

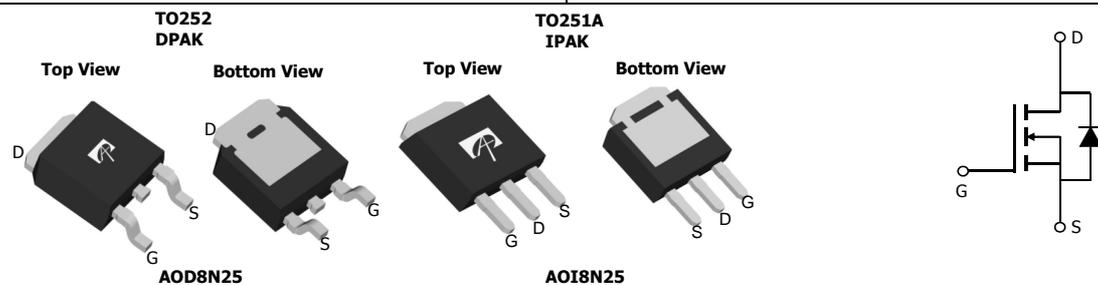
### General Description

The AOD8N25 & AOI8N25 have been fabricated using an advanced high voltage MOSFET process that is designed to deliver high levels of performance and robustness in popular AC-DC applications. By providing low  $R_{DS(on)}$ ,  $C_{iss}$  and  $C_{rss}$  along with guaranteed avalanche capability these parts can be adopted quickly into new and existing offline power supply designs. These parts are ideal for boost converters and synchronous rectifiers for consumer, telecom, industrial power supplies and LED backlighting.

### Product Summary

$V_{DS}$	300V@150°C
$I_D$ (at $V_{GS}=10V$ )	8A
$R_{DS(ON)}$ (at $V_{GS}=10V$ )	< 0.56Ω

100% UIS Tested!  
 100%  $R_g$  Tested!



### Absolute Maximum Ratings $T_A=25^\circ C$ unless otherwise noted

Parameter	Symbol	Maximum	Units
Drain-Source Voltage	$V_{DS}$	250	V
Gate-Source Voltage	$V_{GS}$	±30	V
Continuous Drain Current <sup>B</sup>	$I_D$	$T_C=25^\circ C$	8
		$T_C=100^\circ C$	5
Pulsed Drain Current <sup>C</sup>	$I_{DM}$	16	A
Avalanche Current <sup>C</sup>	$I_{AS}$	2.1	A
Single pulsed avalanche energy <sup>H</sup>	$E_{AS}$	132	mJ
Peak diode recovery dv/dt	dv/dt	5	V/ns
Power Dissipation <sup>B</sup>	$P_D$	$T_C=25^\circ C$	78
		Derate above 25°C	0.63
Junction and Storage Temperature Range	$T_J, T_{STG}$	-50 to 150	°C
Maximum lead temperature for soldering purpose, 1/8" from case for 5 seconds	$T_L$	300	°C

### Thermal Characteristics

Parameter	Symbol	Typical	Maximum	Units
Maximum Junction-to-Ambient <sup>A,G</sup>	$R_{\theta JA}$	45	55	°C/W
Maximum Case-to-sink <sup>A</sup>	$R_{\theta CS}$	-	0.5	°C/W
Maximum Junction-to-Case <sup>D,F</sup>	$R_{\theta JC}$	1.3	1.6	°C/W