



UT30P03

Preliminary

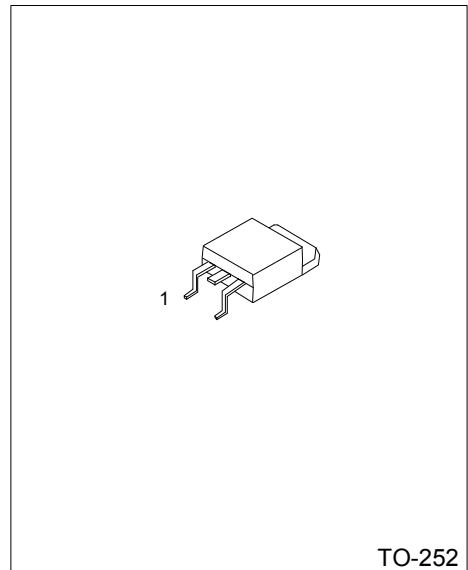
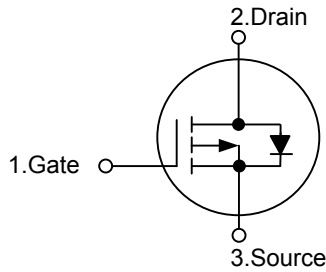
Power MOSFET

P-CHANNEL ENHANCEMENT MODE

■ FEATURES

- * $R_{DS(ON)} = 40m\Omega$ @ $V_{GS} = -10V$
- * Low Capacitance
- * Optimized gate charge
- * Fast switching capability
- * Avalanche energy specified
- * Halogen Free

■ SYMBOL



■ ORDERING INFORMATION

Ordering Number	Package	Pin Assignment			Packing
		1	2	3	
UT30P03G-TN3-R	TO-252	G	D	S	Tape Reel

<p>UT30P03G-TN3-R</p>	<p>(1)Packing Type</p> <p>(2)Package Type</p> <p>(3)Halogen Free</p>	<p>(1) R: Tape Reel</p> <p>(2) TN3: TO-252</p> <p>(3) G: Halogen Free</p>
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■ ABSOLUTE MAXIMUM RATINGS (Ta=25°C, unless otherwise specified)

PARAMETER	SYMBOL	RATINGS	UNIT
Drain-Source Voltage	V _{DS}	-30	V
Gate-Source Voltage	V _{GS}	±20	V
Continuous Drain Current	I _D	-26	A
Power Dissipation	P _D	50	W
Junction Temperature	T _J	+175	°C
Storage Temperature	T _{STG}	-55 ~ +175	°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 (T_J =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 =-250 μA	-30			V
Drain-Source Leakage Current	I _{DSS}	V _{DS} =-30V, V _{GS} =0V			-1	μA
Gate-Source Leakage Current	I _{GSS}	V _{GS} =±20V, V _{DS} =0V			±100	nA
ON CHARACTERISTICS						
Gate Threshold Voltage	V _{GS(TH)}	V _{DS} =V _{GS} , I _D =-250 μA	-1		-3	V
Static Drain-Source On-State Resistance (Note)	R _{DS(ON)}	V _{GS} =-10V, I _D =-10A		30	40	mΩ
		V _{GS} =-4.5V, I _D =-10A		40	60	mΩ
DYNAMIC CHARACTERISTICS						
Input Capacitance	C _{ISS}	V _{DS} =-25V, V _{GS} =0V, f=1.0MHz		700		pF
Output Capacitance	C _{OSS}			130		pF
Reverse Transfer Capacitance	C _{RSS}			120		pF
SWITCHING CHARACTERISTICS						
Turn-On Delay Time	t _{D(ON)}	V _{DS} =-15V, I _D =1A, R _L = 15Ω, V _{GS} =-10V, R _G =3.3Ω		25		ns
Turn-On Rise Time	t _R			50		ns
Turn-Off Delay Time	t _{D(OFF)}			380		ns
Turn-Off Fall Time	t _F			180		ns
Total Gate Charge	Q _G	V _{DS} = -24V, I _D = -30A, V _{GS} = -4.5V		100		nC
Gate-Source Charge	Q _{GS}			15		nC
Gate-Drain Charge	Q _{GD}			10		nC
SOURCE- DRAIN DIODE RATINGS AND CHARACTERISTICS						
Drain-Source Diode Forward Voltage	V _{SD}	V _{GS} = 0V, I _S =-10A			-1.2	V
Maximum Continuous Drain-Source Diode Forward Current	I _S				-26	A

Note: Pulse Test: Pulse width ≤300μs, Duty cycle ≤2%

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