



## UT3055

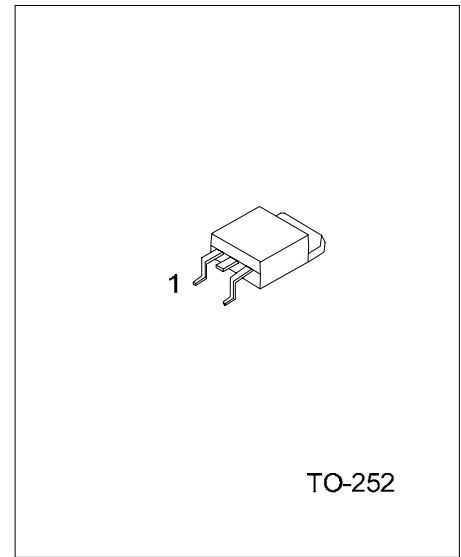
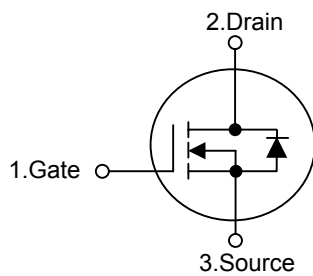
Power MOSFET

### N-CHANNEL ENHANCEMENT MODE

#### DESCRIPTION

The UTC **UT3055** is N-Channel logic level enhancement mode field effect transistor.

#### SYMBOL



\*Pb-free plating product number: UT3055L

#### ORDERING INFORMATION

Ordering Number		Package	Pin Assignment			Packing
Normal	Lead Free Plating		1	2	3	
UT3055-TN3-R	UT3055L-TN3-R	TO-252	G	D	S	Tape Reel
UT3055-TN3-T	UT3055L-TN3-T	TO-252	G	D	S	Tube

<p>UT3055L-TN3-R</p>	<p>(1) R: Tape Reel, T: Tube</p> <p>(2) TN3: TO-252</p> <p>(3) L: Lead Free Plating, Blank: Pb/Sn</p>
----------------------	---

■ ABSOLUTE MAXIMUM RATINGS ( $T_C = 25$  , unless otherwise specified)

PARAMETER	SYMBOL	RATINGS	UNIT
Drain-Source Voltage	$V_{DSS}$	25	V
Gate-Source Voltage	$V_{GSS}$	$\pm 16$	V
Continuous Drain Current	$I_D$	12	A
Power Dissipation	$P_D$	50	W
Junction Temperature	$T_J$	+150	
Storage Temperature	$T_{STG}$	-55 ~ +150	

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 ( $T_C = 25^\circ\text{C}$ , unless otherwise specified)

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
<b>OFF CHARACTERISTICS</b>						
Drain-Source Breakdown Voltage	$BV_{DSS}$	$V_{GS}=0V, I_D=250\mu A$	25			V
Drain-Source Leakage Current	$I_{DSS}$	$V_{DS} = 16V, V_{GS} = 0V$			10	$\mu A$
Gate-Source Leakage Current	$I_{GSS}$	$V_{DS} = 0V, V_{GS} = \pm 12V$			$\pm 100$	nA
<b>ON CHARACTERISTICS</b>						
Gate Threshold Voltage	$V_{GS(TH)}$	$V_{DS}=V_{GS}, I_D=250\mu A$		1.1		V
Drain-Source On-State Resistance (Note 2)	$R_{DS(ON)}$	$V_{GS}=10V, I_D=5A$			70	$m\Omega$
		$V_{GS}=4.5V, I_D=5A$			95	$m\Omega$
<b>DYNAMIC PARAMETERS</b>						
Input Capacitance	$C_{ISS}$			240		pF
Output Capacitance	$C_{OSS}$			97		pF
Reverse Transfer Capacitance	$C_{RSS}$			68		pF
<b>SWITCHING CHARACTERISTICS</b>						
Total Gate Charge	$Q_G$	$V_{GS}=4.5V$		3.2		nC
Gate-Drain Charge	$Q_{GD}$			0.8		nC
<b>SOURCE- DRAIN DIODE RATINGS AND CHARACTERISTICS</b>						
Drain-Source Diode Forward Voltage (Note2)	$V_{SD}$	$I_F=I_S, V_{GS}=0V$			1.0	V
Maximum Continuous Drain-Source Diode Forward Current	$I_S$		5			A

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

2. Pulse width  $\leq 300\mu s$ , duty cycle  $\leq 2\%$ .

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.