



UT2035Z

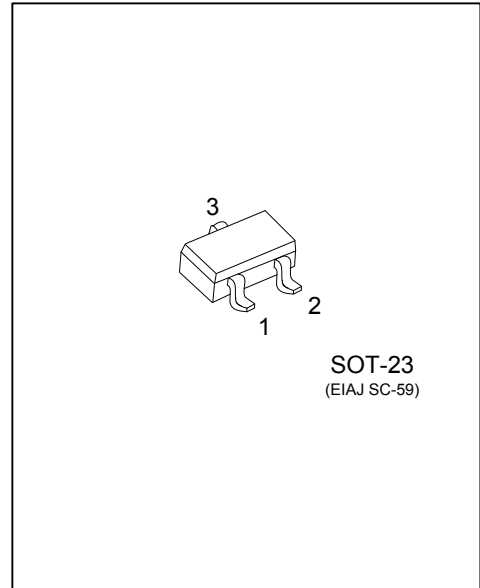
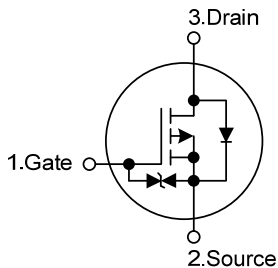
Power MOSFET

**-3.6A, -20V P-CHANNEL
ENHANCEMENT MODE
MOSFET****DESCRIPTION**

The UTC **UT2035Z** is a P-channel enhancement mode MOSFET, it uses UTC's advanced technology to provide the customers with a minimum on state resistance, high switching speed and low gate charge, etc.

FEATURES

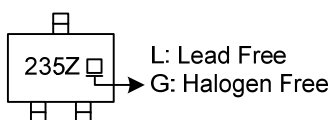
- * $R_{DS(ON)} \leq 42m\Omega$ @ $V_{GS} = -4.5V$, $I_D = -4.0A$
- $R_{DS(ON)} \leq 65m\Omega$ @ $V_{GS} = -2.5V$, $I_D = -4.0A$
- $R_{DS(ON)} \leq 82m\Omega$ @ $V_{GS} = -1.8V$, $I_D = -2.0A$
- * High switching speed
- * Low gate charge
- * Low gate threshold voltage
- * Low input capacitance
- * Low input/output leakage

SYMBOL**ORDERING INFORMATION**

Ordering Number		Package	Pin Assignment			Packing
Lead Free	Halogen Free		1	2	3	
UT2035ZL-AE3-R	UT2035ZG-AE3-R	SOT-23	G	S	D	Tape Reel

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

UT2035ZG-AE3-R	(1)Packing Type	(1) R: Tape Reel
	(2)Package Type	(2) AE3: SOT-23
	(3)Green Package	(3) G: Halogen Free and Lead Free, L: Lead Free

MARKING

■ **ABSOLUTE MAXIMUM RATINGS** ($T_A=25^{\circ}\text{C}$, unless otherwise specified)

PARAMETER			SYMBOL	RATINGS	UNIT
Drain-Source Voltage			V _{DSS}	-20	V
Gate-Source Voltage			V _{GSS}	±8	V
Drain Current	Continuous (Note 2)	Steady, T _A =25°C	I _D	-3.6	A
		State, T _A =70°C		-2.9	A
	Pulsed (Note 3)		I _{DM}	-24	A
Power Dissipation (Note 2)			P _D	0.81	W
Junction Temperature			T _J	-55 ~ +150	°C
Storage Temperature Range			T _{STG}	-55 ~ +150	°C

Notes: 1. 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.

2. Device mounted on FR-4 PCB with 2oz. Copper and test pulse width $\leq 10\text{s}$.

3. Repetitive rating, pulse width limited by junction temperature.

■ **THERMAL CHARACTERISTICS** ($T_A=25^{\circ}\text{C}$, unless otherwise specified)

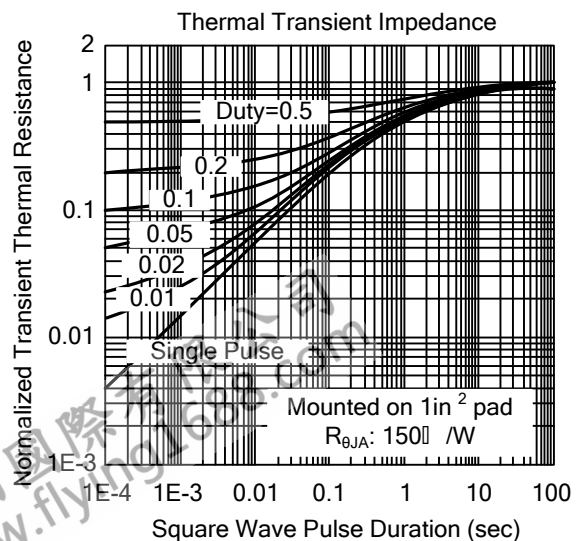
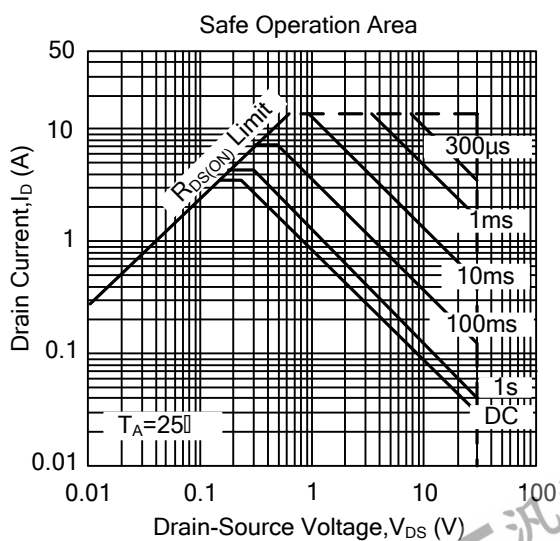
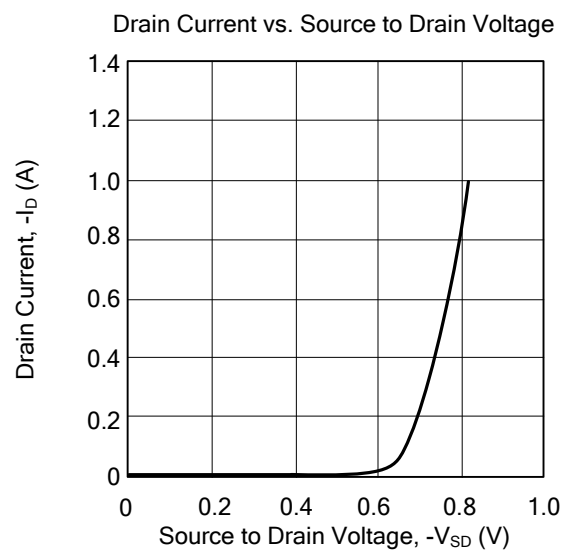
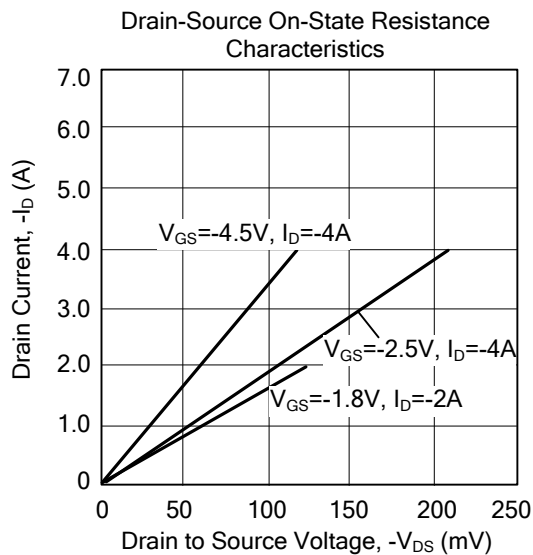
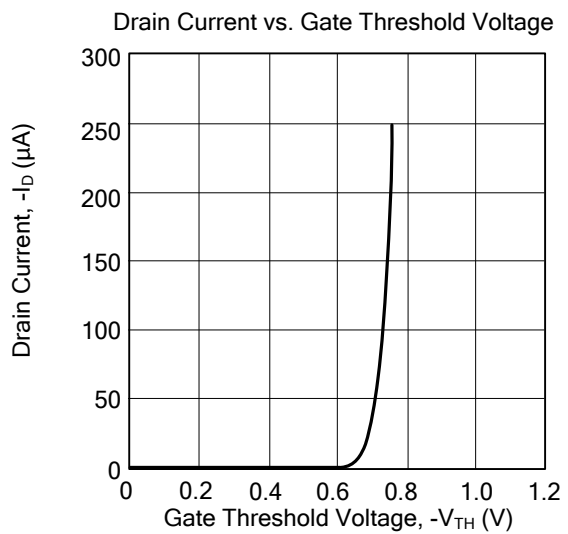
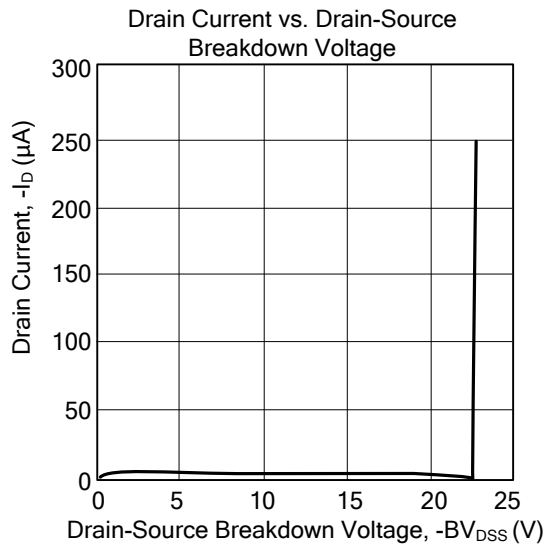
PARAMETER	SYMBOL	RATINGS	UNIT
Junction to Ambient	θ_{JA}	153.5	$^{\circ}\text{C/W}$

■ **ELECTRICAL CHARACTERISTICS** ($T_A=25^{\circ}\text{C}$, unless otherwise specified)

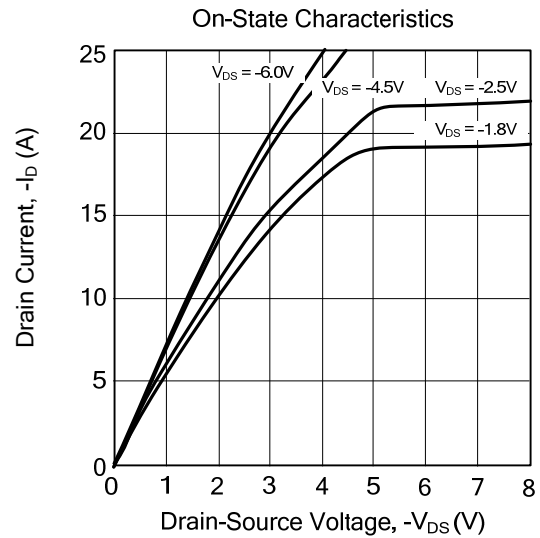
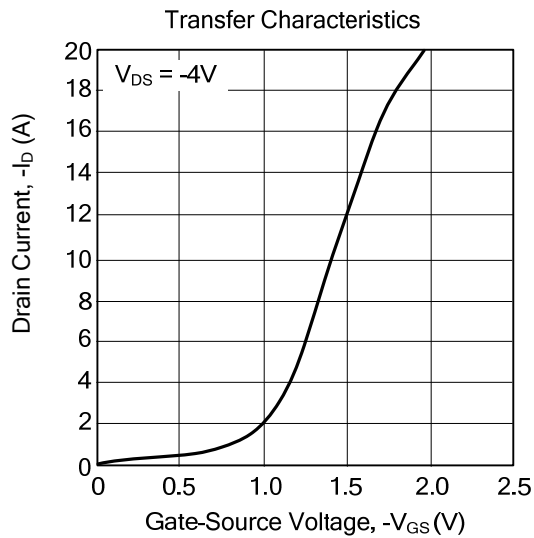
PARAMETER		SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
OFF CHARACTERISTICS (Note 1)							
Drain-Source Breakdown Voltage		BV _{DSS}	I _D =-250μA, V _{GS} =0V	-20			V
Drain-Source Leakage Current		I _{DSS}	V _{DS} =-20V, V _{GS} =0V			-1.0	μA
Gate-Source Leakage Current	Forward	I _{GSS}	V _{GS} =+8V, V _{DS} =0V			+10	μA
	Reverse		V _{GS} =-8V, V _{DS} =0V			-10	μA
ON CHARACTERISTICS (Note 1)							
Gate Threshold Voltage		V _{GS(TH)}	V _{DS} =V _{GS} , I _D =-250μA	-0.4	-0.7	-1.0	V
Static Drain-Source On-State Resistance		R _{DS(ON)}	V _{GS} =-4.5V, I _D =-4.0A		30	42	mΩ
			V _{GS} =-2.5V, I _D =-4.0A		50	65	mΩ
			V _{GS} =-1.8V, I _D =-2.0A		61	82	mΩ
Forward Transfer Admittance		Y _{FS}	V _{DS} =-5.0V, I _D =-4.0A		14		S
Diode Forward Voltage		V _{SD}	V _{GS} =0V, I _S =-1.0A		-0.7	-1.0	V
DYNAMIC PARAMETERS							
Input Capacitance		C _{ISS}	V _{GS} =0V, V _{DS} =-10V, f=1.0MHz		1610		pF
Output Capacitance		C _{OSS}			157		pF
Reverse Transfer Capacitance		C _{RSS}			145		pF
SWITCHING PARAMETERS							
Total Gate Charge		Q _G	V _{GS} =-4.5V, V _{DS} =-10V, I _D =-4.0A		15.4		nC
Gate to Source Charge		Q _{GS}			2.5		nC
Gate to Drain Charge		Q _{GD}			3.3		nC
Gate Resistance		R _G	V _{DS} =0V, V _{GS} =0V, f=1MHz		9.45		Ω
Turn-ON Delay Time		t _{D(ON)}	V _{DS} =-10V, V _{GS} =-4.5V, I _D =-1.0A, R _G =6.0Ω, R _L =10Ω		16.8		ns
Rise Time		t _R			12.4		ns
Turn-OFF Delay Time		t _{D(OFF)}			94.1		ns
Fall-Time		t _F			42.4		ns

Note: Short duration pulse test used to minimize self-heating effect.

TYPICAL CHARACTERISTICS



TYPICAL CHARACTERISTICS (Cont.)



UTC assumes no responsibility for equipment failures that result from using products at values that exceed, even momentarily, rated values (such as maximum ratings, operating condition ranges, or other parameters) listed in products specifications of any and all UTC products described or contained herein. UTC products are not designed for use in life support appliances, devices or systems where malfunction of these products can be reasonably expected to result in personal injury. Reproduction in whole or in part is prohibited without the prior written consent of the copyright owner. UTC reserves the right to make changes to information published in this document, including without limitation specifications and product descriptions, at any time and without notice. This document supersedes and replaces all information supplied prior to the publication hereof.