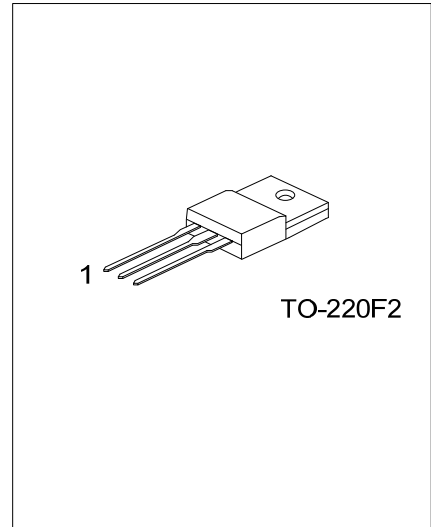
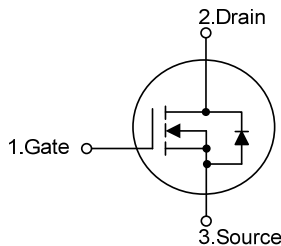


**UFP254****Power MOSFET****23A, 250V N-CHANNEL
POWER MOSFET****DESCRIPTION**

The UTC **UFP254** is an N-channel mode Power FET, it uses UTC's advanced technology. This technology allows a minimum on-state resistance, superior switching performance. It also can withstand high energy pulse in the avalanche and commutation mode.

FEATURES

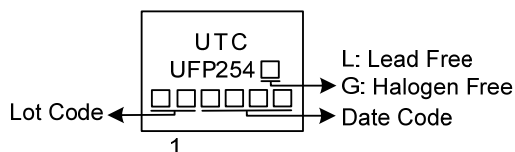
- * $R_{DS(ON)} \leq 140m\Omega$ @ $V_{GS}=10V$, $I_D=14A$
- * Low Gate Charge (Maximum 140nC)
- * High Switching Speed

SYMBOL**ORDERING INFORMATION**

Ordering Number		Package	Pin Assignment			Packing
Lead Free	Halogen Free		1	2	3	
UFP254L-TF2-T	UFP254G-TF2-T	TO-220F2	G	D	S	Tube

Note: Pin Assignment: G: Gate D: Drain S: Source

UFP254G-TF2-T (1) Packing Type (2) Package Type (3) Green Package	(1) T: Tube (2) TF2: TO-220F2 (3) G: Halogen Free and Lead Free, L: Lead Free
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MARKING

ABSOLUTE MAXIMUM RATINGS

PARAMETER		SYMBOL	RATINGS	UNIT
Drain-Source Voltage		V_{DSS}	250	V
Gate-Source Voltage		V_{GSS}	± 20	V
Drain Current	Continuous	I_D	23	A
	Pulsed	I_{DM}	92	A
Avalanche Current		I_{AR}	23	A
Avalanche Energy	Single Pulsed	E_{AS}	1780	mJ
Peak Diode Recovery dv/dt		dv/dt	9	V/ns
Power Dissipation		P_D	42	W
Junction Temperature		T_J	+150	°C
Storage Temperature Range		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

PARAMETER		SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
OFF CHARACTERISTICS							
Drain-Source Breakdown Voltage		BV _{DSS}	I _D =250μA, V _{GS} =0V	250			V
Drain-Source Leakage Current		I _{DSS}	V _{DS} =250V			25	μA
Gate-Source Leakage Current	Forward	I _{GSS}	V _{GS} =+20V, V _{DS} =0V			+100	nA
	Reverse		V _{GS} =-20V, V _{DS} =0V			-100	nA
ON CHARACTERISTICS							
Gate Threshold Voltage		V _{GS(TH)}	I _D =250μA	2.0		4.0	V
Static Drain-Source On-State Resistance		R _{DS(ON)}	V _{GS} =10V, I _D =14A			140	mΩ
DYNAMIC PARAMETERS							
Input Capacitance		C _{ISS}	V _{GS} =0V, V _{DS} =25V, f=1MHz		2800		pF
Output Capacitance		C _{OSS}			380		pF
Reverse Transfer Capacitance		C _{RSS}			23		pF
SWITCHING PARAMETERS							
Total Gate Charge		Q _G	V _{DS} =50V, V _{GS} =10V, I _D =1.3A , I _G =100μA		120		nC
Gate to Source Charge		Q _{GS}			19		nC
Gate to Drain Charge		Q _{GD}			21		nC
Turn-ON Delay Time		t _{D(ON)}	V _{DD} =30V, V _{GS} =10V, I _D =0.5A, R _G =25Ω		85		ns
Rise Time		t _R			115		ns
Turn-OFF Delay Time		t _{D(OFF)}			780		ns
Fall-Time		t _F			170		ns
SOURCE- DRAIN DIODE RATINGS AND CHARACTERISTICS							
Maximum Body-Diode Continuous Current		I _S				23	A
Maximum Body-Diode Pulsed Current		I _{SM}				92	A
Drain-Source Diode Forward Voltage		V _{SD}	I _S =23A, V _{GS} =0V			1.8	V
Reverse Recovery Time		t _{rr}	V _{GS} = 0 V, I _S = 10A,		212		ns
Reverse Recovery Charge		Q _{RR}	dI _F / dt = 100 A/μs (Note 1)		1.73		μC

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