



UT4800

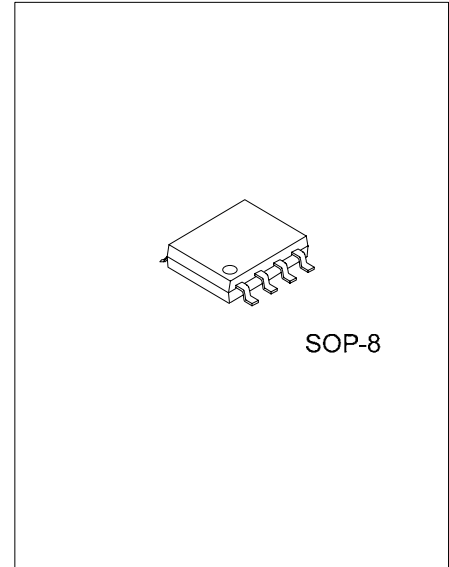
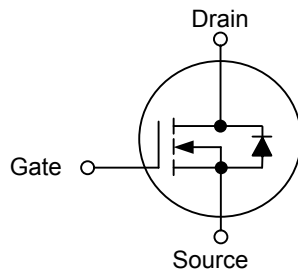
Power MOSFET

N-CHANNEL ENHANCEMENT MODE

DESCRIPTION

The **UT4800** uses advanced trench 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.

SYMBOL



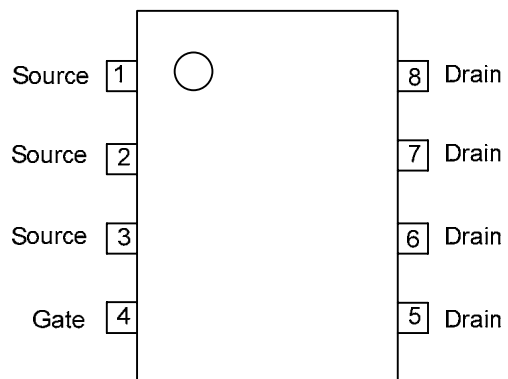
*Pb-free plating product number: UT4800L

ORDERING INFORMATION

Ordering Number		Package	Packing
Normal	Lead Free Plating		
UT4800-S08-R	UT4800L-S08-R	SOP-8	Tape Reel
UT4800-S08-T	UT4800L-S08-T	SOP-8	Tube

UT4800L-S08-R (1)Packing Type (2)Package Type (3)Lead Plating		(1) R: Tape Reel, T: Tube (2) S08: SOP-8 (3) L: Lead Free Plating, Blank: Pb/Sn
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■ PIN CONFIGURATION



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

PARAMETER	SYMBOL	RATINGS	UNIT
Drain-Source Voltage	V_{DSS}	30	V
Gate-Source Voltage	V_{GSS}	± 25	V
Continuous Drain Current (Note 1)	I_D	6.5	A
Pulsed Drain Current (Note 1)	I_{DM}	40	A
Power Dissipation	P_D	1.3	W
Junction Temperature	T_J	+150	$^{\circ}\text{C}$
Storage Temperature	T_{STG}	-55 ~ +150	$^{\circ}\text{C}$

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}		70	95	/W

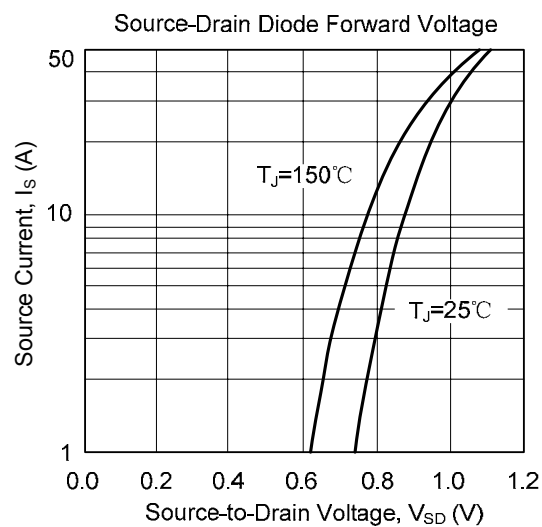
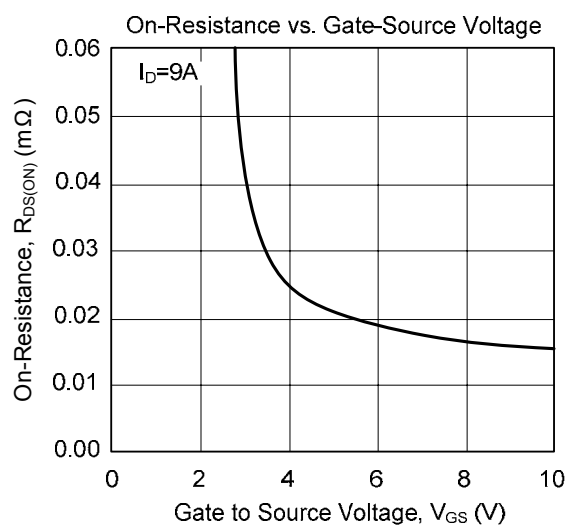
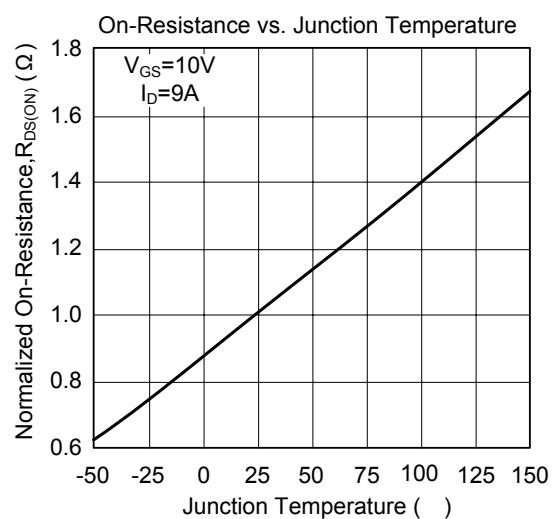
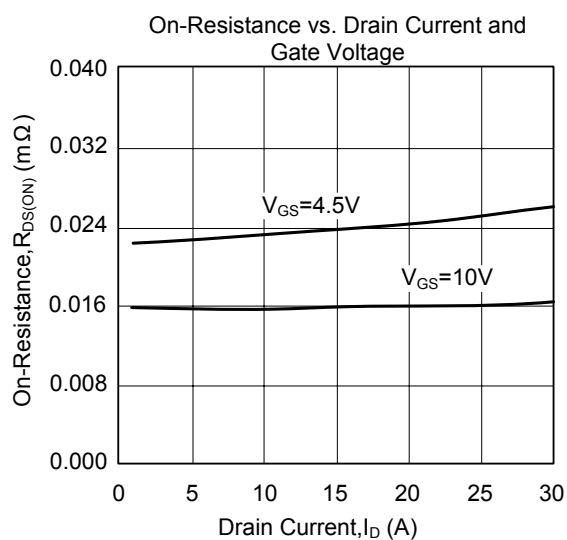
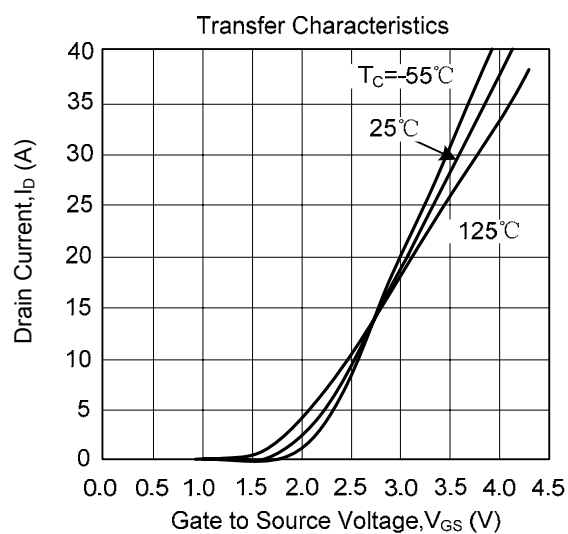
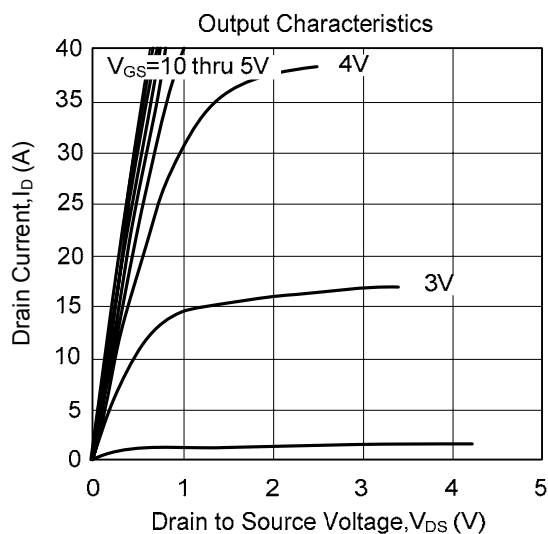
■ ELECTRICAL CHARACTERISTICS ($T_J=25^{\circ}\text{C}$, unless otherwise specified)

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
STATIC PARAMETERS						
Drain-Source Breakdown Voltage	BV _{DSS}	V _{GS} =0 V, I _D =250 μA	30			V
Drain-Source Leakage Current	I _{DSS}	V _{DS} =24 V, V _{GS} =0 V			1	μA
Gate-Source Leakage Current	I _{GSS}	V _{DS} =0 V, V _{GS} =±20V			±100	nA
ON CHARACTERISTICS						
Gate-Threshold Voltage	V _{GS(TH)}	V _{DS} =V _{GS} , I _D =250 μA	0.8		1.8	V
Static Drain-Source On-Resistance	R _{DS(ON)}	V _{GS} =10 V, I _D =9A		15.5	18.5	mΩ
		V _{GS} =4.5 V, I _D =7A		23	30	mΩ
SWITCHING PARAMETERS						
Turn-ON Delay Time	t _{D(ON)}	V _{GS} =10V, V _{DS} =15V, R _L =15Ω, R _{GEN} =6Ω		7	15	ns
Turn-ON Rise Time	t _R			12	20	ns
Turn-OFF Delay Time	t _{D(OFF)}			32	50	ns
Turn-OFF Fall-Time	t _F			14	25	ns
Total Gate Charge	Q _G	V _{DS} =15V, V _{GS} =5.0V, I _D =9A		8.7	13	nC
Gate-Source Charge	Q _{GS}			1.5		nC
Gate-Drain Charge	Q _{GD}			3.5		nC
DRAIN-SOURCE DIODE CHARACTERISTICS AND MAXIMUM RATINGS						
Diode Forward Voltage	V _{SD}	V _{GS} =0V, I _S =2.3A		0.75	1.2	V
Maximum Body-Diode Continuous Current	I _S				2.3	A
Body Diode Reverse Recovery Time	t _{RR}	I _F =2.3A, dI/dt=100A/μs		30	60	ns

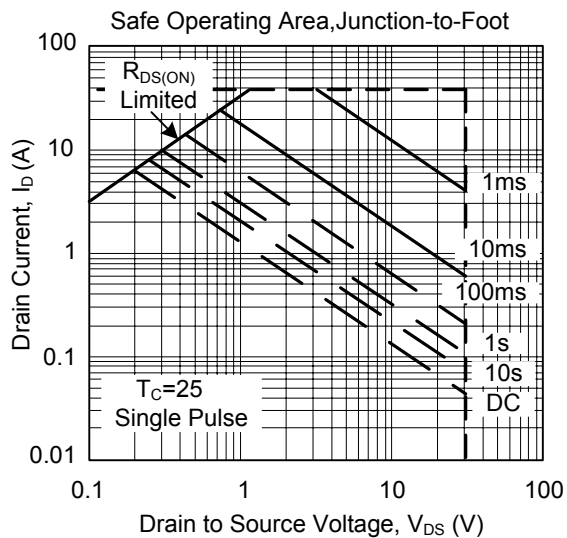
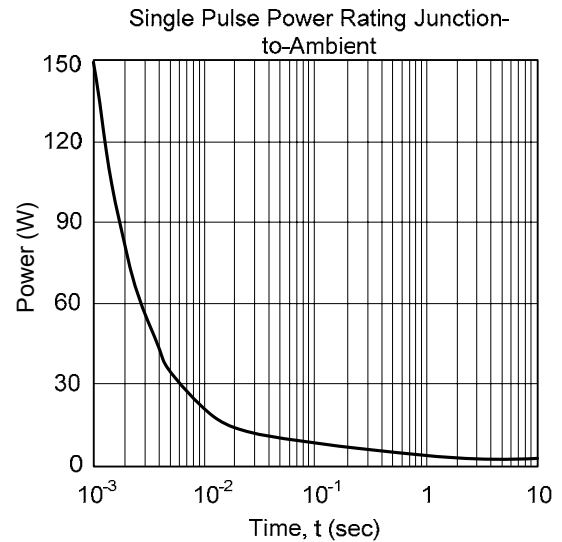
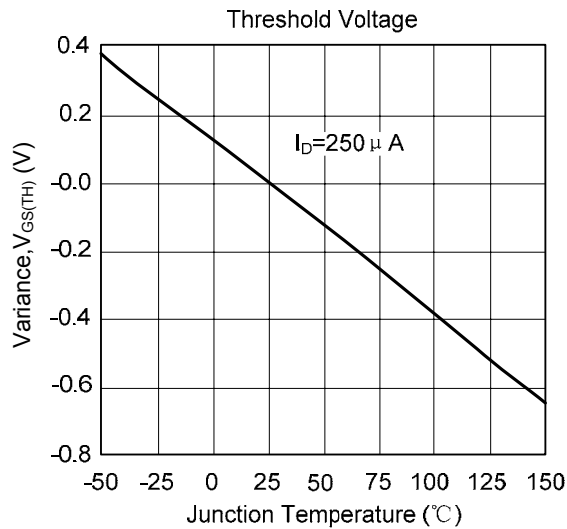
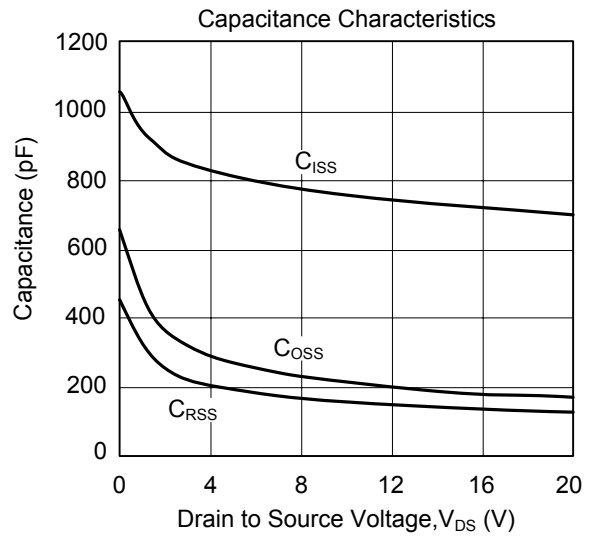
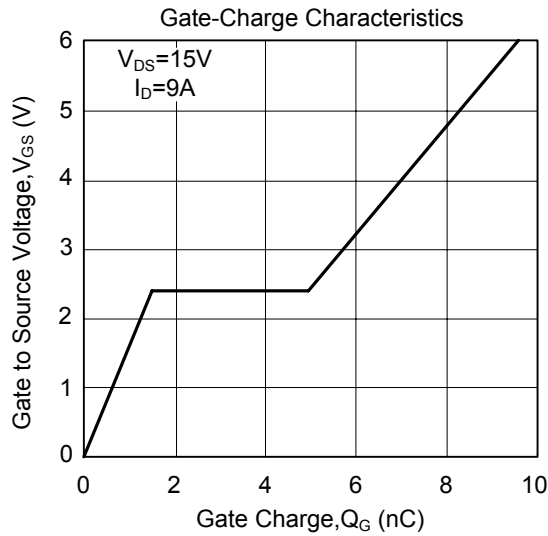
Note: 1. Repetitive Rating : Pulse width limited by T_J

2. Pulse Test: Pulse width $\leq 300\mu\text{s}$, Duty cycle 2% max.

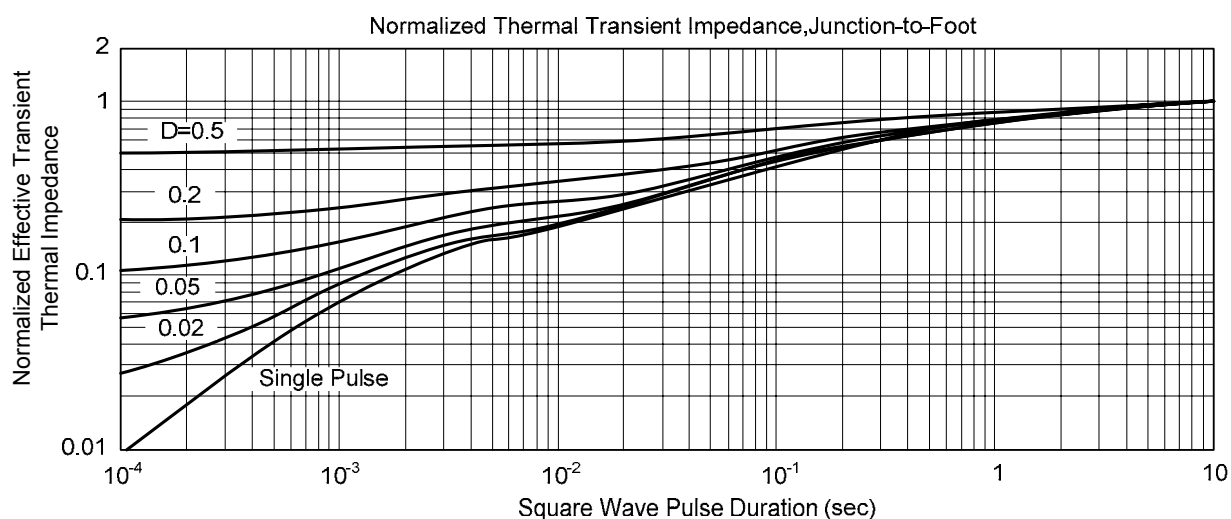
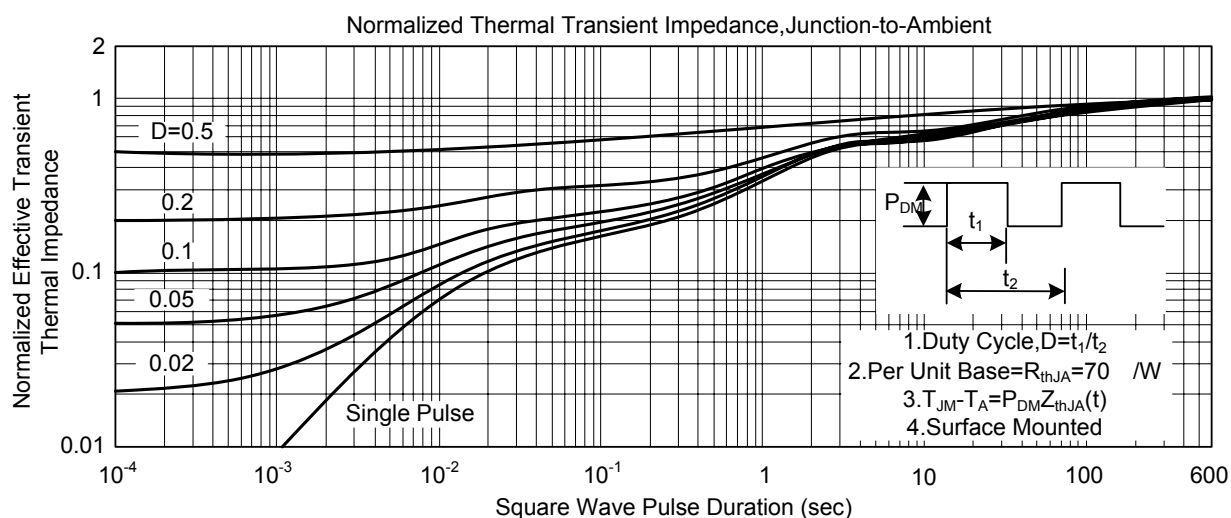
TYPICAL CHARACTERISTICS



■ TYPICAL CHARACTERISTICS(Cont.)



TYPICAL CHARACTERISTICS(Cont.)



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