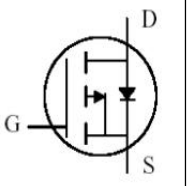
● General Description

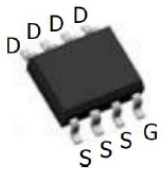
The LH9435 combines advanced trench MOSFET technology with a low resistance package to provide extremely low $R_{DS(ON)}$. This device is ideal for load switch and battery protection applications.



V DS =-30V

$R_{DS(ON)}$ =60mΩ

I D =-5.3A



SOP-8

■ RoHS COMPLIANT

● Features

■Advanced trench process technology

■High Density Cell Design For Ultra Low On-Resistance

■Improved Shoot-Through FOM

●Ordering Information:

Part number	LH9435
Packing	SOP-8
Basic ordering unit (pcs)	4000
Normal Package Material Ordering Code	LH9435S-SOP8-TAP
Halogen Free Ordering Code	LH9435S-SOP8-TAP-HF

●Absolute Maximum Ratings (T_C =25℃)

Parameter		**Symbol**	Rating	Unit
Drain-Source Voltage		V_{DS}	-30	V
Gate-Source Voltage		V_{GS}	± 20	
Continuous Drain Current		I_D	-5.3	A
Pulsed Drain Current		I_{DM}	-20	
Maximum Power Dissipation	TA = 25°C	P_D	2.5	W
	TA = 75°C		1.2	
Operating Junction and Storage Temperature Range		T_J, T_{stg}	-55 to 150	°C
Junction-to-Case Thermal Resistance		$R_{\theta JC}$	24	°C/W
Junction-to-Ambient Thermal Resistance (PCB mounted)		$R_{\theta\ JA}$	62.5	

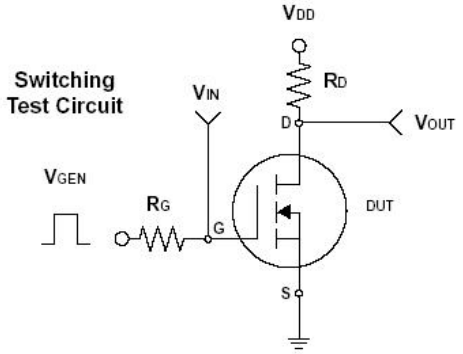
●Electronic Characteristics

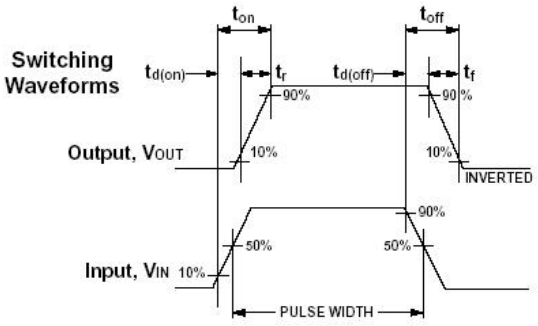
Parameter	Symbol	Condition	Min.	Typ	Max.	Unit
Drain-Source Breakdown Voltage	BV_{DSS}	V_{GS} = 0V, I_D = -250uA	-30			V
Gate Threshold Voltage	$V_{GS(TH)}$	V_{DS} =V_{GS}, I_D = -250uA	-1		-3	V
Drain-Source Leakage Current	I_{DSS}	V_{DS} = -24V, V_{GS} = 0V			1	uA
Gate- Source Leakage Current	I_{GSS}	V_{GS} = ± 20V, V_{DS} = 0V			±100	nA
Static Drain-source On Resistance	$R_{DS(ON)}$	V_{GS} = -4.5V, I_D = -4.2A		70.0	90.0	mΩ
		V_{GS} = -10V, I_D = -5.3A		50.0	60.0	
Transconductance	gfs	V_{DS} = -10V, I_D = -5.3A		10		S

●Electronic Characteristics

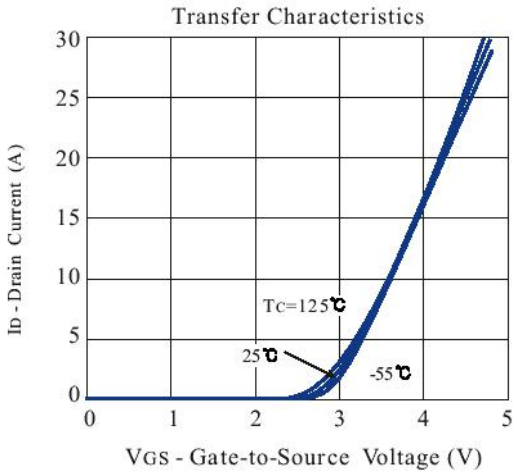
Parameter	Symbol	Condition	Min.	Typ	Max.	Unit
Input capacitance	Ciss	V_{DS} = -15V, V_{GS} = 0V f = 1.0 MHz		745		pF
Output capacitance	Coss			440		
Reverse transfer capacitance	Crss			120		
Total Gate Charge	Qg	V_{DS} =-15V, I_D = -5.3A V_{GS} = -10V		28		nC
Gate-to-Source Charge	Qgs			3		
Gate-to-Drain Charge	Qgd			7		
Turn-On Delay Time	$t_{d(on)}$	V_{DD} = -15V, R_L = 15Ω I_D = -1A, V_{GEN} = -10V R_G = 6Ω		9		ns
Turn-On Rise Time	t_r			15		
Turn-Off Delay Time	$t_{d(off)}$			75		
Turn-Off Fall Time	t_f			40		
Max. Diode Forward Current	I_S				-2.6	A
Diode Forward Voltage	V_{SD}	I_S = -2.6A, V_{GS} = 0V			-1.3	V

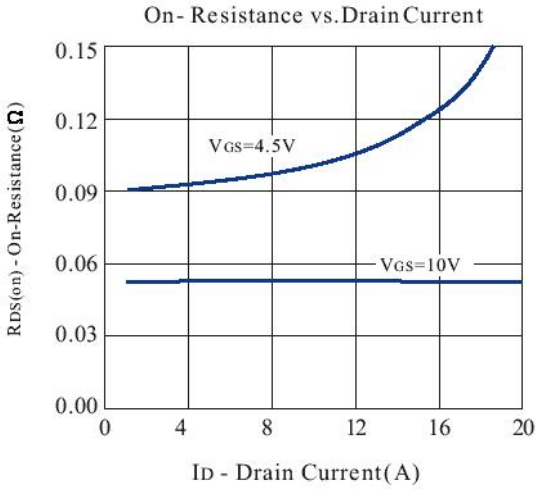
Notes: Pulse test: pulse width <= 300us, duty cycle<= 2%

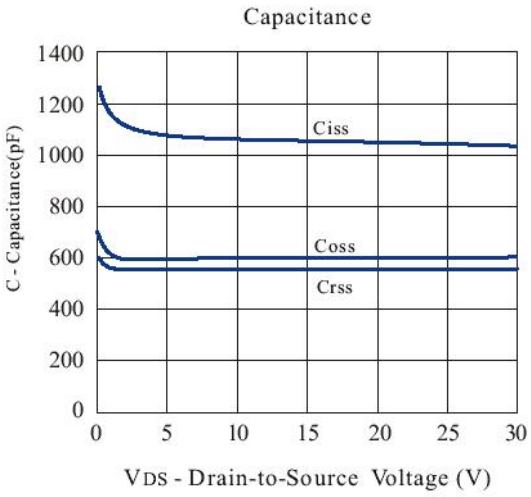


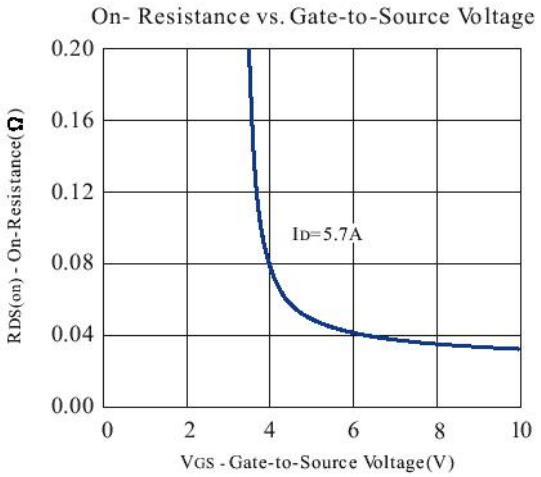


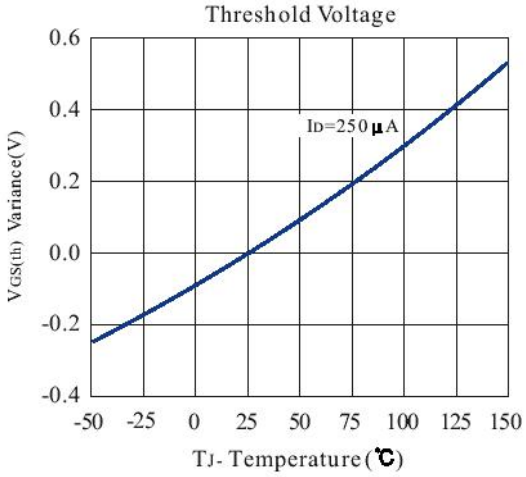
Typical Characteristics (T_J =25℃ Noted)











Dimensions(SOP-8)

UNIT：mm

SYMBOL	Millimeter		SYMBOL	Millimeter	
	min	max		min	max
A	5.80	6.20	M	0.10	0.25
B	4.80	5.00	H	0.35	0.49
C	3.80	4.00	L	1.35	1.75
D	0°	8°	J	0.375 REF.	
E	0.40	0.90	K	45°	
F	0.19	0.25	G	1.27 TYP.