



UF2N30Z

Power MOSFET

2A, 300V N-CHANNEL POWER MOSFET

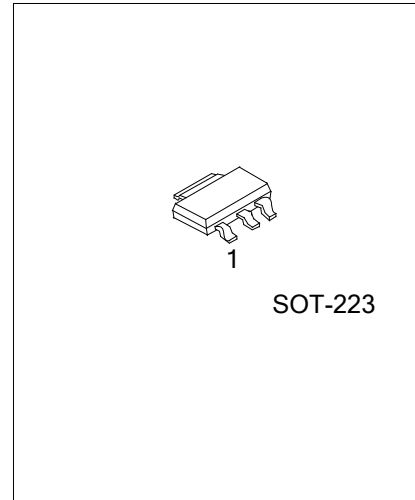
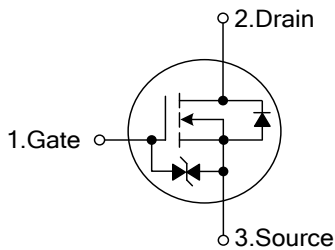
DESCRIPTION

The UTC **UF2N30Z** is an N-channel enhancement mode Power MOSFET using UTC' s advanced technology to provide customers with a minimum on-state resistance, low gate charge and superior switching performance.

FEATURES

- * $R_{DS(ON)} < 2\Omega$ @ $V_{GS}=10V, I_D=2A$
- * High switching speed
- * Typically 3.2nC low gate charge
- * 100% avalanche tested

SYMBOL



ORDERING INFORMATION

Ordering Number		Package	Pin Assignment			Packing
Lead Free	Halogen Free		1	2	3	
UF2N30ZL-AA3-R	UF2N30ZG-AA3-R	SOT-223	G	D	S	Tape Reel

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

UF2N30ZL-AA3-R	(1)Packing Type	(1) R: Tape Reel
	(2)Package Type	(2) AA3: SOT-223
	(3)Lead Free	(3) L: Lead Free, G: Halogen Free

■ ABSOLUTE MAXIMUM RATINGS

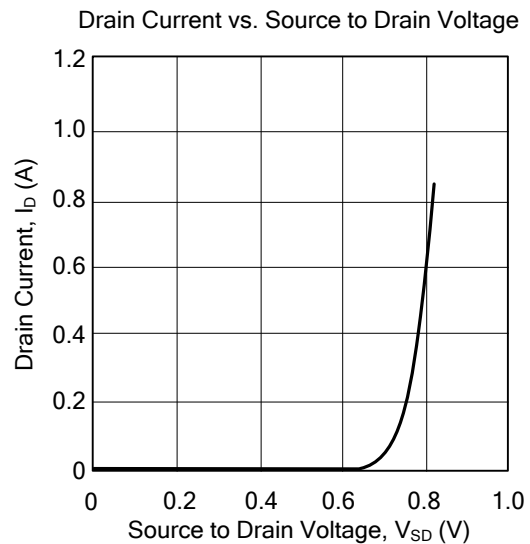
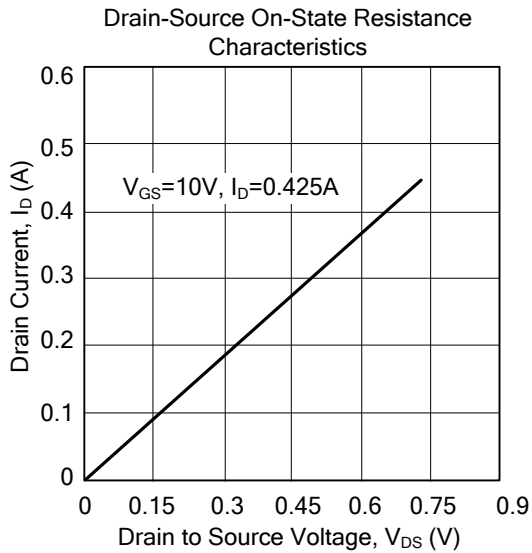
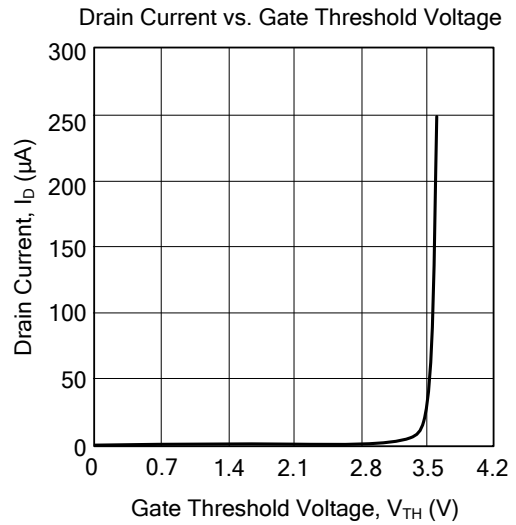
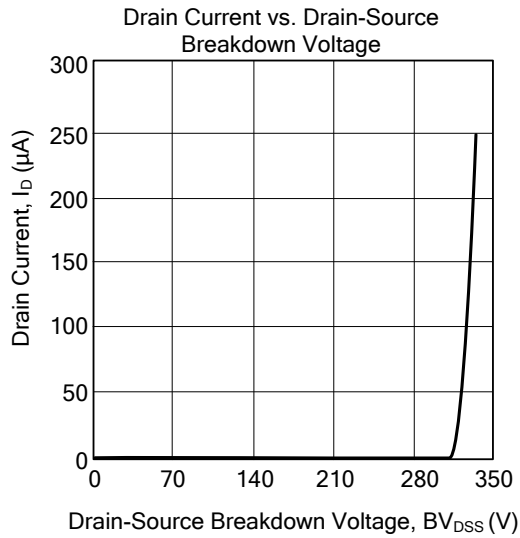
PARAMETER		SYMBOL	RATINGS	UNIT
Drain-Source Voltage		V_{DSS}	300	V
Gate-Source Voltage		V_{GSS}	± 20	V
Continuous Drain Current	Continuous	I_D	2	A
	Pulsed	I_{DM}	8	A
Avalanche Energy		E_{AS}	52	mJ
Power Dissipation		P_D	2	W
Junction Temperature		T_J	+150	$^{\circ}C$
Storage Temperature Range		T_{STG}	-55~+150	$^{\circ}C$

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}	$I_D=250\mu A, V_{GS}=0V$	300			V	
Drain-Source Leakage Current		I_{DSS}	$V_{DS}=300V$			1	μA	
Gate-Source Leakage Current	Forward	I_{GSS}	$V_{GS}=+20V, V_{DS}=0V$			10	μA	
	Reverse		$V_{GS}=-20V, V_{DS}=0V$			-10	μA	
ON CHARACTERISTICS								
Gate Threshold Voltage		$V_{GS(TH)}$	$I_D=250\mu A$	2		4	V	
Static Drain-Source On-State Resistance		$R_{DS(ON)}$	$V_{GS}=10V, I_D=2A$			2	Ω	
DYNAMIC PARAMETERS								
Input Capacitance		C_{ISS}	$V_{GS}=0V, V_{DS}=25V, f=1MHz$		200		pF	
Output Capacitance		C_{OSS}				90		pF
Reverse Transfer Capacitance		C_{RSS}				30		pF
SWITCHING PARAMETERS								
Total Gate Charge		Q_G	$V_{DD}=50V, I_D=2A, I_G=100\mu A, V_{GS}=10V$		4		nC	
Gate to Source Charge		Q_{GS}				0.64		nC
Gate to Drain Charge		Q_{GD}				1.6		nC
Turn-ON Delay Time		$t_{D(ON)}$	$V_{DD}=30V, I_D=1A, R_G=25\Omega, V_{GS}=0\sim 10V$		10		ns	
Rise Time		t_R				50		ns
Turn-OFF Delay Time		$t_{D(OFF)}$				30		ns
Fall-Time		t_F				40		ns
SOURCE- DRAIN DIODE RATINGS AND CHARACTERISTICS								
Maximum Body-Diode Continuous Current		I_S				2	A	
Maximum Body-Diode Pulsed Current		I_{SM}				8	A	
Drain-Source Diode Forward Voltage		V_{SD}	$I_S=2A$			1.3	V	

TYPICAL CHARACTERISTICS



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