AON6232

40V N-Channel MOSFET

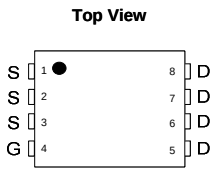
General Description

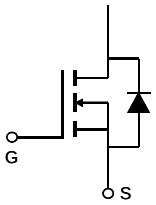
The AON6232 uses trench MOSFET technology that is uniquely optimized to provide the most efficient hi gh frequency switching performance.Power losses are minimized due to an extremely low combination of $R_{DS(ON)}$ and Crss.In addition,switching behavior is well controlled with a "Schottky style" soft recovery bo dy diode.

Product Summary

V_{DS}	40V
I_D (at V_{GS}=10V)	85A
$R_{DS(ON)}$ (at V_{GS}=10V)	< 2.5mΩ
$R_{DS(ON)}$ (at V_{GS} = 4.5V)	< 3.6mΩ

100% UIS Tested
100% R_g Tested





Absolute Maximum Ratings T_A=25℃ unless otherwise noted				
Parameter		**Symbol**	**Maximum**	**Units**
Drain-Source Voltage		V_{DS}	40	V
Gate-Source Voltage		V_{GS}	±20	V
Continuous Drain Current [G]	T_C=25℃	I_D	85	A
	T_C=100℃		67	
Pulsed Drain Current [C]		I_{DM}	260	
Continuous Drain Current	T_A=25℃	I_{DSM}	22	A
	T_A=70℃		17	
Avalanche Current [C]		I_{AS}, I_{AR}	60	A
Avalanche energy L=0.1mH [C]		E_{AS}, E_{AR}	180	mJ
Power Dissipation [B]	T_C=25℃	P_D	83	W
	T_C=100℃		33	
Power Dissipation [A]	T_A=25℃	P_{DSM}	2.3	W
	T_A=70℃		1.4	
Junction and Storage Temperature Range		T_J, T_{STG}	-55 to 150	℃

Thermal Characteristics					
Parameter		**Symbol**	**Typ**	**Max**	**Units**
Maximum Junction-to-Ambient [A]	t ≤ 10s	$R_{\theta JA}$	14	17	℃/W
Maximum Junction-to-Ambient [A D]	Steady-State		40	55	℃/W
Maximum Junction-to-Case	Steady-State	$R_{\theta JC}$	1.1	1.5	℃/W

TYPICAL ELECTRICAL AND THERMAL CHARACTERISTICS

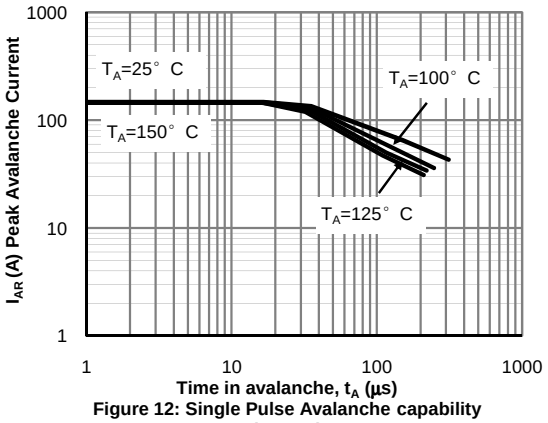


Figure 12: Single Pulse Avalanche capability (Note C)

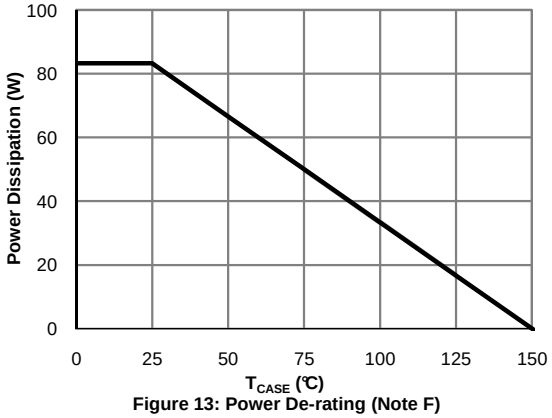


Figure 13: Power De-rating (Note F)

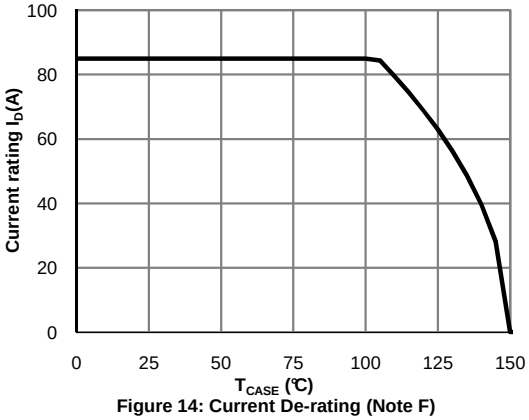


Figure 14: Current De-rating (Note F)

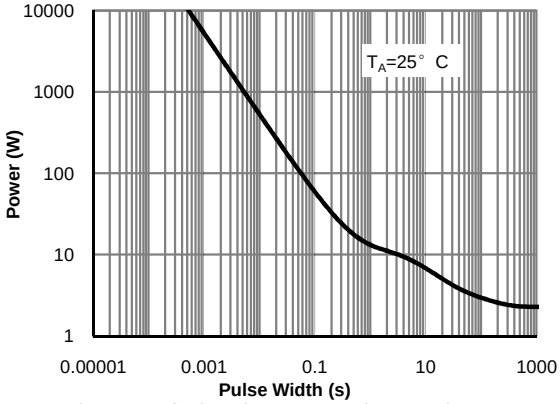


Figure 15: Single Pulse Power Rating Junction-to-Ambient (Note H)

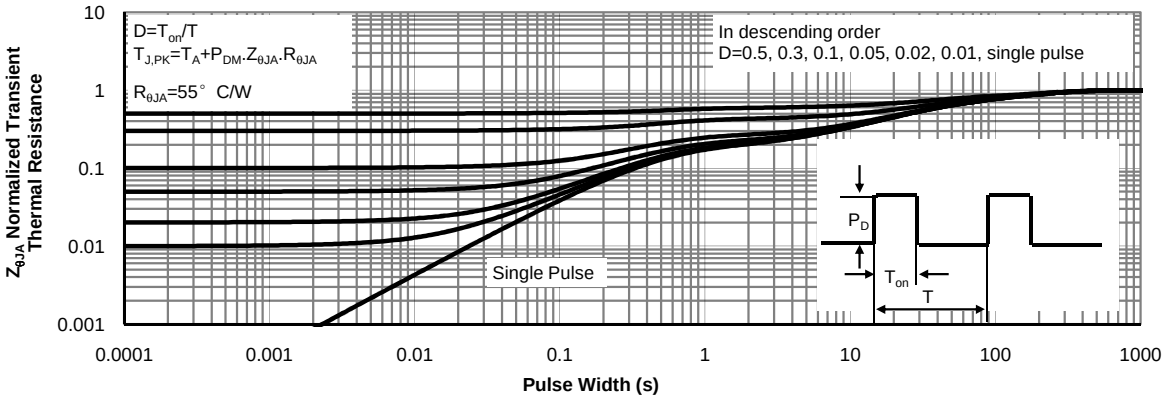
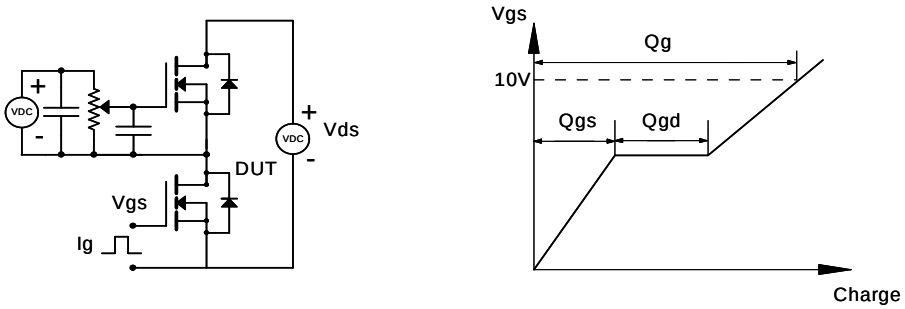
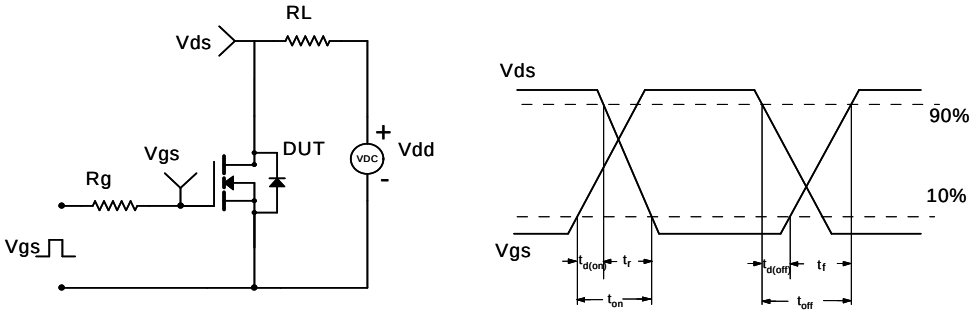


Figure 16: Normalized Maximum Transient Thermal Impedance (Note H)

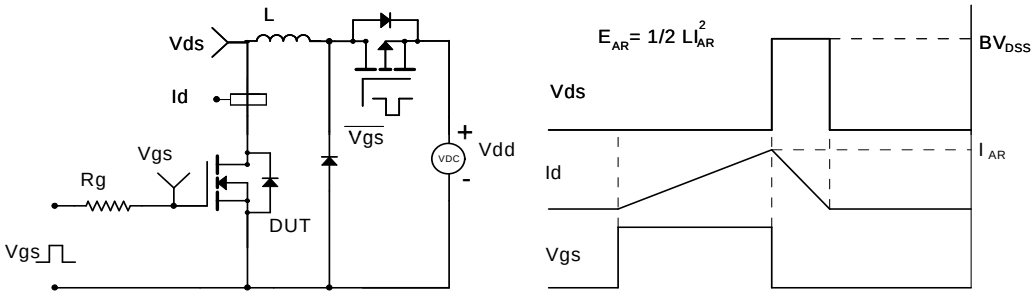
Gate Charge Test Circuit & Waveform



Resistive Switching Test Circuit & Waveforms



Unclamped Inductive Switching (UIS) Test Circuit & Waveforms



Diode Recovery Test Circuit & Waveforms