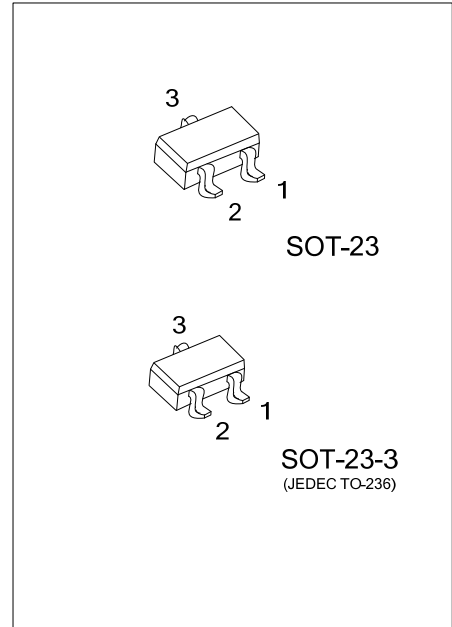
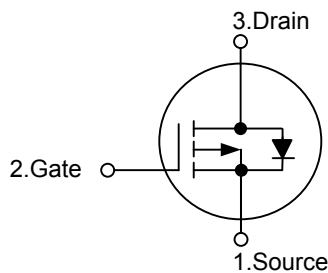


**UTR4502****Power MOSFET****-1.95 Amps, -30 Volts
P-CHANNEL POWER MOSFET****DESCRIPTION**

The **UTR4502** uses UTC advanced technology to provide excellent $R_{DS(ON)}$, low gate charge and operation with low gate voltages. This device is suitable for use as a load switch or in PWM applications.

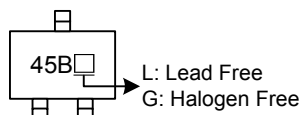
FEATURES

- * $R_{DS(ON)} < 155m\Omega$ @ $V_{GS} = -10V$
- * $R_{DS(ON)} < 240m\Omega$ @ $V_{GS} = -4.5V$
- * Low capacitance
- * Optimized gate charge
- * Fast switching capability
- * Avalanche energy specified

SYMBOL**ORDERING INFORMATION**

Ordering Number		Package	Pin Assignment			Packing
Lead Free	Halogen Free		1	2	3	
UTR4502L-AE2-R	UTR4502G-AE2-R	SOT-23-3	S	G	D	Tape Reel
UTR4502L-AE3-R	UTR4502G-AE3-R	SOT-23	S	G	D	Tape Reel

UTR4502L-AE3-R 		(1) R: Tape Reel (2) AE2: SOT-23-3, AE3: SOT-23 (3) G: Halogen Free, L: Lead Free
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MARKING

■ ABSOLUTE MAXIMUM RATINGS (T_A=25°C, unless otherwise specified)

PARAMETER	SYMBOL	RATINGS	UNIT
Drain-Source Voltage	V _{DSS}	-30	V
Gate-Source Voltage	V _{GSS}	±20	V
Continuous Drain Current (Note 3)	I _D	-1.13	A
Pulsed Drain Current (Note 1, 2)	I _{DM}	-6.8	A
Total Power Dissipation	P _D	0.4	W
Junction Temperature	T _J	+150	°C
Storage Temperature	T _{STG}	-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.

■ THERMAL DATA

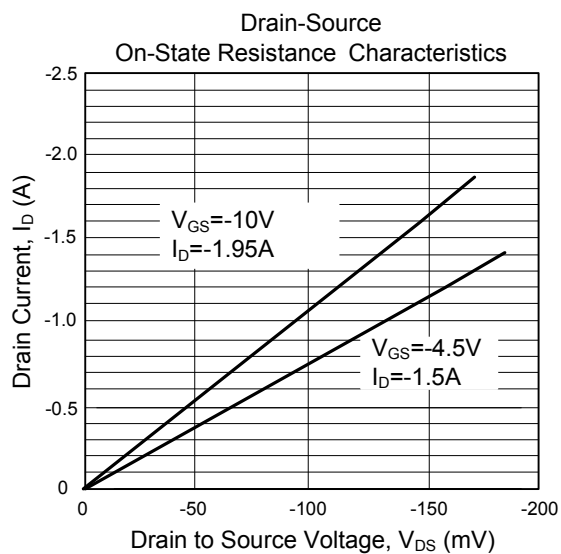
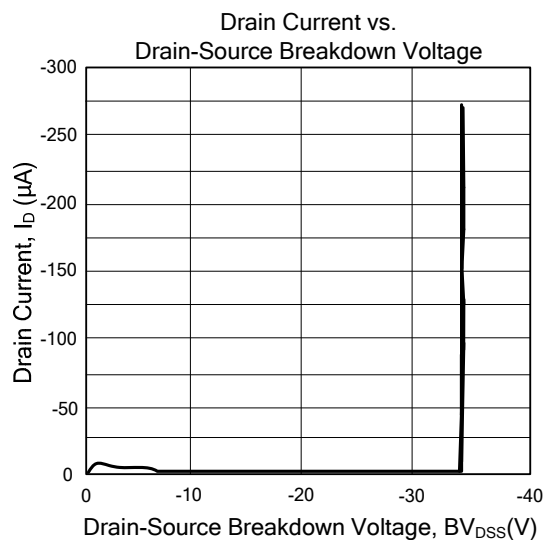
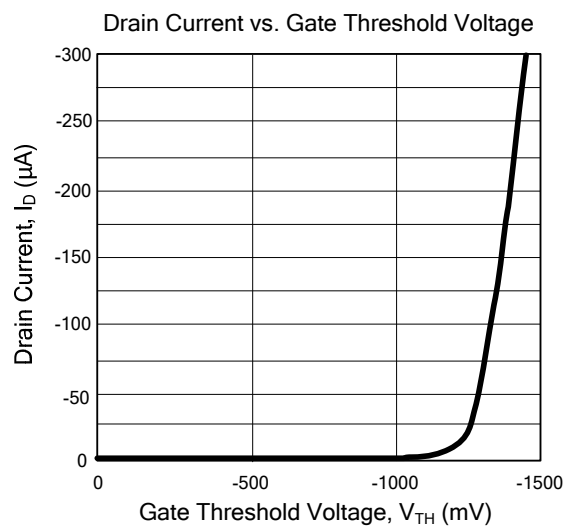
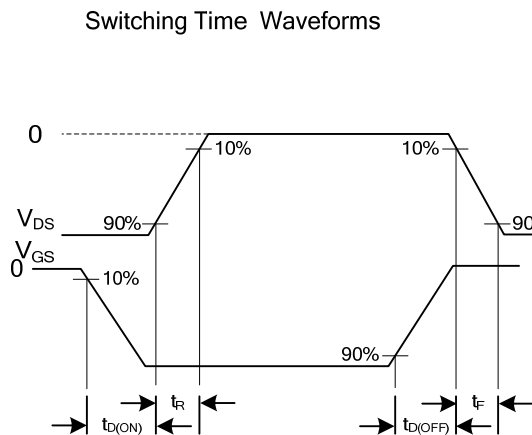
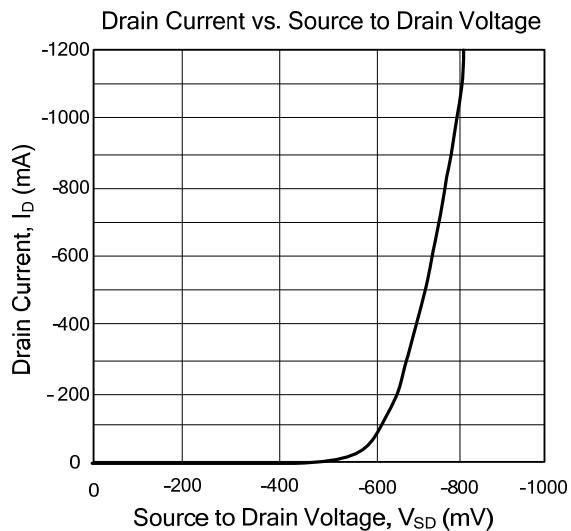
PARAMETER	SYMBOL	MIN	TYP	MAX	UNIT
Junction-to-Ambient	θ _{JA}			300	°C/W

■ ELECTRICAL CHARACTERISTICS (T_J =25°C, unless otherwise specified)

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
OFF CHARACTERISTICS						
Drain-Source Breakdown Voltage	BV _{DSS}	V _{GS} =0 V, I _D =-250μA	-30			V
Drain-Source Leakage Current	I _{DSS}	V _{DS} =-30V, V _{GS} =0V			-1	μA
Gate-Source Leakage Current	I _{GSS}	V _{DS} =0V, V _{GS} =±20V			±100	nA
ON CHARACTERISTICS (Note 3)						
Gate Threshold Voltage	V _{GS(TH)}	V _{DS} =V _{GS} , I _D =-250μA	-1.0		-3.0	V
Static Drain-Source On-Resistance (Note 2)	R _{DS(ON)}	V _{GS} =-10V, I _D =-1.95A		155	200	mΩ
		V _{GS} =-4.5V, I _D =-1.5A		240	350	
DYNAMIC PARAMETERS						
Input Capacitance	C _{ISS}	V _{DS} =-15V, V _{GS} =0V, f=1MHz		200		pF
Output Capacitance	C _{OSS}			80		pF
Reverse Transfer Capacitance	C _{RSS}			50		pF
SWITCHING PARAMETERS (Note 4)						
Turn-ON Delay Time	t _{D(ON)}	V _{GS} =-10V, V _{DD} =-15V, I _D =-1.95A, R _{GEN} =6Ω		5.2	10	ns
Turn-ON Rise Time	t _R			12	24	ns
Turn-OFF Delay Time	t _{D(OFF)}			19	96	ns
Turn-OFF Fall-Time	t _F			17.5	48	ns
Total Gate Charge	Q _{G(TOT)}	V _{DS} =-15V, V _{GS} =-10V, I _D =-1.95A		6	10	nC
Threshold Gate Charge	Q _{G(TH)}			0.3		nC
Gate Source Charge	Q _{GS}			1		nC
Gate Drain Charge	Q _{GD}			1.7		nC
SOURCE- DRAIN DIODE RATINGS AND CHARACTERISTICS (Note 3)						
Drain-Source Diode Forward Voltage(Note2)	V _{SD}	I _S =-1.25A, V _{GS} =0V		-0.8	-1.2	V
Reverse Recovery Time	t _{RR}	V _{GS} =0V, dI _{SD} /d _t =100A/s I _S =-1.25A		23		ns

Note: 1. Pulse width limited by T_{J(MAX)}
2. Pulse width ≤300us, duty cycle ≤2%.

TYPICAL CHARACTERISTICS



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