



UT9435H

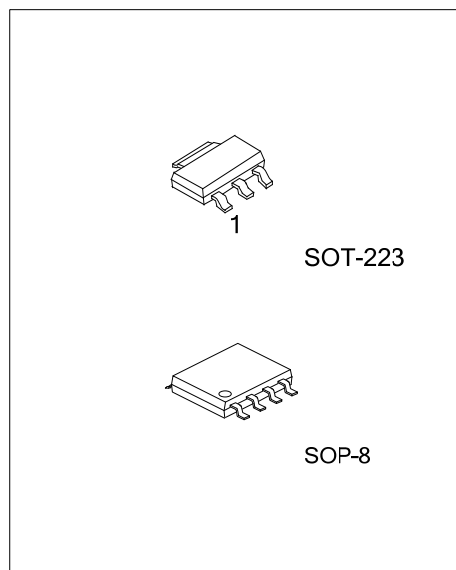
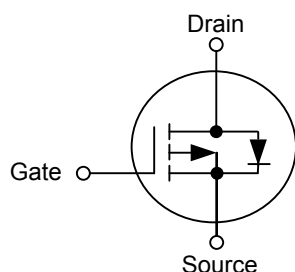
Power MOSFET

P-CHANNEL ENHANCEMENT MODE

DESCRIPTION

The UTC **UT9435H** provide excellent $R_{DS(ON)}$, low gate charge and fast switching speed. It has been optimized for power management applications.

SYMBOL

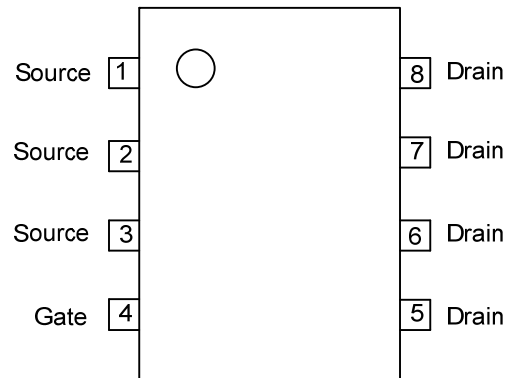


ORDERING INFORMATION

Ordering Number		Package	Pin Assignment								Packing
Lead Free	Halogen Free		1	2	3	4	5	6	7	8	
UT9435HL-AA3-R	UT9435HG-AA3-R	SOT-223	G	D	S	-	-	-	-	-	Tape Reel
UT9435HL-S08-R	UT9435HG-S08-R	SOP-8	S	S	S	G	D	D	D	D	Tape Reel
UT9435HL-S08-T	UT9435HG-S08-T	SOP-8	S	S	S	G	D	D	D	D	Tube

UT9435HL-AA3-R		(1)Packing Type	(1) R: Tape Reel, T: Tube (2) AA3: SOT-223, S08: SOP-8 (3) G: Halogen Free, L: Lead Free
		(2)Package Type	
		(3)Lead Free	

■ PIN CONFIGURATION



■ **ABSOLUTE MAXIMUM RATINGS** ($T_A = 25^\circ\text{C}$, unless otherwise specified)

PARAMETER	SYMBOL	RATING	UNITS
Drain-Source Voltage	V_{DS}	-30	V
Gate-Source Voltage	V_{GS}	± 20	V
Continuous Drain Current (Note 3) $T_A=125^\circ\text{C}$	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	$^\circ\text{C}$
Storage Temperature	T_{STG}	-55 ~ +150	$^\circ\text{C}$

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**

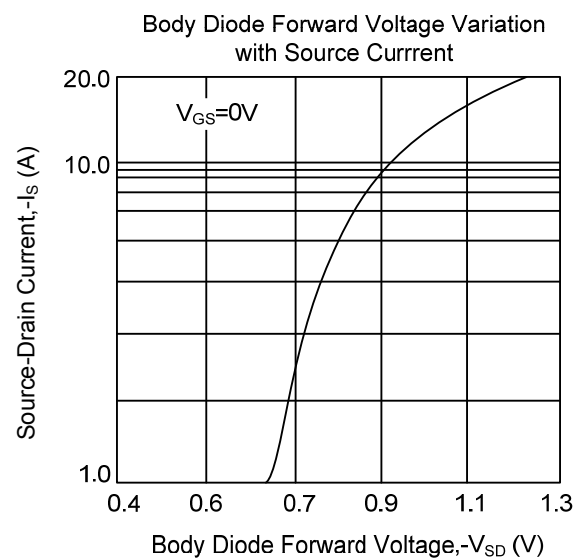
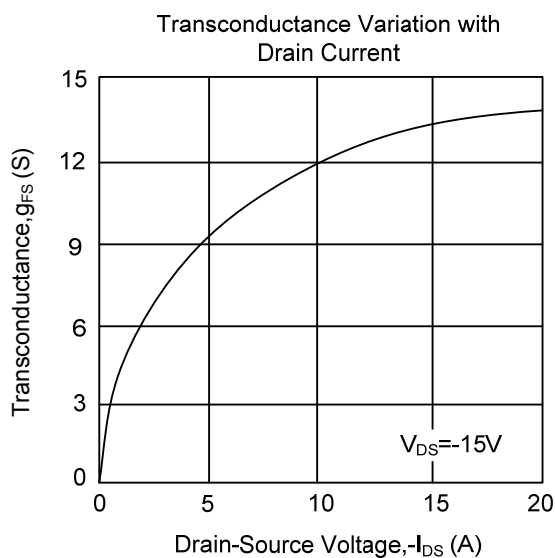
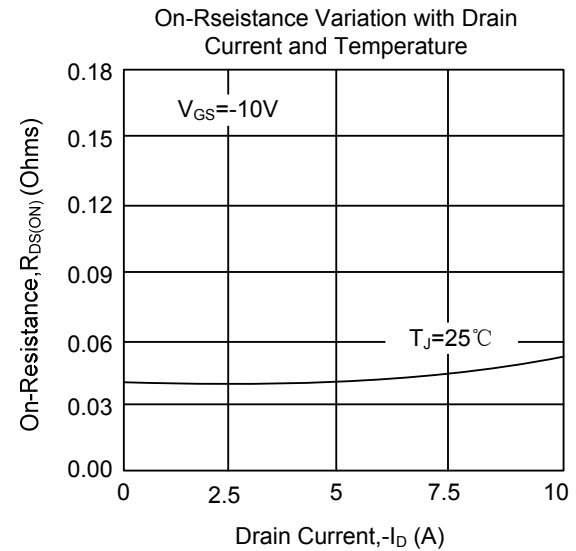
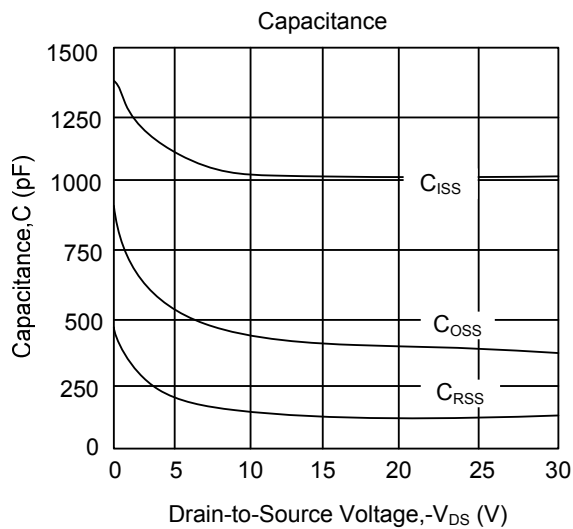
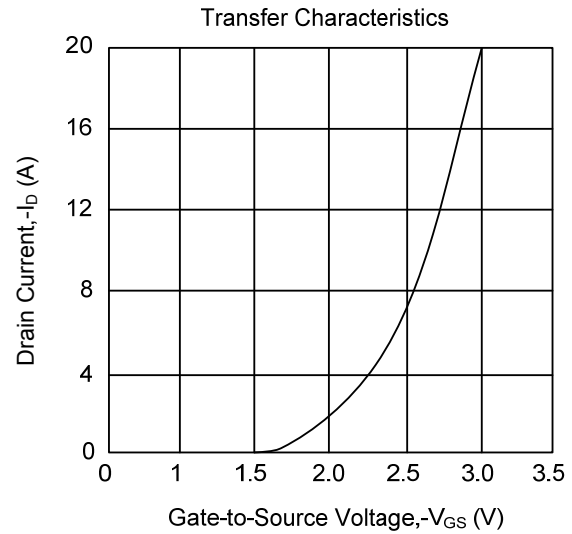
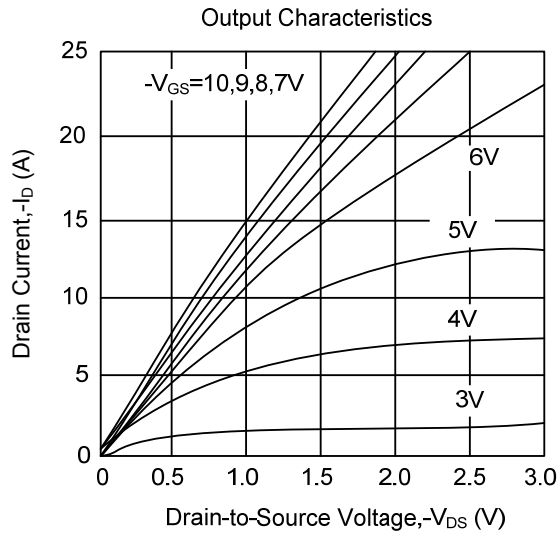
PARAMETER	SYMBOL	RATING	UNIT
Junction to Ambient	θ_{JA}	50	$^\circ\text{C/W}$

■ **ELECTRICAL CHARACTERISTICS** ($T_A = 25^\circ\text{C}$, unless otherwise specified)

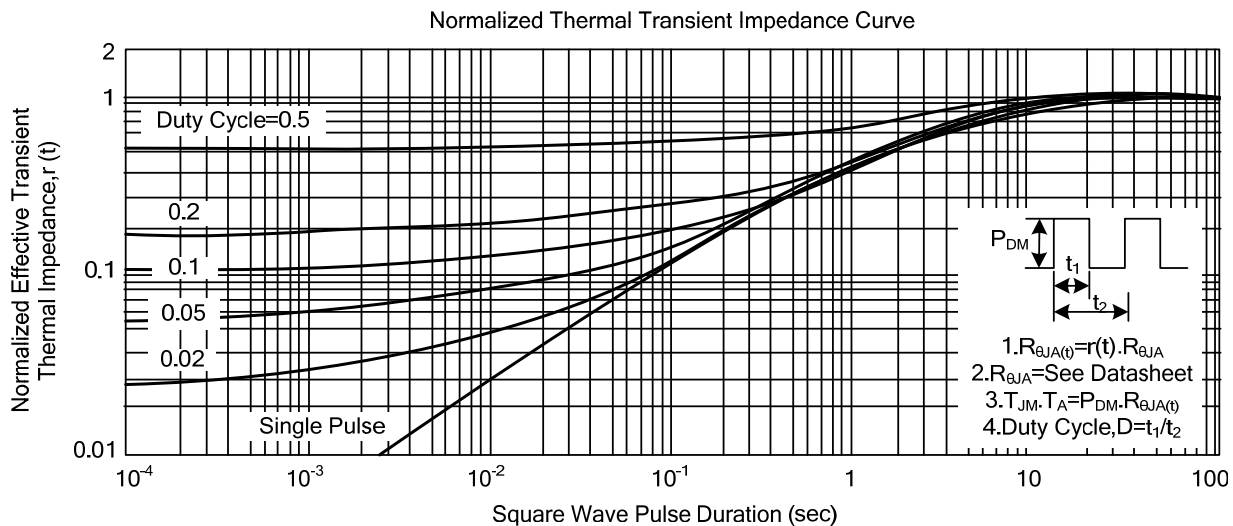
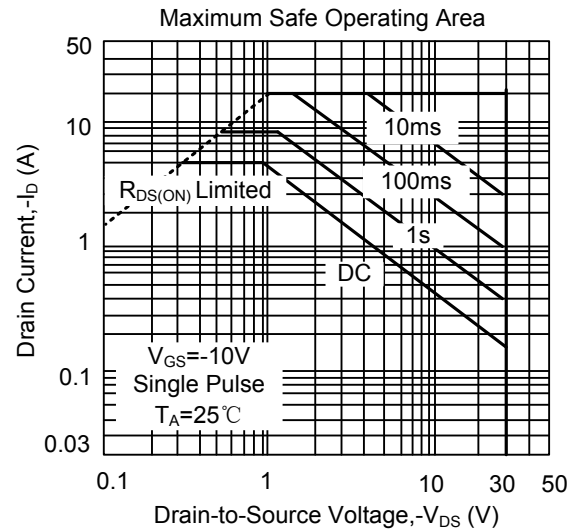
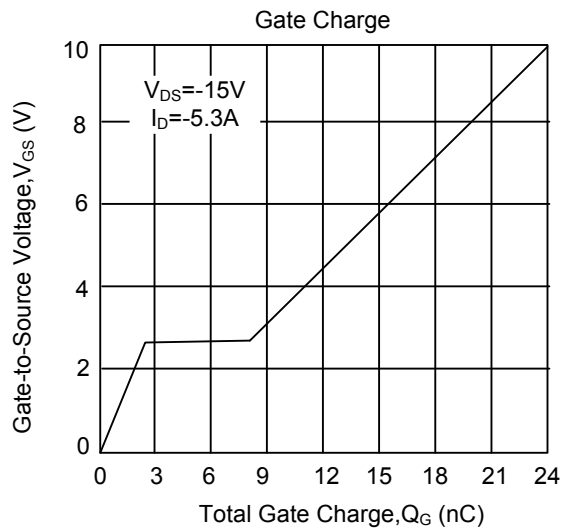
PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
OFF CHARACTERISTICS						
Drain-Source Breakdown Voltage	BV _{DSS}	V _{GS} =0 V, I _D =-250 μA	-30			V
Drain-Source Leakage Current	I _{DSS}	V _{DS} =-24 V, V _{GS} =0 V			-1	μA
Gate-Source Leakage Current	I _{GSS}	V _{DS} =0 V, V _{GS} = ±20V			±100	nA
ON CHARACTERISTICS						
Gate Threshold Voltage	V _{GS(TH)}	V _{DS} =V _{GS} , I _D =-250 μA	-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			A
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						
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
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
DRAIN-SOURCE DIODE 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 $\leq 300\text{ }\mu\text{s}$, duty cycle $\leq 2\%$.
3. Surface mounted on 1 in² copper pad of FR4 board

■ TYPICAL CHARACTERISTICS



■ TYPICAL CHARACTERISTICS(Cont.)



UTC assumes no responsibility for equipment failures that result from using products at values that exceed, even momentarily, rated values (such as maximum ratings, operating condition ranges, or other parameters) listed in products specifications of any and all UTC products described or contained herein. UTC products are not designed for use in life support appliances, devices or systems where malfunction of these products can be reasonably expected to result in personal injury. Reproduction in whole or in part is prohibited without the prior written consent of the copyright owner. The information presented in this document does not form part of any quotation or contract, is believed to be accurate and reliable and may be changed without notice.