

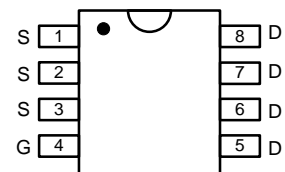
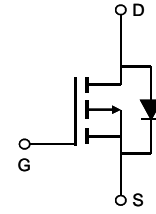
The 4435 uses advanced trench technology to provide excellent $R_{DS(ON)}$ and low gate charge. This device is suitable for use as a load switch or in PWM applications.

GENERAL FEATURES

- $R_{DS(ON)} < 18\text{m}\Omega$ @ $V_{GS} = -10\text{V}$
 $R_{DS(ON)} < 26\text{m}\Omega$ @ $V_{GS} = -4.5\text{V}$
- High Power and current handling capability
- Lead free product is acquired
- Surface Mount Package

Application

- PWM applications
- Load switch
- Power management



Marking and pin assignment

ABSOLUTE MAXIMUM RATINGS($T_A=25^\circ\text{C}$ unless otherwise noted)

Parameter	Symbol	Maximum	Unit
Drain-source Voltage	V_{DS}	-30	V
Gate-source Voltage	V_{GS}	± 20	V
Drain Current	I_D	$T_A=25^\circ\text{C}$ @ Steady State	-10
		$T_A=70^\circ\text{C}$ @ Steady State	-8
Pulsed Drain Current ^A	I_{DM}	-50	A
Total Power Dissipation @ $T_A=25^\circ\text{C}$	P_D	3.0	W
Thermal Resistance Junction-to-Ambient @ Steady State ^B	R_{JA}	42	$^\circ\text{C}/\text{W}$
Junction and Storage Temperature Range	T_J, T_{STG}	-55~+150	$^\circ\text{C}$

ELECTRICAL CHARACTERISTICS (T_A=25°C unless otherwise noted)

Parameter	Symbol	Conditions	Min	Typ	Max	Units
Static Parameter						
Drain-Source Breakdown Voltage	BV _{DSS}	V _{GS} = 0V, I _D =-250 μA	-30			V
Zero Gate Voltage Drain Current	I _{DSS}	V _{DS} =-30V, V _{GS} =0V, T _C =25			-1	μA
Gate-Body Leakage Current	I _{GSS}	V _{GS} = f 20V, V _{DS} =0V			f 100	nA
Gate Threshold Voltage	V _{GS(th)}	V _{DS} = V _{GS} , I _D =-250 μA	-1.0	-1.5	-2.5	V
Static Drain-Source On-Resistance	R _{DS(ON)}	V _{GS} = -10V, I _D =-10A		16	18	mΩ
		V _{GS} = -4.5V, I _D =-5.0A		21.5	26	
Diode Forward Voltage	V _{SD}	I _S =-10A, V _{GS} =0V		-0.8	-1.2	V
Maximum Body-Diode Continuous Current	I _S				-10	A
Dynamic Parameters						
Input Capacitance	C _{iss}	V _{DS} =-15V, V _{GS} =0V, f=1MHz		1500		pF
Output Capacitance	C _{oss}			327		
Reverse Transfer Capacitance	C _{rss}			276		
Switching Parameters						
Total Gate Charge	Q _g	V _{GS} =-10V, V _{DS} =-15V, I _D =-9.1A		30		nC
Gate Source Charge	Q _{gs}			5.3		
Gate Drain Charge	Q _{gd}			7.6		
Turn-on Delay Time	t _{D(on)}	V _{GS} =-10V, V _{DS} =-15V, I _D =-6A, R _{GEN} =2.5		14		ns
Turn-on Rise Time	t _r			20		
Turn-off Delay Time	t _{D(off)}			95		
Turn-off Fall Time	t _f			65		

- A. Repetitive Rating: Pulse width limited by maximum junction temperature.
 B. 6XUIDFH 0RXQWHG RQ)5 %RDUG W " VHF

TYPICAL ELECTRICAL AND THERMAL CHARACTERISTICS

Figure1. Output Characteristics

Figure2. Transfer Characteristics

Figure3. Capacitance Characteristics

Figure4. Gate Charge

Figure5. Drain-Source on Resistance

Figure6. Drain-Source on Resistance

TYPICAL ELECTRICAL AND THERMAL CHARACTERISTICS

Figure7. Safe Operation Area

Figure8. Switching wave

Package Information

SOP-8