



UF600

Power MOSFET

0.185A, 600V N-CHANNEL POWER MOSFET

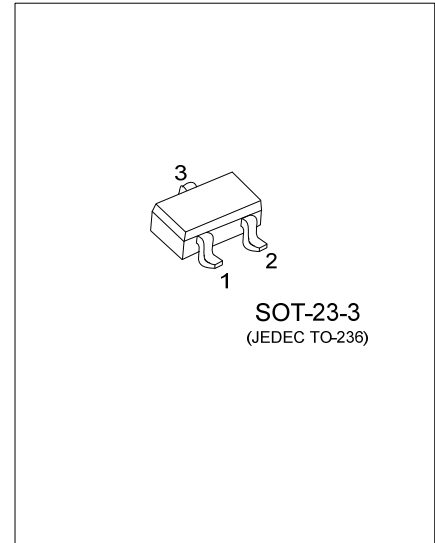
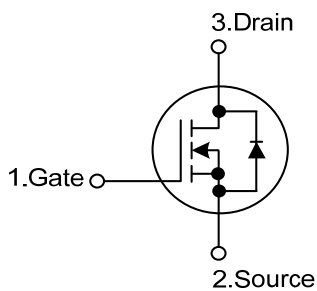
DESCRIPTION

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

- * $R_{DS(on)} \leq 1.2k\Omega$ @ $V_{GS}=0V, I_D=3.0mA$
- * $R_{DS(on)} \leq 1.8k\Omega$ @ $V_{GS}=10V, I_D=16mA$
- * High switching speed
- * high breakdown voltage

SYMBOL



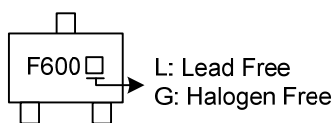
ORDERING INFORMATION

Ordering Number		Package	Pin Assignment			Packing
Lead Free	Halogen Free		1	2	3	
UF600L-AE2-R	UF600G-AE2-R	SOT-23-3	G	S	D	Tape Reel

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

<p>UF600G-AE2-R</p> <ul style="list-style-type: none"> (1) Packing Type (2) Package Type (3) Green Package 	<ul style="list-style-type: none"> (1) R: Tape Reel (2) AE2: SOT-23-3 (3) G: Halogen Free and Lead Free, L: Lead Free
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MARKING



■ ABSOLUTE MAXIMUM RATINGS

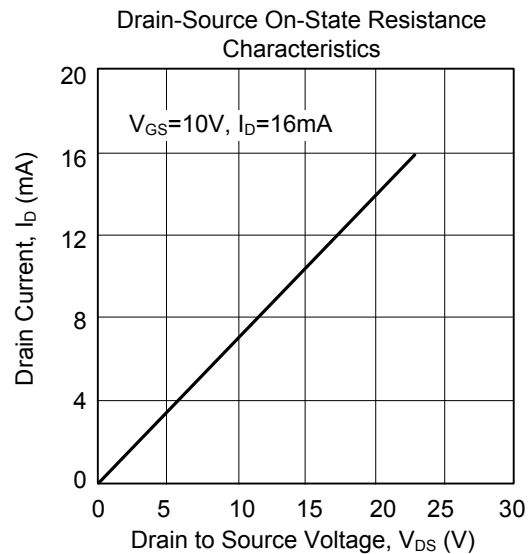
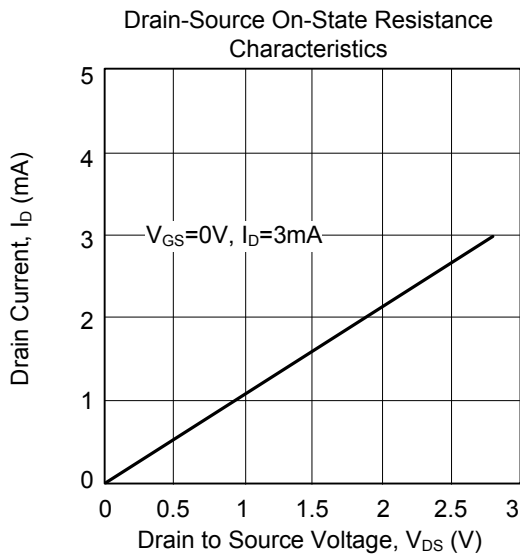
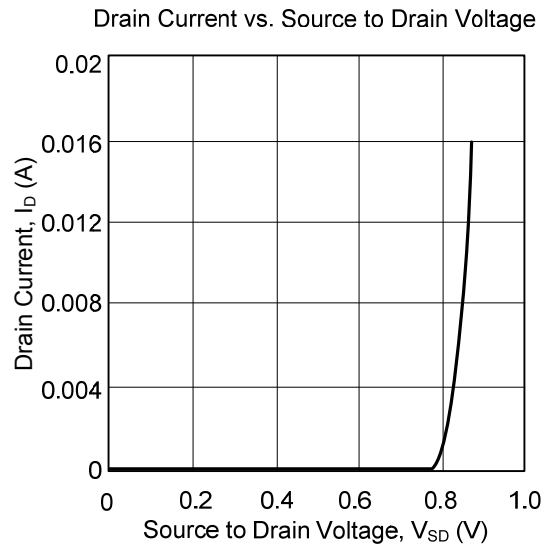
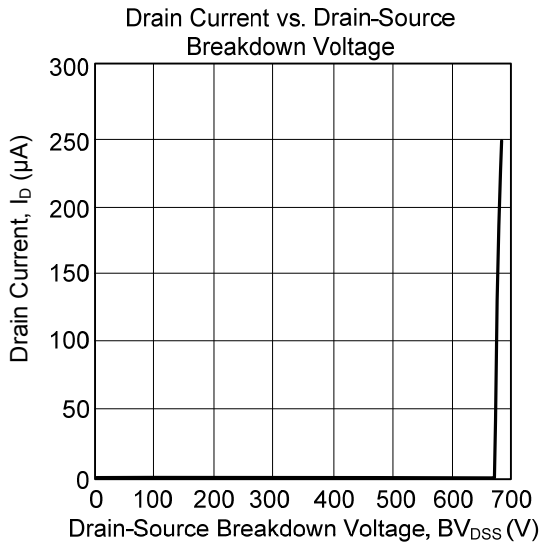
PARAMETER	SYMBOL	RATINGS	UNIT
Drain-Source Voltage	V_{DSS}	600	V
Gate-Source Voltage	V_{GSS}	± 20	V
Drain Current	Continuous	I_D	0.185
	Pulsed	I_{DM}	0.740
Power Dissipation	P_D	0.50	W
Junction Temperature	T_J	+150	$^{\circ}C$
Storage Temperature Range	T_{STG}	-55 ~ +150	$^{\circ}C$

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	I_{GSS}	$V_{GS}=-20V, V_{DS}=0V$		-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	$R_{DS(ON)}$	$V_{GS}=0V, I_D=3.0mA$	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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