ
$R_{DS(ON)}$ (at V_{GS}=8V)	< 1.5mΩ

100% UIS Tested
100% Rg Tested

Max Tj=175°C

GREEN Product



Orderable Part Number	Package Type	Form	Minimum Order Quantity
AONA66642	DFN 5x6	Tape & Reel	5000

Absolute Maximum Ratings T_A=25°C unless otherwise noted

Parameter		Symbol	Maximum	Units
Drain-Source Voltage		V_{DS}	60	V
Gate-Source Voltage		V_{GS}	±20	V
Continuous Drain Current	T_C=25°C	I_D	264	A
	T_C=100°C		186	
Pulsed Drain Current [C]		I_{DM}	1056	
Continuous Drain Current	T_A=25°C	I_{DSM}	49	A
	T_A=70°C		41	
Avalanche Current [C]		I_{AS}	67	A
Avalanche energy	L=0.3mH [C]	E_{AS}	673	mJ
Power Dissipation [B]	T_C=25°C	P_D	214	W
	T_C=100°C		107	
Power Dissipation [A]	T_A=25°C	P_{DSM}	7.5	W
	T_A=70°C		5.2	
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	$R_{\theta JA}$	15	20	°C/W
Maximum Junction-to-Ambient [A D]	Steady-State		40	50	°C/W
Maximum Junction-to-Case,bottom	Steady-State	$R_{\theta JC}$	0.4	0.75	°C/W
Maximum Junction-to-Case,top	Steady-State	$R_{\theta JC}$	0.35	0.7	°C/W