



UT7317

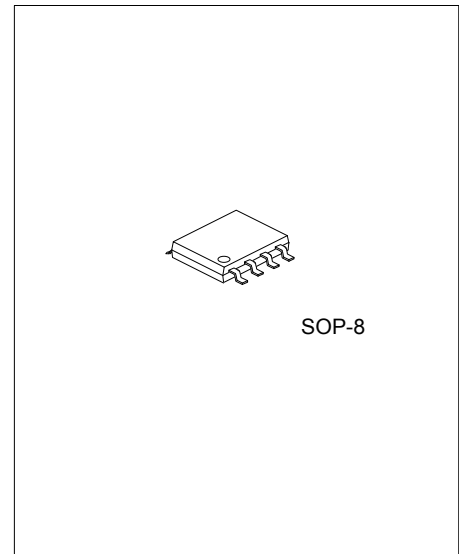
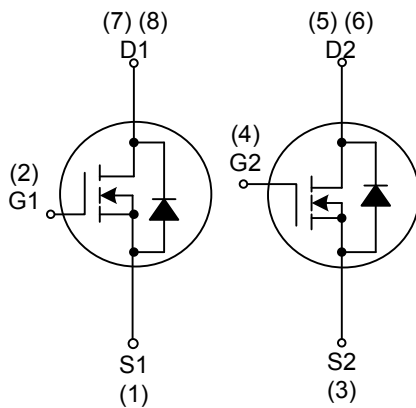
Power MOSFET

DUAL N-CHANNEL ENHANCEMENT MODE

■ FEATURES

- * 30V/6A
- * Low $R_{DS(ON)}$
- * Reliable and Rugged

■ SYMBOL



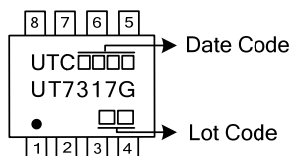
■ ORDERING INFORMATION

Ordering Number	Package	Pin Assignment								Packing
		1	2	3	4	5	6	7	8	
UT7317G-S08-R	SOP-8	S	G	S	G	D	D	D	D	Tape Reel

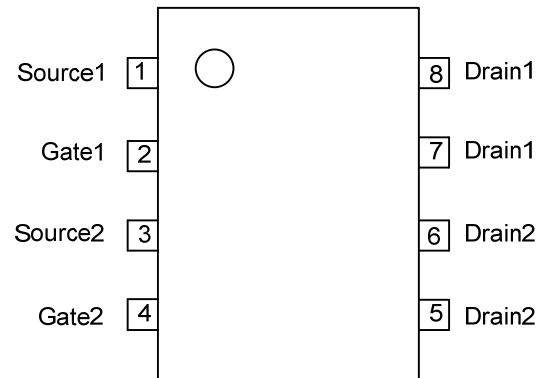
Note: Pin Assignment: G: Gate D: Drain S: Source

UT7317G-S08-R	(1) Packing Type	(1) R: Tape Reel
	(2) Package Type	(2) S08: SOP-8
	(3) Green Package	(3) G: Halogen Free and Lead Free

■ MARKING



■ PIN CONFIGURATION



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

PARAMETER	SYMBOL	RATINGS	UNIT
Drain-Source Voltage	V_{DS}	30	V
Gate-Source Voltage	V_{GS}	± 20	
Continuous Drain Current (Note 3)	I_D	6	A
Pulsed Drain Current (Note 3)	I_{DM}	24	
Power Dissipation	P_D	2.5	W
Maximum Junction Temperature	T_J	150	$^\circ\text{C}$
Storage Temperature Range	T_{STG}	$-55 \sim +150$	$^\circ\text{C}$

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 (Note3)	θ_{JA}			50	$^\circ\text{C/W}$

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

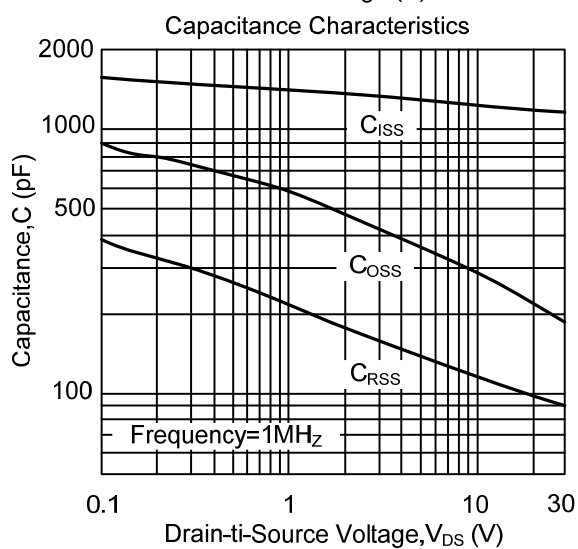
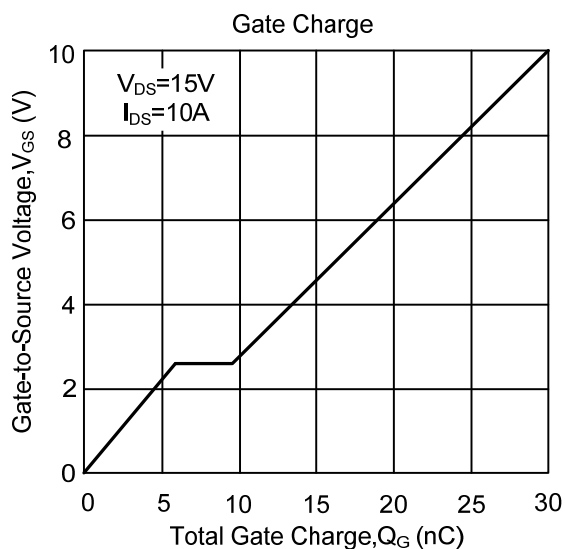
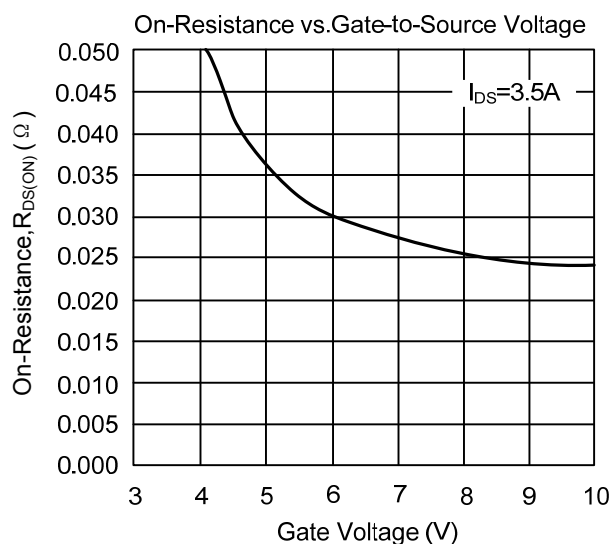
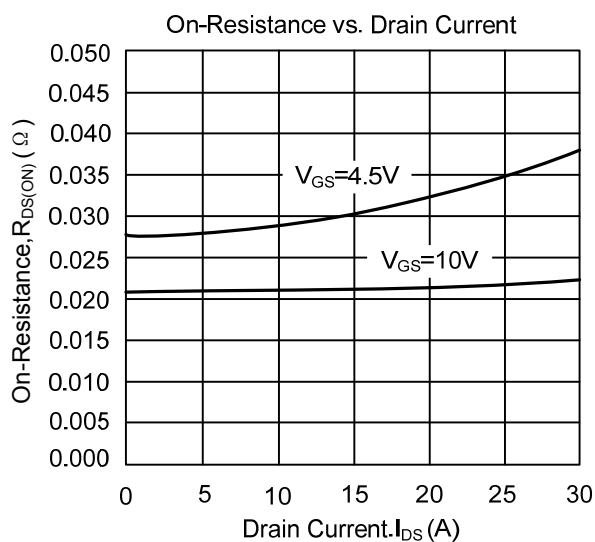
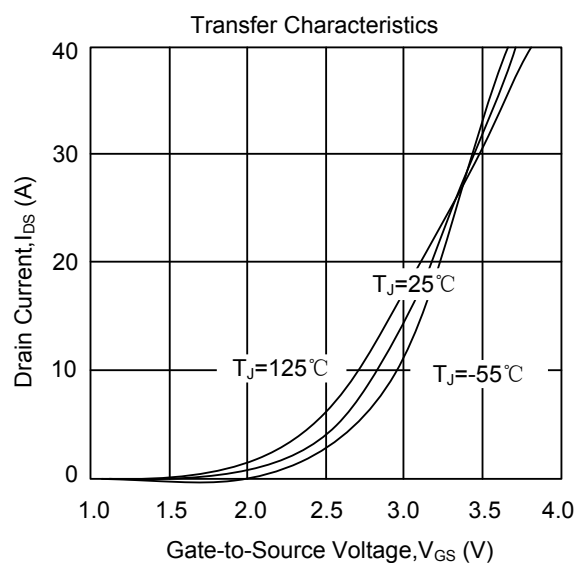
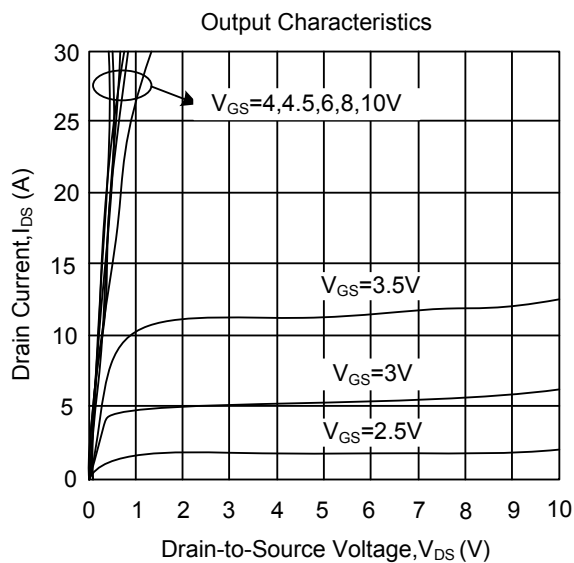
PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
OFF CHARACTERISTICS						
Drain-Source Breakdown Voltage	BV _{DSS}	V _{GS} =0V, I _D =250uA	30			V
Drain-Source Leakage Current	I _{DSS}	V _{DS} =24V, V _{GS} =0V			1	uA
Gate-Source Leakage Current	I _{GSS}	V _{DS} =0V, V _{GS} =±20V			±100	nA
ON CHARACTERISTICS						
Gate Threshold Voltage	V _{GS(TH)}	V _{DS} =V _{GS} , I _D =250uA	1	1.5	2	V
Drain-Source On-State Resistance (Note2)	R _{DS(ON)}	V _{GS} =10V, I _D =3.5A		21	28	mΩ
		V _{GS} =4.5V, I _D =2A		27	42	mΩ
DYNAMIC CHARACTERISTICS						
Input Capacitance	C _{ISS}	V _{GS} =0V,V _{DS} =25V,f=1.0MHz		1200		pF
Output Capacitance	C _{OSS}			210		pF
Reverse Transfer Capacitance	C _{RSS}			95		pF
SWITCHING CHARACTERISTICS						
Turn-ON Delay Time (Note2)	t _{D(ON)}	V _{DD} =15V, V _{GS} =10V, I _D =2A, R _G =6Ω		11	22	ns
Turn-ON Rise Time	t _R			17	33	ns
Turn-OFF Delay Time	t _{D(OFF)}			37	68	ns
Turn-OFF Fall Time	t _F			20	38	ns
Total Gate Charge (Note2)	Q _G	V _{DS} =15V, V _{GS} =10V, I _D =10A		30	36	nC
Gate-Source Charge	Q _{GS}			5.8		nC
Gate-Drain Charge	Q _{GD}			3.8		nC
SOURCE- DRAIN DIODE RATINGS AND CHARACTERISTICS						
Drain-Source Diode Forward Voltage(Note2)	V _{SD}	I _S =2A, V _{GS} =0V		0.7	1.3	V

Notes: 1. Pulse width limited by $T_{J(MAX)}$

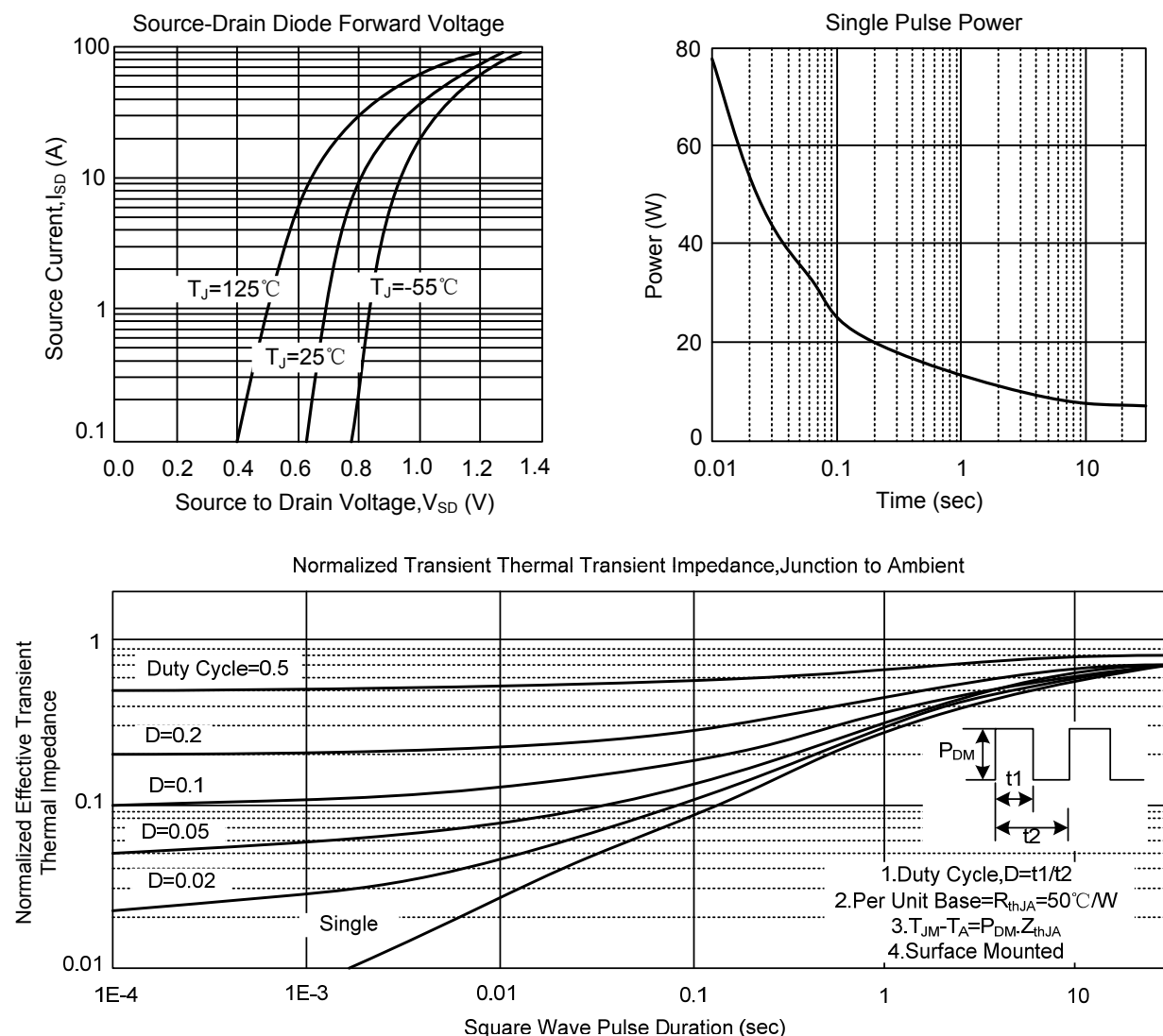
2. Pulse width $\leq 300\mu\text{s}$, duty cycle $\leq 2\%$.

3. Surface Mounted on 1in^2 pad area, $t \leq 10\text{sec}$.

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. The information presented in this document does not form part of any quotation or contract, is believed to be accurate and reliable and may be changed without notice.