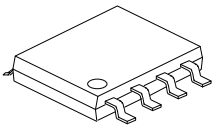
P-CHANNEL ENHANCEMENT MODE



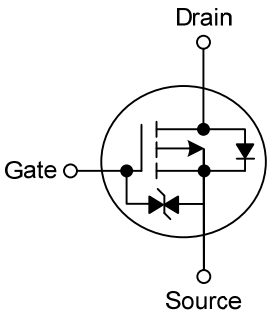
SOP-8

■ DESCRIPTION

The UTC **UT9435HZ** is a P-channel enhancement power MOSFET. It has low gate charge, fast switching speed and perfect $R_{DS(ON)}$.

This device is generally applied in power management applications.

■ SYMBOL



■ ORDERING INFORMATION

Ordering Number		Package	Pin Assignment								Packing
Lead Free	Halogen Free		1	2	3	4	5	6	7	8	
UT9435HZL-S08-R	UT9435HZG-S08-R	SOP-8	S	S	S	G	D	D	D	D	Tape Reel
UT9435HZL-S08-T	UT9435HZG-S08-T	SOP-8	S	S	S	G	D	D	D	D	Tube

Note: Pin Assignment: G: Gate D: Drain S: Source

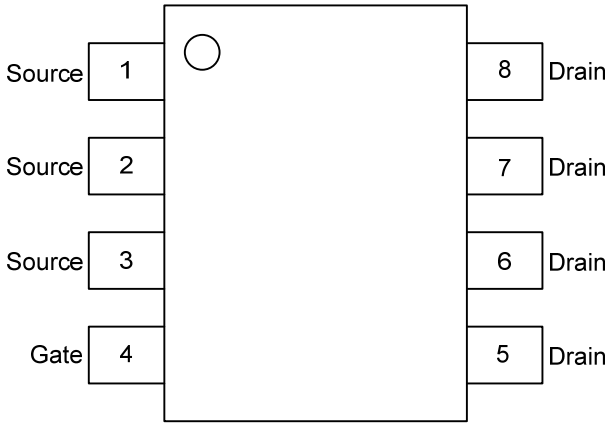
UT3435HZL-S08-R
- (1) Packing Type
- (2) Package Type
- (3) Lead Free

(1) R: Tape Reel, T: Tube

(2) S08: SOP-8

(3) G: Halogen Free, L: Lead Free

■ PIN CONFIGURATION



■ ABSOLUTE MAXIMUM RATINGS (T_A=25°C, unless otherwise specified)

PARAMETER	SYMBOL	RATINGS	UNIT
Drain to Source Voltage	V_{DSS}	-30	V
Gate to Source Voltage	V_{GSS}	±20	V
Continuous Drain Current (Note 3)	I_D	±5.3	A
Pulsed Drain Current (Note 1, 2)	I_{DM}	±20	A
Power Dissipation	P_D	2.5	W
Junction Temperature	T_J	+150	°C
Storage Temperature	T_{STG}	-55 ~ +150	°C

Note: Absolute maximum ratings are those values beyond which the device could be permanently damaged. Absolute maximum ratings are stress ratings only and functional device operation is not implied.

■ THERMAL DATA

PARAMETER	SYMBOL	RATINGS	UNIT
Junction to Ambient	θ_{JA}	50	°C/W

■ ELECTRICAL CHARACTERISTICS (T_A=25°C, unless otherwise specified)

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
OFF CHARACTERISTICS						
Drain-Source Breakdown Voltage	BV_{DSS}	V_{GS}=0V, I_D=-250μA	-30			V
Drain-Source Leakage Current	I_{DSS}	V_{DS}=-30V,V_{GS}=0V			-1	μA
Gate-Source Leakage Current	I_{GSS}	V_{DS}=0V ,V_{GS}=±20V			±5	μA
ON CHARACTERISTICS						
Gate Threshold Voltage	$V_{GS(TH)}$	V_{DS}=V_{GS}, I_D=-250μA	-1		-3	V
Drain-Source On-State Resistance (Note 2)	$R_{DS(ON)}$	V_{GS}=-10V,I_D=-5.3A		44	50	mΩ
		V_{GS}=-4.5V, I_D=-4.2A		74	90	mΩ
On State Drain Current	$I_{D(ON)}$	V_{DS}=-5V, V_{GS}=-10V	-20			V
DYNAMIC PARAMETERS						
Input Capacitance	C_{ISS}	V_{DS}=-15V,V_{GS}=0V, f=1.0MHz		1040		pF
Output Capacitance	C_{OSS}			420		pF
Reverse Transfer Capacitance	C_{RSS}			150		pF
SWITCHING PARAMETERS						
Total Gate Charge (Note 2)	Q_G	V_{DS}=-15V,V_{GS}=-10V, I_D=-4.6A		22.5	29	nC
Gate-Source Charge	Q_{GS}			2		nC
Gate-Drain Charge	Q_{GD}			6		nC
Turn-ON Delay Time (Note 2)	$t_{D(ON)}$	V_{DD}=-15V, I_D=-1A, V_{GEN}=-10V, R_G=6Ω,		19	26	ns
Turn-ON Rise Time	t_R			9	13	ns
Turn-OFF Delay Time	$t_{D(OFF)}$			74	105	ns
Turn-OFF Fall Time	t_F			36	50	ns
SOURCE- DRAIN DIODE RATINGS AND CHARACTERISTICS						
Drain-Source Diode Forward Voltage (Note 2)	V_{SD}	V_{GS}=0V, I_S=-5.3A		-0.84	-1.3	V

Notes: 1. Pulse width limited by $T_{J(MAX)}$.
2. Pulse width ≤300μs, duty cycle ≤2%.
3. Surface Mounted on 1in^2 copper pad of FR4 board