

UTC UNISONIC TECHNOLOGIES CO., LTD

UT3055

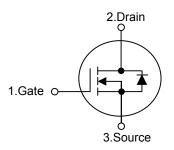
Power MOSFET

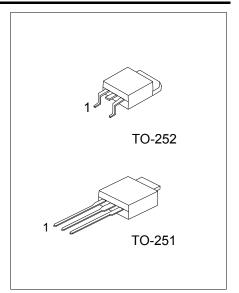
12A, 25V N-CHANNEL **POWER MOSFET**

DESCRIPTION

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

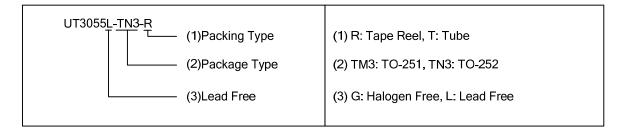
SYMBOL





ORDERING INFORMATION

Ordering Number		Deekege	Pin Assignment			Deaking	
Lead Free	Halogen Free	Package	1	2	3	Packing	
UT3055-TM3-T	UT3055L-TM3-T	TO-251	G	D	S	Tube	
UT3055-TN3-R	UT3055L-TN3-R TO-25		G	D	S	Tape Reel	
UT3055-TN3-T	UT3055L-TN3-T	TO-252	G	D	S	Tube	



■ 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	Ι _D	12	А
Power Dissipation	PD	50	W
Junction Temperature	TJ	+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 Course On State Desistance (Alata O)	R _{DS(ON)}	V _{GS} =10V, I _D =5A			70	mΩ
Drain-Source On-State Resistance (Note 2)		V _{GS} =4.5V, I _D =5A			95	mΩ
DYNAMIC PARAMETERS						
Input Capacitance	CISS			240		pF
Output Capacitance	Coss			97		pF
Reverse Transfer Capacitance	C _{RSS}			68		pF
SWITCHING CHARACTERISTICS						
Total Gate Charge	Q_{G}			3.2		nC
Gate-Drain Charge	Q_{GD}	-V _{GS} =4.5V		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	I _S		5			А
Forward Current						

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

2. Pulse width \leq 300us, duty cycle \leq 2%.

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