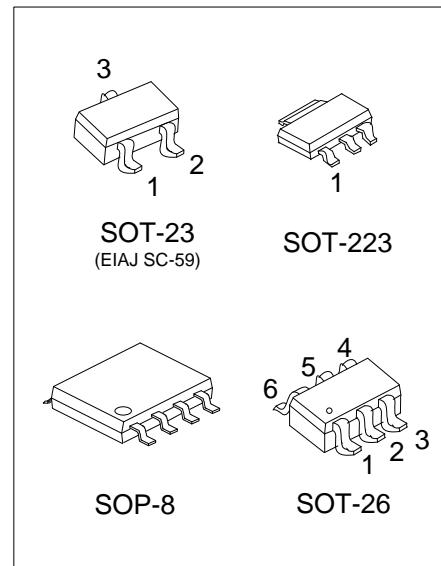
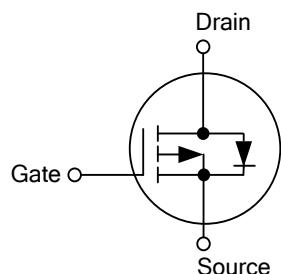


UT9435H**Power MOSFET****P-CHANNEL
ENHANCEMENT MODE****■ DESCRIPTION**

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-AE3-R	UT9435HG-AE3-R	SOT-23	G	S	D	-	-	-	-	-	Tape Reel
UT9435HL-AL6-R	UT9435HG-AG6-R	SOT-26	D	D	G	S	D	D	-	-	Tape Reel
UT9435HL-S08-R	UT9435HG-S08-R	SOP-8	S	S	S	G	D	D	D	D	Tape Reel

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

UT9435HG-AA3-R 	(1) R: Tape Reel (2) AA3: SOT-223, S08: SOP-8, AE3: SOT-23 AG6: SOT-26 (3) G: Halogen Free and Lead Free, L: Lead Free
--------------------	---

■ MARKING

SOT-223	SOT-23
 L: Lead Free G: Halogen Free Date Code	 L: Lead Free G: Halogen Free
SOT-26	SOP-8
 L: Lead Free G: Halogen Free	 Date Code L: Lead Free G: Halogen Free Lot Code

■ 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)	I_D	-5.3	A
Pulsed Drain Current (Note 1, 2)	I_{DM}	-20	A
Power Dissipation	SOT-223	2.5	W
	SOP-8		
Junction Temperature	SOT-23	0.38	W
	SOT-26		
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	SOT-223	50	$^\circ\text{C}/\text{W}$
	SOP-8		
SOT-23	θ_{JA}	325	
SOT-26			

Note: Surface mounted on 1 in² copper pad of FR4 board.

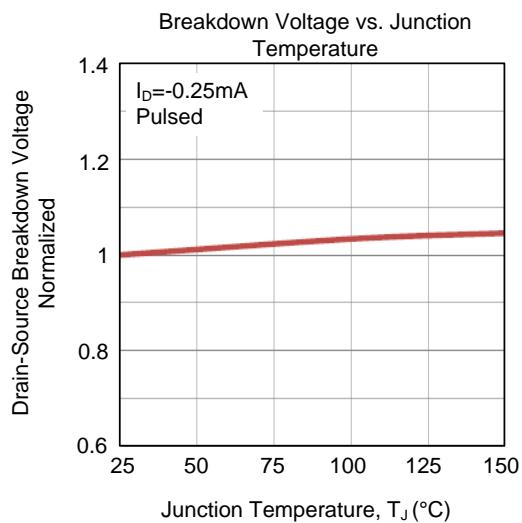
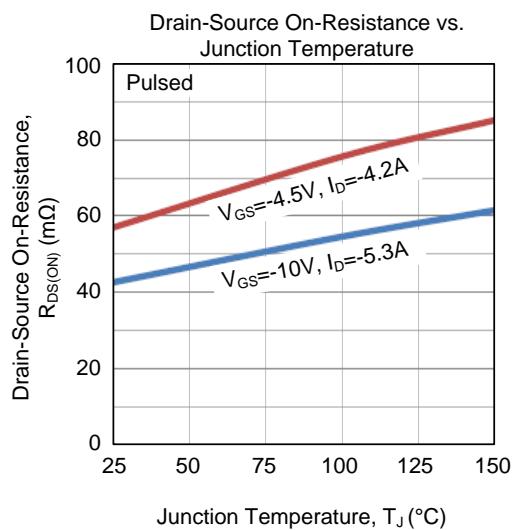
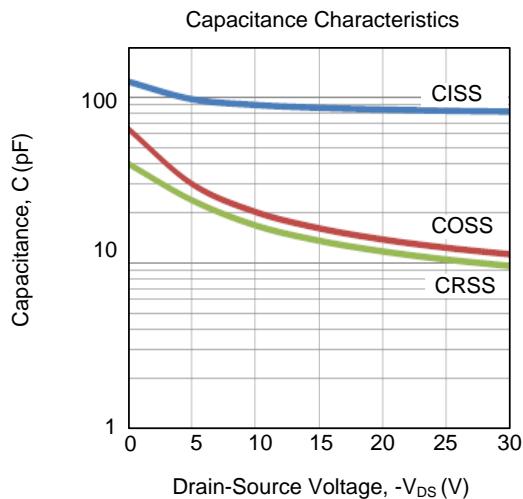
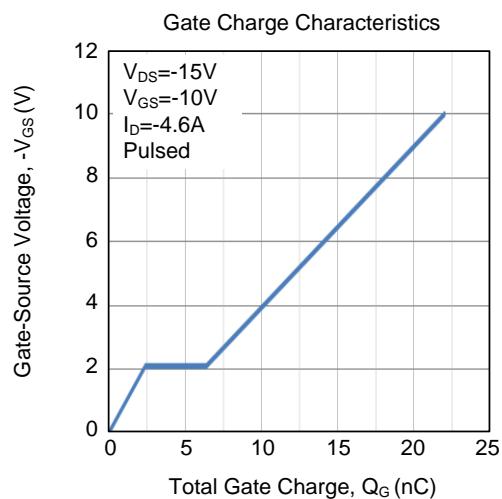
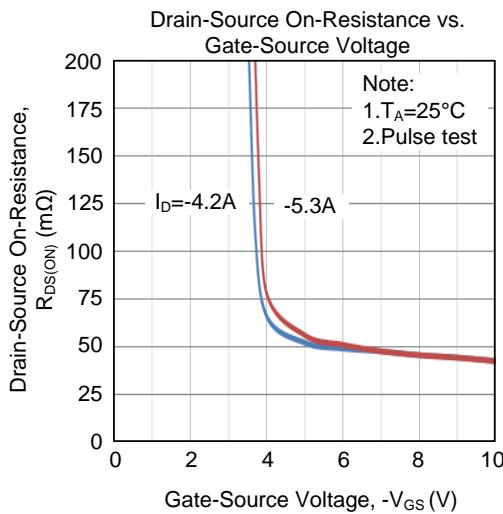
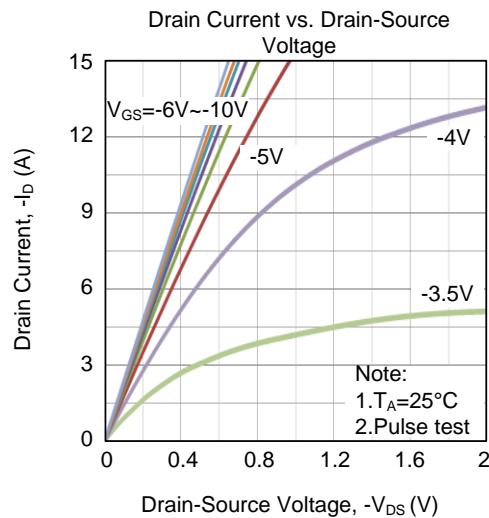
■ ELECTRICAL CHARACTERISTICS ($T_A = 25^\circ\text{C}$, unless otherwise specified)

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
OFF CHARACTERISTICS						
Drain-Source Breakdown Voltage	BV_{DSS}	$V_{GS}=0\text{V}, I_D=-250\mu\text{A}$	-30			V
Drain-Source Leakage Current	I_{DSS}	$V_{DS}=-24\text{V}, V_{GS}=0\text{V}$			-1	μA
Gate-Source Leakage Current	I_{GSS}	$V_{DS}=0\text{V}, V_{GS}=\pm 20\text{V}$			± 100	nA
ON CHARACTERISTICS						
Gate Threshold Voltage	$V_{GS(TH)}$	$V_{DS}=V_{GS}, I_D=-250\mu\text{A}$	-1		-3	V
Drain-Source On-State Resistance (Note 2)	$R_{DS(ON)}$	$V_{GS}=-10\text{V}, I_D=-5.3\text{A}$		50		$\text{m}\Omega$
		$V_{GS}=-4.5\text{V}, I_D=-4.2\text{A}$		90		$\text{m}\Omega$
On State Drain Current	$I_{D(ON)}$	$V_{DS}=-5\text{V}, V_{GS}=-10\text{V}$	-20			A
DYNAMIC PARAMETERS						
Input Capacitance	C_{ISS}	$V_{DS}=-15\text{V}, V_{GS}=0\text{V}, f=1.0\text{MHz}$		880		pF
Output Capacitance	C_{OSS}			160		pF
Reverse Transfer Capacitance	C_{RSS}			135		pF
SWITCHING PARAMETERS						
Total Gate Charge (Note 2)	Q_G	$V_{DS}=-15\text{V}, V_{GS}=-10\text{V}, I_D=-4.6\text{A}$		22		nC
Gate-Source Charge	Q_{GS}			2		nC
Gate-Drain Charge	Q_{GD}			4		nC
Turn-ON Delay Time (Note 2)	$t_{D(ON)}$	$V_{DD}=-15\text{V}, I_D=-1\text{A}, V_{GEN}=-10\text{V}, R_G=6\Omega$		3		ns
Turn-ON Rise Time	t_R			16		ns
Turn-OFF Delay Time	$t_{D(OFF)}$			27		ns
Turn-OFF Fall Time	t_F			20		ns
DRAIN-SOURCE DIODE CHARACTERISTICS						
Drain-Source Diode Forward Voltage (Note 2)	V_{SD}	$V_{GS}=0\text{V}, I_S=-5.3\text{A}$			-1.3	V

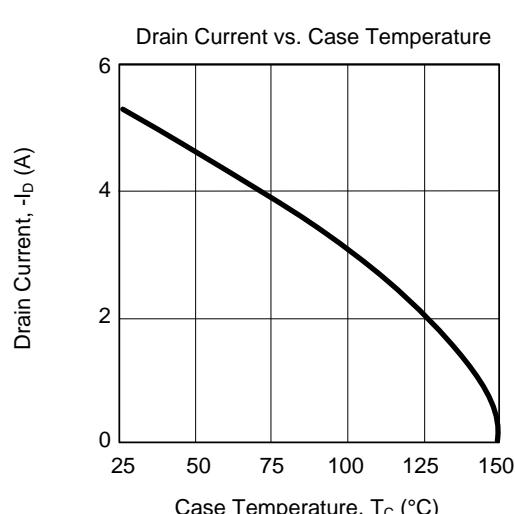
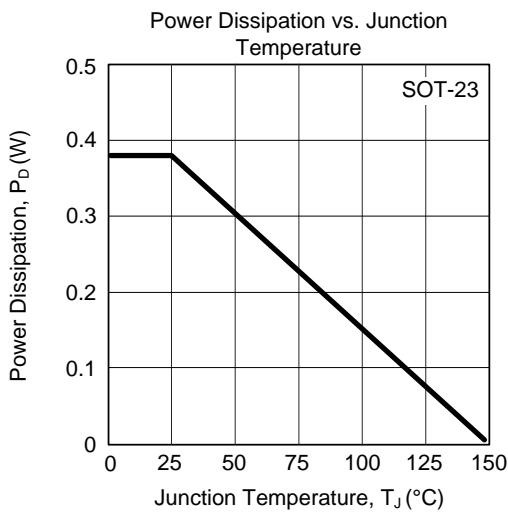
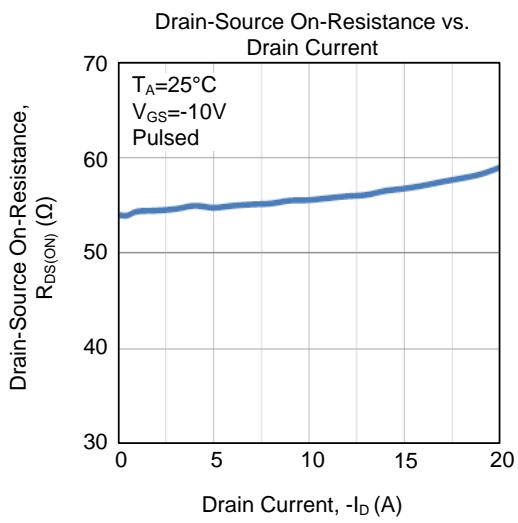
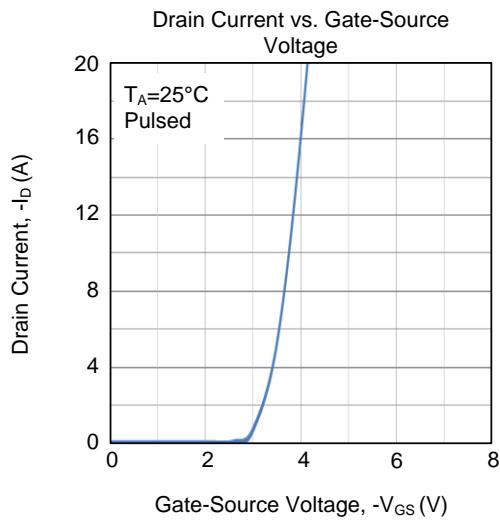
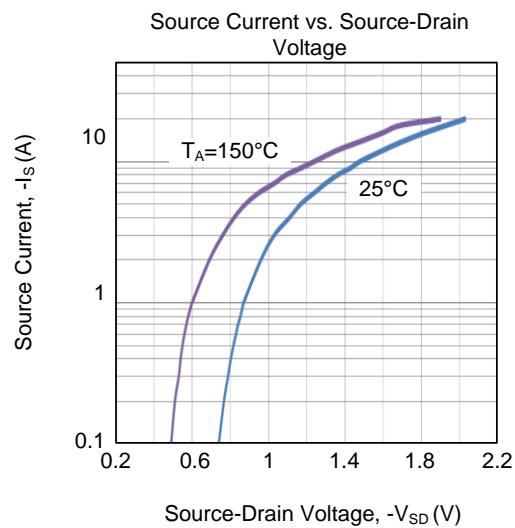
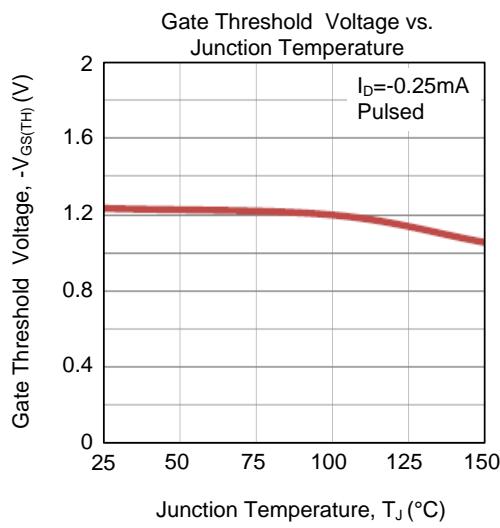
Notes: 1. Repetitive Rating: Pulse width limited by maximum junction temperature.

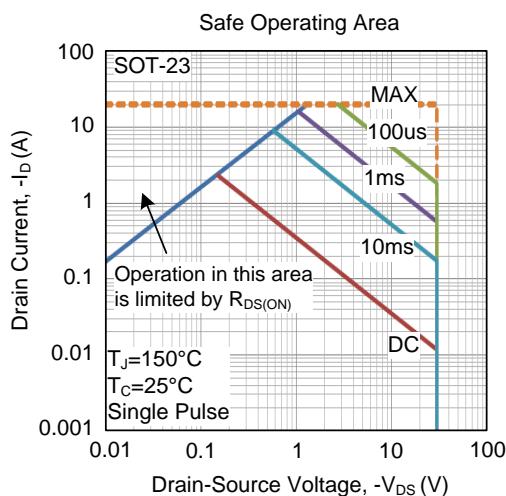
2. Pulse width $\leq 300\text{us}$, duty cycle $\leq 2\%$.

■ TYPICAL CHARACTERISTICS



■ TYPICAL CHARACTERISTICS (Cont.)



■ 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. UTC reserves the right to make changes to information published in this document, including without limitation specifications and product descriptions, at any time and without notice. This document supersedes and replaces all information supplied prior to the publication hereof.