



UF600

Power MOSFET

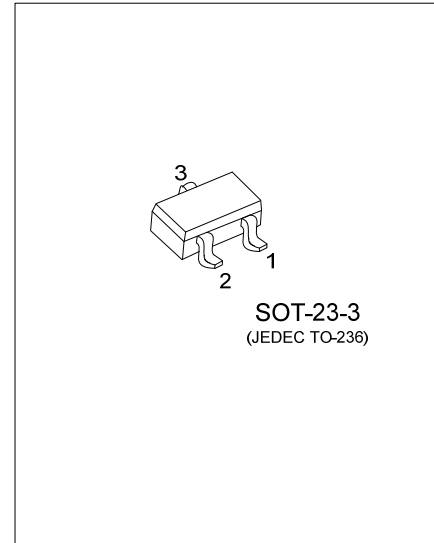
A, 600V, N-CHANNEL POWER MOSFET

DESCRIPTION

The UTC **UF600** is an N-channel Power MOSFET, it uses UTC's advanced technology to provide the customers with high switching speed and high breakdown voltage, etc.

FEATURES

- * $R_{DS(on)} < 1.2k\Omega$ @ $V_{GS}=0V, I_D=3mA$
- * $R_{DS(on)} < 1.8k\Omega$ @ $V_{GS}=10V, I_D=16mA$
- * High switching speed
- * high breakdown voltage



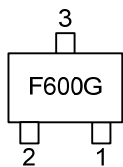
ORDERING INFORMATION

Ordering Number	Package	Pin Assignment			Packing
		1	2	3	
UF600G-AE2-R	SOT-23-3	S	G	D	Tape Reel

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

<p>UF600G-AE2-R</p> <p>(1) Packing Type (2) Package Type (3) Green Package</p>	<p>(1) R: Tape Reel (2) AE2: SOT-23-3 (3) G: Halogen Free and Lead Free</p>
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MARKING



ABSOLUTE MAXIMUM RATINGS

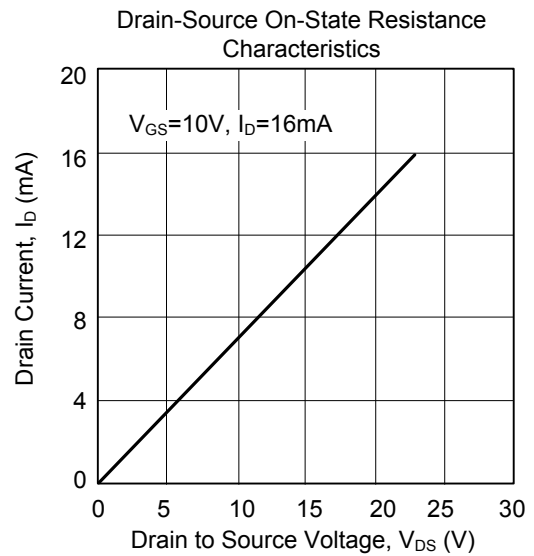
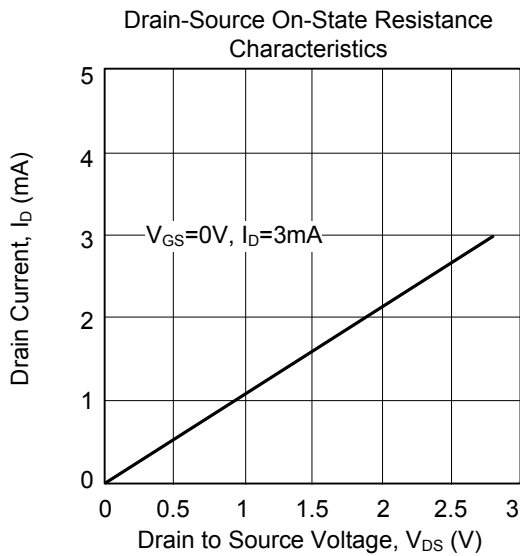
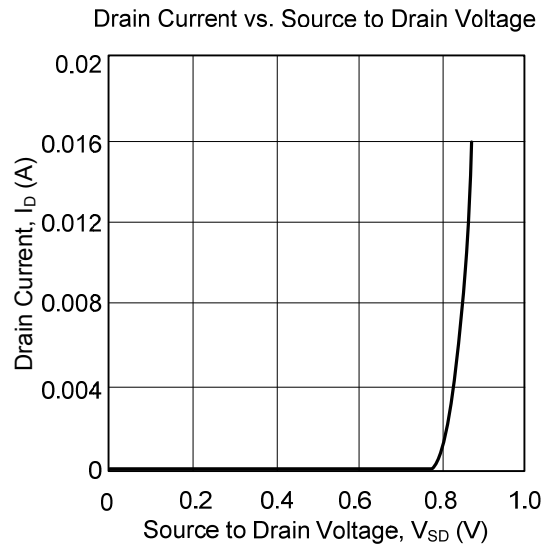
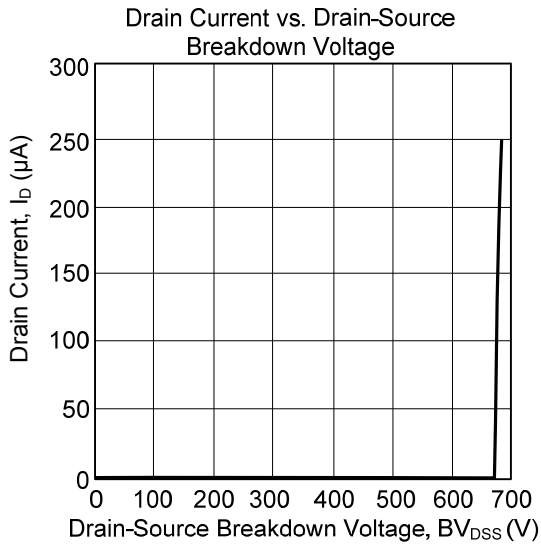
PARAMETER	SYMBOL	RATINGS	UNIT
Drain-Source Voltage	V_{DSS}	600	V
Gate-Source Voltage	V_{GSS}	± 20	V
Drain Current	Continuous	I_D	0.185
	Pulsed	I_{DM}	0.740
Power Dissipation	P_D	0.50	W
Junction Temperature	T_J	+150	$^{\circ}C$
Storage Temperature Range	T_{STG}	-55~+150	$^{\circ}C$

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}	$I_D=250\mu A, V_{GS}=-5V$	600			V	
Drain-Source Leakage Current	I_{DSS}	$V_{DS}=480V$			90	nA	
		$V_{DS}=540V$			90	nA	
Gate-Source Leakage Current	Forward	I_{GSS}	$V_{GS}=+20V, V_{DS}=0V$			+90	nA
	Reverse		$V_{GS}=-20V, V_{DS}=0V$			-90	nA
ON CHARACTERISTICS							
Gate Threshold Voltage	$V_{GS(TH)}$	$V_{DS}=3V, I_D=8\mu A$	-2.7		-1.5	V	
Static Drain-Source On-State Resistance	$R_{DS(ON)}$	$V_{GS}=0V, I_D=3mA$	0.05	0.9	1.2	k Ω	
		$V_{GS}=10V, I_D=16mA$	0.05	1.4	1.8	k Ω	
DYNAMIC PARAMETERS							
Input Capacitance	C_{ISS}	$V_{GS}=0V, V_{DS}=25V, f=1.0MHz$		10		pF	
Output Capacitance	C_{OSS}			30		pF	
Reverse Transfer Capacitance	C_{RSS}			5		pF	
SWITCHING PARAMETERS							
Total Gate Charge	Q_G	$V_{GS}=-5\sim 5V, V_{DS}=25V, f=1.0MHz$		1.29		nC	
Gate to Source Charge	Q_{GS}			0.1		nC	
Gate to Drain Charge	Q_{GD}			0.47		nC	
Turn-ON Delay Time	$t_{D(ON)}$	$V_{DD}=30V, I_D=5mA, R_G=25\Omega, V_{GS}=-5\sim 5V$		30		ns	
Rise Time	t_R			55		ns	
Turn-OFF Delay Time	$t_{D(OFF)}$			80		ns	
Fall-Time	t_F			265		ns	
SOURCE- DRAIN DIODE RATINGS AND CHARACTERISTICS							
Drain-Source Diode Forward Voltage	V_{SD}	$I_{SD}=3mA$			1.38	V	
		$I_{SD}=16mA$			4.58	V	

TYPICAL CHARACTERISTICS



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