



UT9435HZ

Preliminary

Power MOSFET

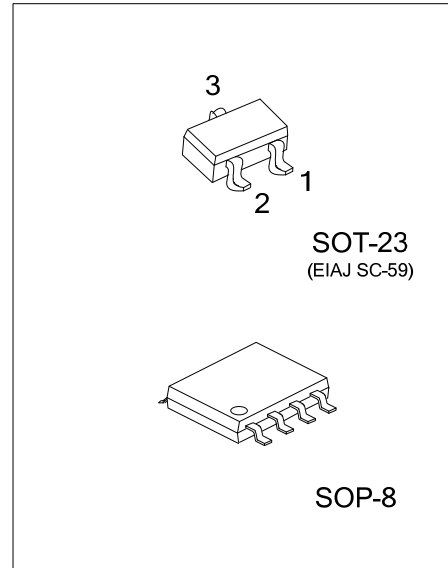
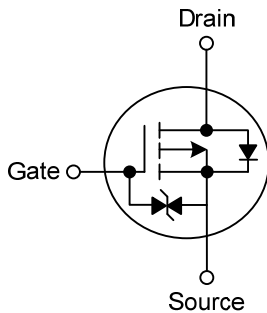
P-CHANNEL ENHANCEMENT MODE

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



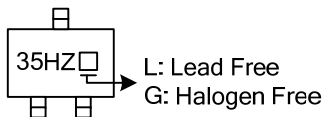
ORDERING INFORMATION

Ordering Number		Package	Pin Assignment								Packing
Lead Free	Halogen Free		1	2	3	4	5	6	7	8	
UT9435HZL-AE3-R	UT9435HZG-AE3-R	SOT-23	S	G	D	-	-	-	-	-	Tape Reel
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

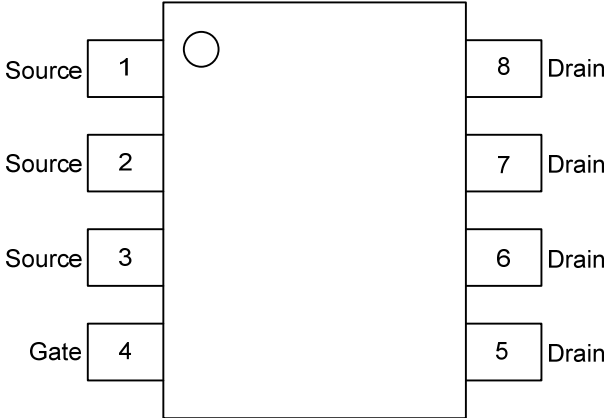
Note: Pin Assignment: G: Gate D: Drain S: Source

<p>UT9435HZL-AE3-R</p> <p>(1) Packing Type (2) Package Type (3) Lead Free</p>	<p>(1) R: Tape Reel, T: Tube (2) AE3: SOT-23, S08: SOP-8 (3) L: Lead Free, G: Halogen Free</p>
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MARKING FOR SOT-23



■ PIN CONFIGURATION (FOR SOP-8)



■ 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	SOT-23	0.38	W
	SOP-8	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	SOT-23	325	°C/W
	SOP-8	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	55	mΩ
		V _{GS} =-4.5V, I _D =-4.2A		74	135	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 1in² copper pad of FR4 board

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