



UT6354-H

Power MOSFET

-4A, -60V P-CHANNEL SILICON MOSFET

DESCRIPTION

The UTC **UT6354-H** is a P-Channel Silicon MOSFET, it uses UTC's advanced technology to provide the customers with a minimum on state resistance and low gate charge, etc.

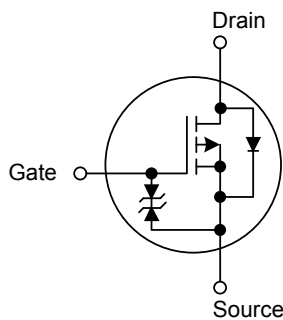
The UTC **UT6354-H** is suitable for general-purpose switching device applications.

FEATURES

* $R_{DS(ON)} \leq 100m\Omega$ @ $V_{GS} = -10V$, $I_D = -2.0A$

* Low gate charge

SYMBOL



ORDERING INFORMATION

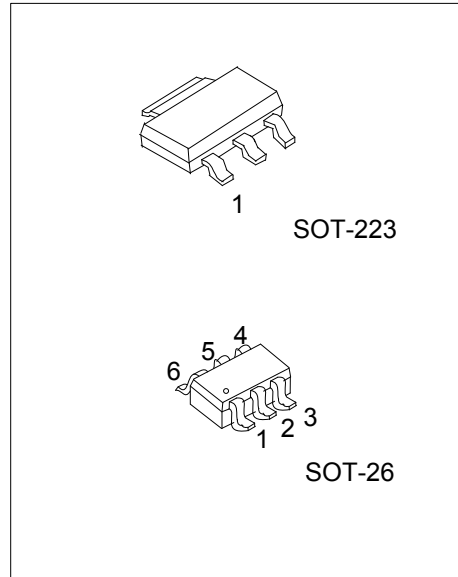
Ordering Number		Package	Pin Assignment						Packing
Lead Free	Halogen Free		1	2	3	4	5	6	
UT6354L-AA3-R	UT6354G-AA3-R	SOT-223	G	D	S	-	-	-	Tape Reel
UT6354L-AG6-R	UT6354G-AG6-R	SOT-26	D	D	G	S	D	D	Tape Reel

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

UT6354G-AA3-R	(1)Packing Type	(1) R: Tape Reel
	(2)Package Type	(2) AA3: SOT-223, AG6: SOT-26
	(3)Green Package	(3) G: Halogen Free and Lead Free, L: Lead Free

MARKING

SOT-223	SOT-26
UT6354 1 Lot Code ← → Date Code L: Lead Free G: Halogen Free	354H 1 → L: Lead Free → G: Halogen Free



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

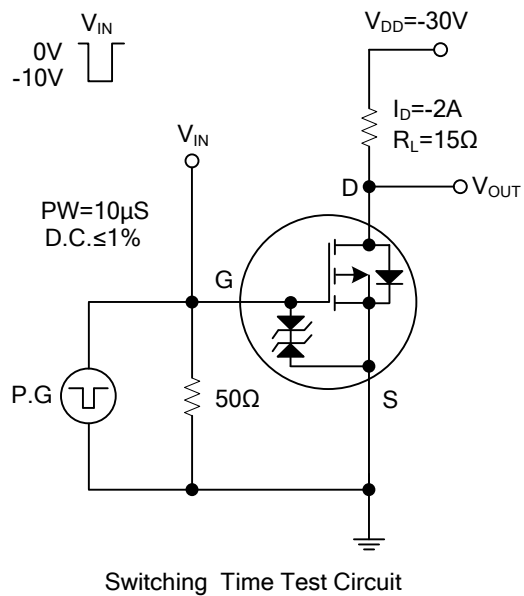
PARAMETER		SYMBOL	RATINGS	UNIT
Drain-Source Voltage		V_{DSS}	-60	V
Gate-Source Voltage		V_{GSS}	± 20	V
Drain Current (DC)		I_D	-4	A
Drain Current (Pulse)	$P_W \leq 10\mu\text{s}$ Duty Cycle $\leq 1\%$	I_{DP}	-16	A
Allowable Power Dissipation (When Mounted on Ceramic Substrate ($1500\text{mm}^2 \times 0.8\text{mm}$))	SOT-223	P_D	2.3	W
	SOT-26		1.6	W
Junction Temperature		T_J	+150	$^\circ\text{C}$
Storage Temperature Range		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.

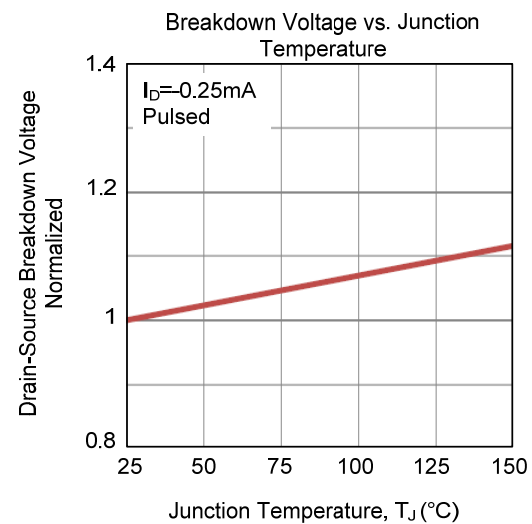
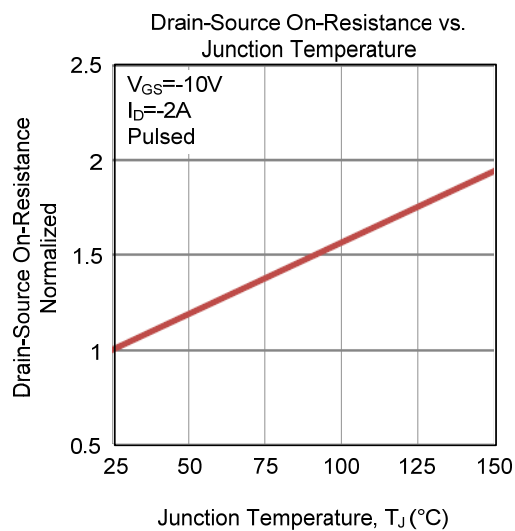
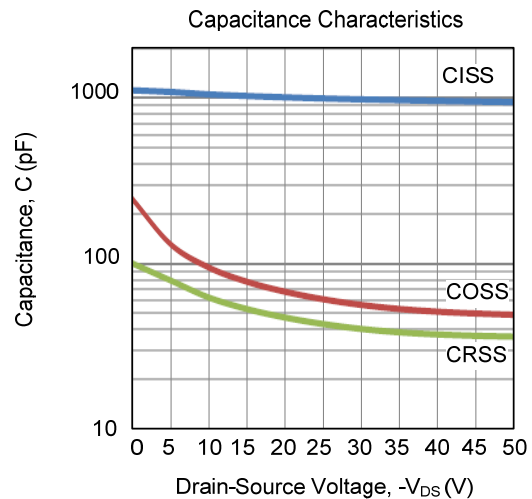
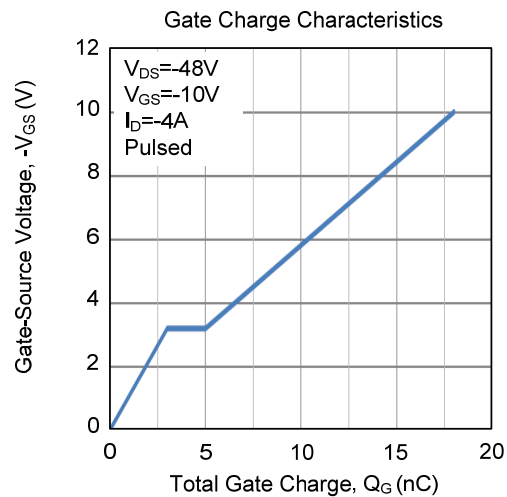
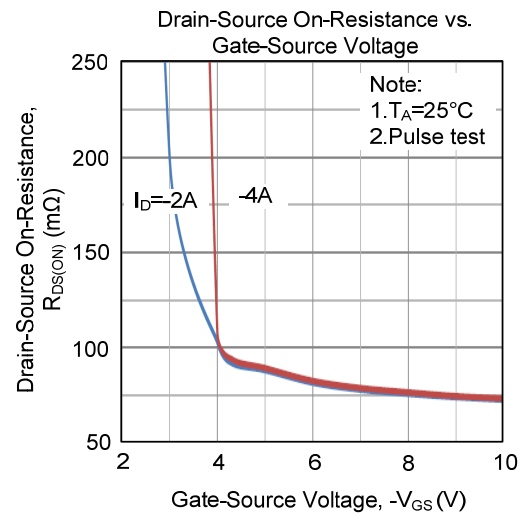
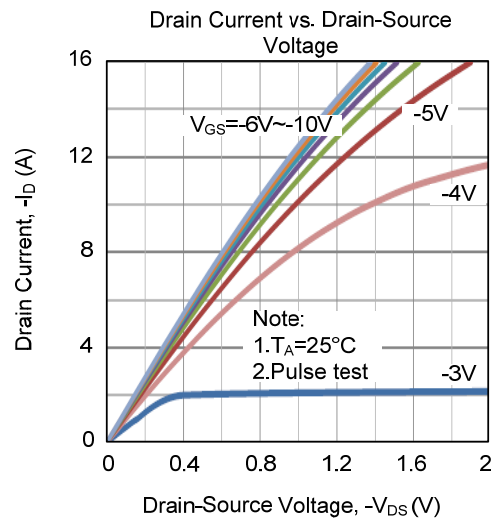
■ ELECTRICAL CHARACTERISTICS ($T_A=25^\circ\text{C}$ unless otherwise specified)

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
OFF CHARACTERISTICS						
Drain-Source Breakdown Voltage	BV _{DSS}	I _D =-1mA, V _{GS} =0V	-60			V
Zero Gate Voltage Drain Current	I _{DSS}	V _{DS} =-60V, V _{GS} =0V			-1	μA
Gate-to-Source Leakage Current	I _{GSS}	V _{GS} =±16V, V _{DS} =0V			±10	μA
ON CHARACTERISTICS						
Cutoff Voltage	V _{GS(OFF)}	V _{DS} =-10V, I _D =-1mA	-1.2		-2.6	V
Static Drain-Source On-State Resistance	R _{DS(ON)}	V _{GS} =-10V, I _D =-2A		77	100	mΩ
		V _{GS} =-4.5V, I _D =-1A		96	135	mΩ
		V _{GS} =-4V, I _D =-1A		103	145	mΩ
DYNAMIC PARAMETERS						
Input Capacitance	C _{ISS}	V _{DS} =-20V, f=1.0MHz		950		pF
Output Capacitance	C _{OSS}			60		pF
Reverse Transfer Capacitance	C _{RSS}			40		pF
SWITCHING PARAMETERS						
Total Gate Charge	Q _G	V _{DS} =-48V, V _{GS} =-10V, I _D =-4A I _G =-1mA		18		nC
Gate to Source Charge	Q _{GS}			3		nC
Gate to Drain Charge	Q _{GD}			2		nC
Turn-ON Delay Time	t _{D(ON)}	V _{DS} =-30V, V _{GS} =-10V, I _D =-4A R _G =25Ω		15		ns
Rise Time	t _R			17		ns
Turn-OFF Delay Time	t _{D(OFF)}			93		ns
Fall-Time	t _F			50		ns
SOURCE- DRAIN DIODE RATINGS AND CHARACTERISTICS						
Diode Forward Voltage	V _{SD}	I _S =-4A, V _{GS} =0V		-0.84	-1.2	V

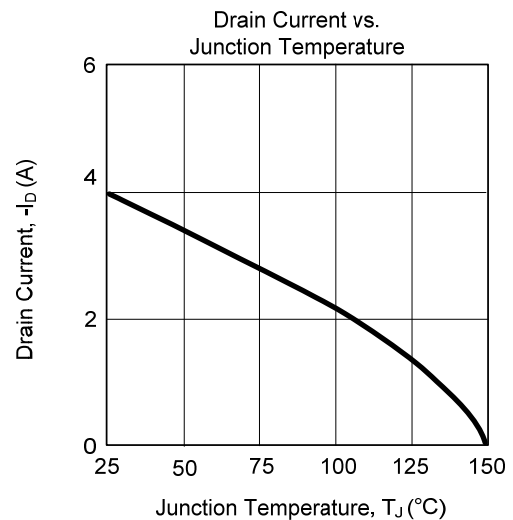
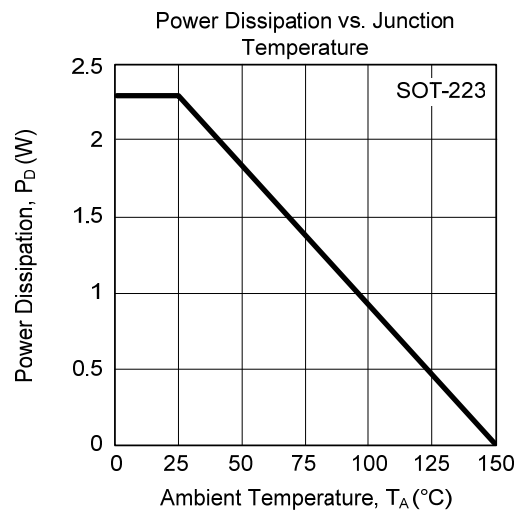
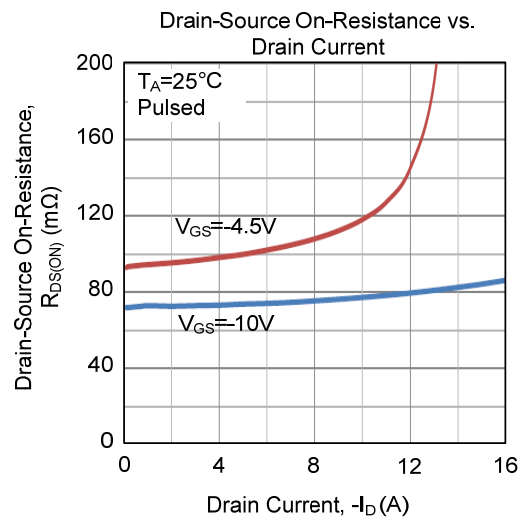
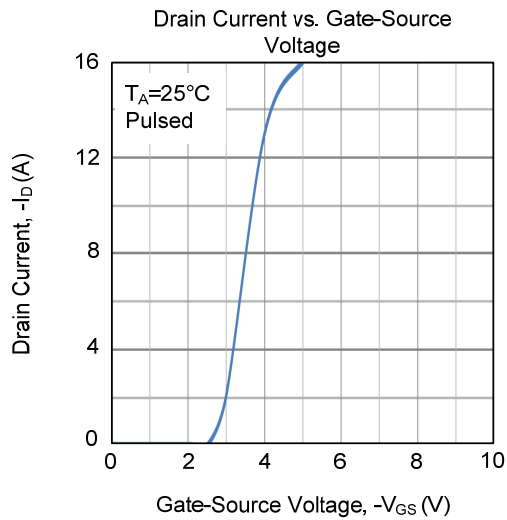
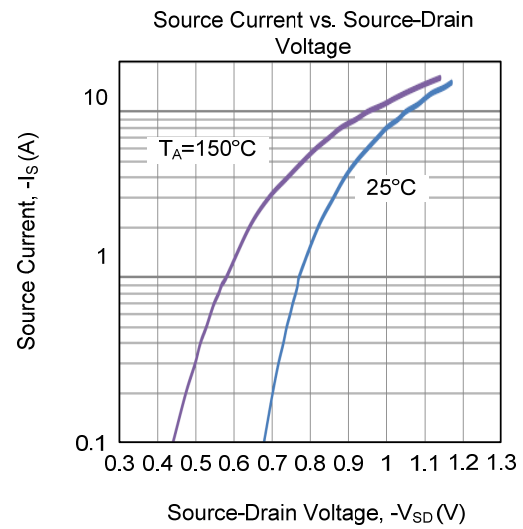
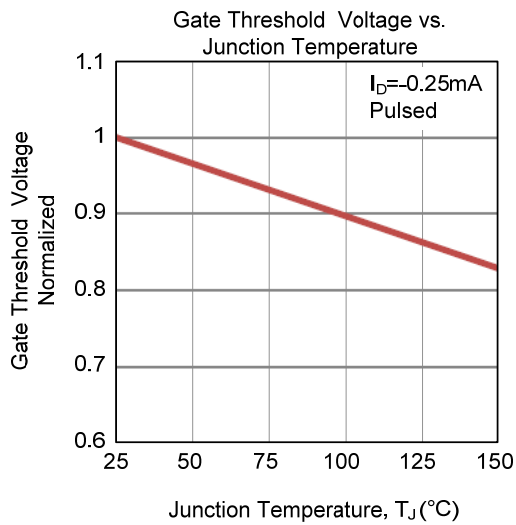
■ TEST CIRCUITS AND WAVEFORMS



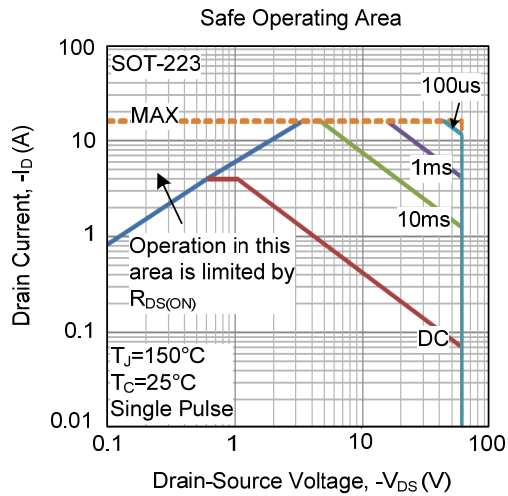
TYPICAL CHARACTERISTICS



TYPICAL CHARACTERISTICS (Cont.)



■ TYPICAL CHARACTERISTICS (Cont.)



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