



UT2308

Preliminary

Power MOSFET

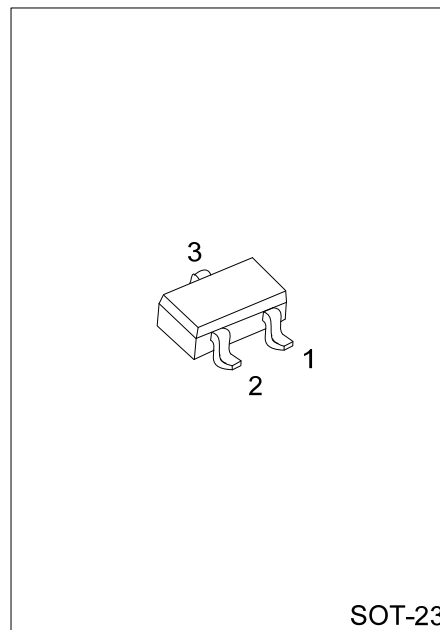
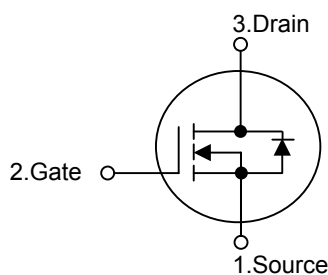
N-CHANNEL ENHANCEMENT MODE

■ 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



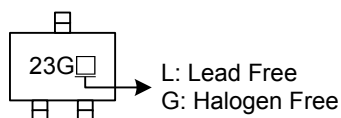
SOT-23

■ 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

UT2308L-AE3-R	(1)Packing Type	(1) R: Tape Reel
	(2)Package Type	(2) AE3: SOT-23
	(3)Lead Free	(3) G: Halogen Free, L: Lead Free

■ MARKING



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

PARAMETER	SYMBOL	RATINGS	UNIT
Drain-Source Voltage	V _{DSS}	20	V
Gate-Source Voltage	V _{GSS}	±10	V
Continuous Drain Current	I _D	2.7	A
Power Dissipation	P _D	1.25	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.

■ **ELECTRICAL CHARACTERISTICS** (Ta = 25°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	20			V
Drain-Source Leakage Current	I _{DSS}	V _{DS} =20 V, V _{GS} =0 V			1.0	μA
Gate-Source Leakage Current	I _{GSS}	V _{DS} =0 V, V _{GS} = ±10V			±100	nA
ON CHARACTERISTICS						
Gate-Threshold Voltage	V _{GS(TH)}	V _{DS} =V _{GS} , I _D =250 μA	0.4	0.8	1.0	V
Static Drain-Source On-State Resistance (Note2)	R _{DS(ON)}	V _{GS} =4.5 V, I _D =1A			80	mΩ
		V _{GS} =2.5 V, I _D =1A			110	mΩ
DYNAMIC PARAMETERS						
Input Capacitance	C _{ISS}			215		pF
Output Capacitance	C _{OSS}			65		pF
Reverse Transfer Capacitance	C _{RSS}			45		pF
SWITCHING CHARACTERISTICS						
Total Gate Charge	Q _G	V _{GS} =4.5V		3.8		nC
Gate Source Charge	Q _{GS}			0.7		nC
Gate-Drain Charge	Q _{GD}			0.9		nC

Note: 1. Pulse width limited by T_{J(MAX)}

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

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

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