



## UT2308

Preliminary

Power MOSFET

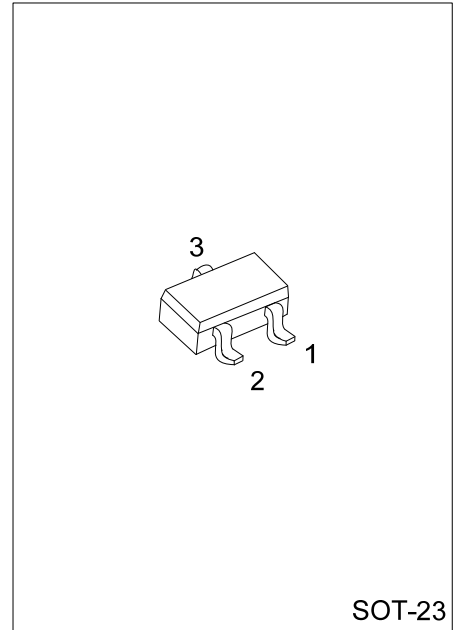
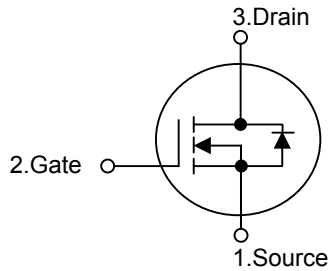
### N-CHANNEL ENHANCEMENT MODE

#### DESCRIPTION

The UTC **UT2308** is N-channel Power MOSFET, designed with high density cell, with fast switching speed, ultra low on-resistance and excellent thermal and electrical capabilities.

Used in commercial and industrial surface mount applications and suited for low voltage applications such as DC/DC converters.

#### SYMBOL

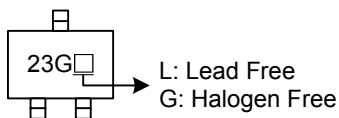


#### ORDERING INFORMATION

Ordering Number		Package	Pin Assignment			Packing
Lead Free	Halogen Free		1	2	3	
UT2308L-AE3-R	UT2308G-AE3-R	SOT-23	S	G	D	Tape Reel

<p>UT2308L-AE3-R</p>	<p>(1) Packing Type</p> <p>(2) Package Type</p> <p>(3) Lead Free</p>	<p>(1) R: Tape Reel</p> <p>(2) AE3: SOT-23</p> <p>(3) G: Halogen Free, L: Lead Free</p>
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#### MARKING



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

PARAMETER	SYMBOL	RATINGS	UNIT
Drain-Source Voltage	V <sub>DSS</sub>	20	V
Gate-Source Voltage	V <sub>GSS</sub>	±10	V
Continuous Drain Current	I <sub>D</sub>	2.7	A
Power Dissipation	P <sub>D</sub>	1.25	W
Junction Temperature	T <sub>J</sub>	+150	°C
Storage Temperature	T <sub>STG</sub>	-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.

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

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
<b>OFF CHARACTERISTICS</b>						
Drain-Source Breakdown Voltage	BV <sub>DSS</sub>	V <sub>GS</sub> = 0 V, I <sub>D</sub> = 250 μA	20			V
Drain-Source Leakage Current	I <sub>DSS</sub>	V <sub>DS</sub> = 20 V, V <sub>GS</sub> = 0 V			1.0	μA
Gate-Source Leakage Current	I <sub>GSS</sub>	V <sub>DS</sub> = 0 V, V <sub>GS</sub> = ±10V			±100	nA
<b>ON CHARACTERISTICS</b>						
Gate-Threshold Voltage	V <sub>GS(TH)</sub>	V <sub>DS</sub> = V <sub>GS</sub> , I <sub>D</sub> = 250 μA	0.4	0.8	1.0	V
Static Drain-Source On-State Resistance (Note2)	R <sub>DS(ON)</sub>	V <sub>GS</sub> = 4.5 V, I <sub>D</sub> = 1A			80	mΩ
		V <sub>GS</sub> = 2.5 V, I <sub>D</sub> = 1A			110	mΩ
<b>DYNAMIC PARAMETERS</b>						
Input Capacitance	C <sub>ISS</sub>			215		pF
Output Capacitance	C <sub>OSS</sub>			65		pF
Reverse Transfer Capacitance	C <sub>RSS</sub>			45		pF
<b>SWITCHING CHARACTERISTICS</b>						
Total Gate Charge	Q <sub>G</sub>	V <sub>GS</sub> = 4.5V		3.8		nC
Gate Source Charge	Q <sub>GS</sub>			0.7		nC
Gate-Drain Charge	Q <sub>GD</sub>			0.9		nC

Note: 1. Pulse width limited by T<sub>J(MAX)</sub>

2. Pulse width ≤ 300 μs, duty cycle ≤ 2%.

3. Surface mounted on FR4 board t ≤ 5 sec.

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