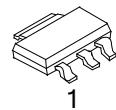


**UF6N15Z****Power MOSFET****6A, 150V N-CHANNEL  
POWER MOSFET****■ DESCRIPTION**

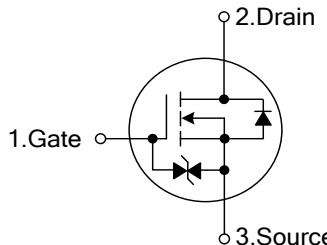
The UTC **UF6N15Z** is an N-channel enhancement mode Power MOSFET using UTC's advanced technology to provide customers with a minimum on-state resistance, low gate charge and superior switching performance.



SOT-223

**■ FEATURES**

- \*  $R_{DS(ON)} < 1.95\Omega$  @  $V_{GS}=10V$ ,  $I_D=6A$
- \* 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	
UF6N15ZL-AA3-R	UF6N15ZG-AA3-R	SOT-223	G	D	S	Tape Reel

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

UF6N15L-AA3-R  (1)Packing Type (2)Package Type (3)Lead Free	(1) R: Tape Reel (2) AA3: SOT-223 (3) L: Lead Free, G: Halogen Free
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■ ABSOLUTE MAXIMUM RATINGS

PARAMETER		SYMBOL	RATINGS	UNIT
Drain-Source Voltage		V <sub>DSS</sub>	150	V
Gate-Source Voltage		V <sub>GSS</sub>	±20	V
Continuous Drain Current	Continuous	I <sub>D</sub>	6	A
	Pulsed	I <sub>DM</sub>	24	A
Avalanche Energy		E <sub>AS</sub>	52	mJ
Power Dissipation		P <sub>D</sub>	2	W
Junction Temperature		T <sub>J</sub>	+150	°C
Storage Temperature Range		T <sub>STG</sub>	-55~+150	°C

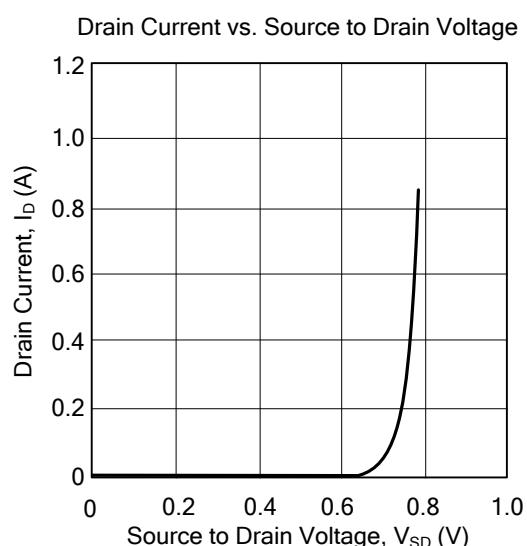
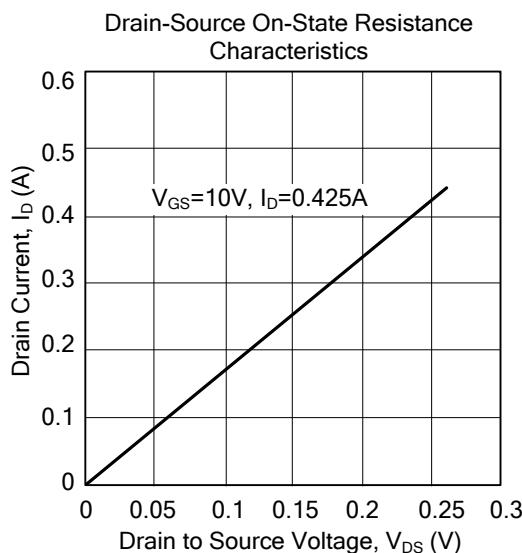
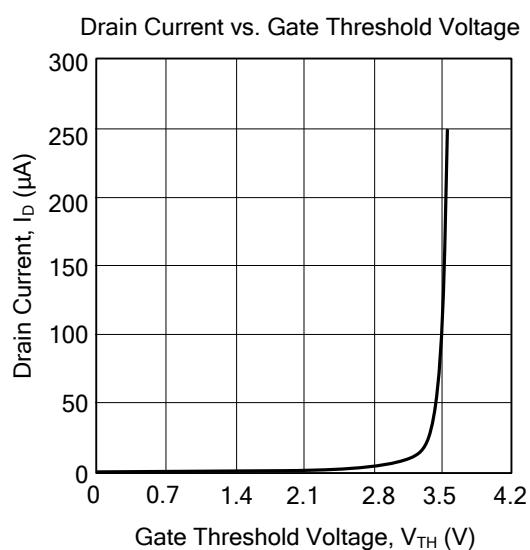
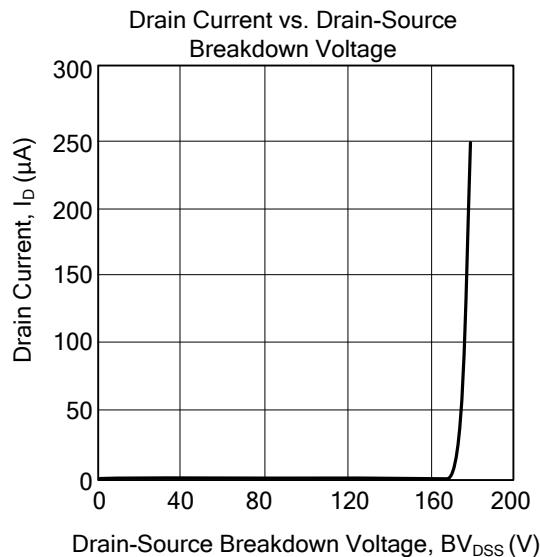
Note: Absolute maximum ratings are those values beyond which the device could be permanently damaged.

Absolute maximum ratings are stress ratings only and functional device operation is not implied.

■ ELECTRICAL CHARACTERISTICS

PARAMETER		SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
<b>OFF CHARACTERISTICS</b>							
Drain-Source Breakdown Voltage		BV <sub>DSS</sub>	I <sub>D</sub> =250μA, V <sub>GS</sub> =0V	150			V
Drain-Source Leakage Current		I <sub>DSS</sub>	V <sub>DS</sub> =150V			1	μA
Gate-Source Leakage Current	Forward	I <sub>GSS</sub>	V <sub>GS</sub> =+20V, V <sub>DS</sub> =0V			10	μA
	Reverse		V <sub>GS</sub> =-20V, V <sub>DS</sub> =0V			-10	μA
<b>ON CHARACTERISTICS</b>							
Gate Threshold Voltage		V <sub>GS(TH)</sub>	I <sub>D</sub> =250μA	2		4	V
Static Drain-Source On-State Resistance		R <sub>D(S)ON</sub>	V <sub>GS</sub> =10V, I <sub>D</sub> =6A			1.95	Ω
<b>DYNAMIC PARAMETERS</b>							
Input Capacitance		C <sub>ISS</sub>	V <sub>GS</sub> =0V, V <sub>DS</sub> =25V, f=1MHz		190	300	pF
Output Capacitance		C <sub>OSS</sub>			70	100	pF
Reverse Transfer Capacitance		C <sub>RSS</sub>			20	50	pF
<b>SWITCHING PARAMETERS</b>							
Total Gate Charge		Q <sub>G</sub>	V <sub>DD</sub> =50V, I <sub>D</sub> =6A, I <sub>G</sub> =100μA, V <sub>GS</sub> =10V		3.2		nC
Gate to Source Charge		Q <sub>GS</sub>			0.64		nC
Gate to Drain Charge		Q <sub>GD</sub>			1.6		nC
Turn-ON Delay Time		t <sub>D(ON)</sub>	V <sub>DD</sub> =30V, I <sub>D</sub> =1A, R <sub>G</sub> =25Ω, V <sub>GS</sub> =10V		6		ns
Rise Time		t <sub>R</sub>			38		ns
Turn-OFF Delay Time		t <sub>D(OFF)</sub>			11		ns
Fall-Time		t <sub>F</sub>			13		ns
<b>SOURCE- DRAIN DIODE RATINGS AND CHARACTERISTICS</b>							
Maximum Body-Diode Continuous Current		I <sub>S</sub>			6		A
Maximum Body-Diode Pulsed Current		I <sub>SM</sub>			24		A
Drain-Source Diode Forward Voltage		V <sub>SD</sub>	I <sub>S</sub> =6A			1.48	V

■ TYPICAL CHARACTERISTICS



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