



UT3055

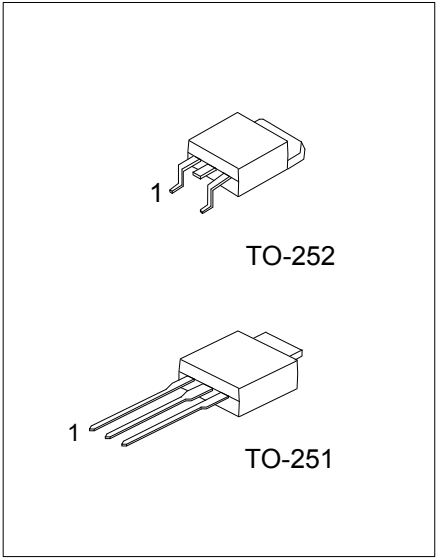
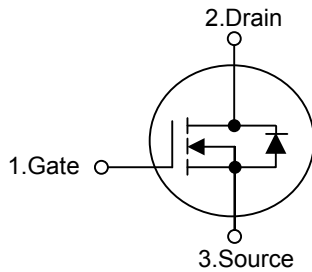
Power MOSFET

12A, 25V N-CHANNEL POWER MOSFET

■ DESCRIPTION

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

■ SYMBOL



■ ORDERING INFORMATION

Ordering Number		Package	Pin Assignment			Packing
Lead Free	Halogen Free		1	2	3	
UT3055-TM3-T	UT3055L-TM3-T	TO-251	G	D	S	Tube
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)Packing Type</p> <p>(2)Package Type</p> <p>(3)Lead Free</p>	<p>(1) R: Tape Reel, T: Tube</p> <p>(2) TM3: TO-251, TN3: TO-252</p> <p>(3) G: Halogen Free, L: Lead Free</p>
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■ ABSOLUTE MAXIMUM RATINGS (T_C = 25°C, unless otherwise specified)

PARAMETER	SYMBOL	RATINGS	UNIT
Drain-Source Voltage	V _{DSS}	25	V
Gate-Source Voltage	V _{GSS}	±16	V
Continuous Drain Current	I _D	12	A
Power Dissipation	P _D	50	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.

■ THERMAL DATA

PARAMETER	SYMBOL	RATINGS	UNIT
Junction to Ambient	θ _{JA}	62	°C/W
Junction to Case	θ _{JC}	2.5	°C/W

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

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
OFF CHARACTERISTICS						
Drain-Source Breakdown Voltage	BV _{DSS}	V _{GS} =0V, I _D =250uA	25			V
Drain-Source Leakage Current	I _{DSS}	V _{DS} =16 V, V _{GS} =0 V			10	μA
Gate-Source Leakage Current	I _{GSS}	V _{DS} =0 V, V _{GS} = ±12V			±100	nA
ON CHARACTERISTICS						
Gate Threshold Voltage	V _{GS(TH)}	V _{DS} =V _{GS} , I _D =250uA		1.1		V
Drain-Source On-State Resistance (Note 2)	R _{DS(ON)}	V _{GS} =10V, I _D =5A			70	mΩ
		V _{GS} =4.5V, I _D =5A			95	mΩ
DYNAMIC PARAMETERS						
Input Capacitance	C _{ISS}			240		pF
Output Capacitance	C _{OSS}			97		pF
Reverse Transfer Capacitance	C _{RSS}			68		pF
SWITCHING CHARACTERISTICS						
Total Gate Charge	Q _G	V _{GS} =4.5V		3.2		nC
Gate-Drain Charge	Q _{GD}			0.8		nC
SOURCE- DRAIN DIODE RATINGS AND CHARACTERISTICS						
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 ≤300us, duty cycle ≤2%.

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