



UD9926

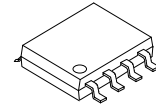
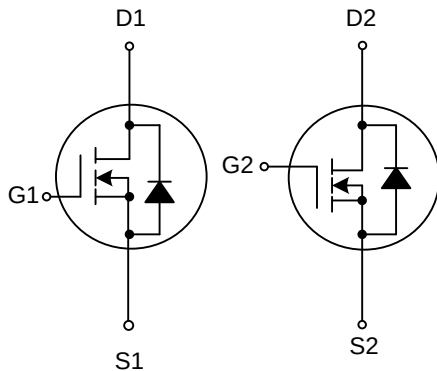
Power MOSFET

DUAL N-CHANNEL ENHANCEMENT MODE

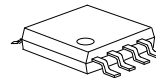
FEATURES

- * 20V/6A
- * Low $R_{DS(ON)}$
- * Reliable and Rugged

SYMBOL



SOP-8



TSSOP-8

ORDERING INFORMATION

Ordering Number		Package	Pin Assignment								Packing
Lead Free	Halogen Free		1	2	3	4	5	6	7	8	
UD9926L-S08-R	UD9926G-S08-R	SOP-8	S1	G1	S2	G2	D2	D2	D1	D1	Tape Reel
UD9926L-P08-R	UD9926G-P08-R	TSSOP-8	D1	S1	S1	G1	G2	S2	S2	D2	Tape Reel

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

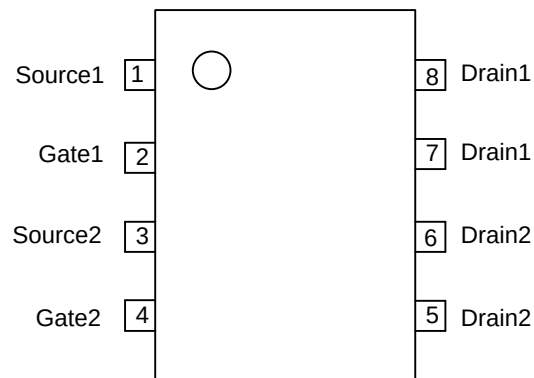
UD9926G-S08-R (1) Packing Type (2) Package Type (3) Green Package		(1) R: Tape Reel (2) S08: SOP-8, P08: TSSOP-8 (3) G: Halogen Free and Lead Free, L: Lead Free
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MARKING

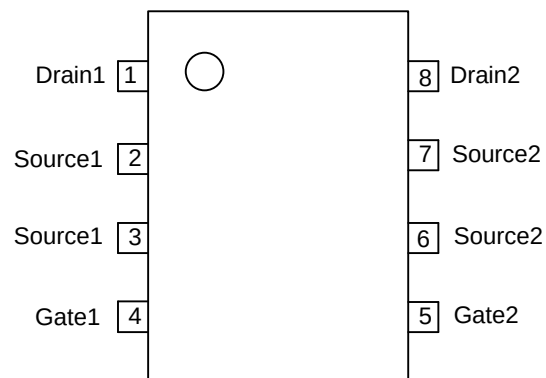
SOP-8	TSSOP-8
8 7 6 5 UTC □□□□ UD9926□ □□ 1 2 3 4 → Date Code → L: Lead Free → G: Halogen Free → Lot Code	1 2 3 4 UTC □□□□ UD9926□ □□ 5 6 7 8 → Date Code → L: Lead Free → G: Halogen Free → Lot Code

■ PIN CONFIGURATION

For SOP-8 Package



For TSSOP-8 Package



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

PARAMETER		SYMBOL	RATINGS	UNIT
Drain Source Voltage		V _{DSS}	20	V
Gate Source Voltage		V _{GSS}	±10	V
Drain Current	Continuous(Note 2)	I _D	6	A
	Pulsed (Note 3)	I _{DM}	20	A
Power Dissipation	SOP-8	P _D	1.6	W
	TSSOP-8		1.0	W
Junction Temperature		T _J	+150	°C
Storage Temperature		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. Repetitive Rating: Pulse width limited by maximum junction temperature.

3. Surface Mounted on 1in² pad area, t≤10sec.

■ THERMAL DATA

PARAMETER	SYMBOL	MIN	TYP	MAX	UNIT
Junction to Ambient	θ _{JA}			80	°C /W

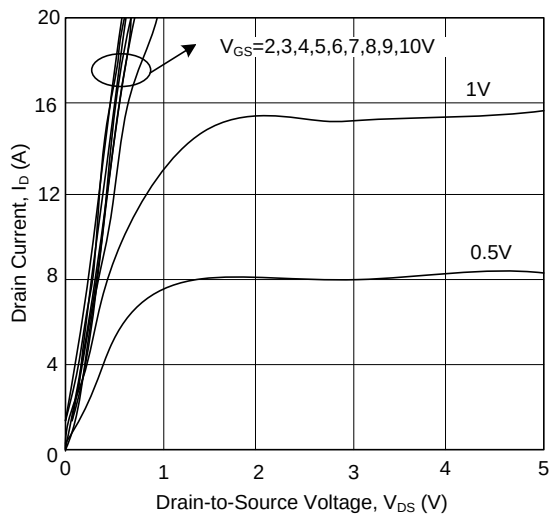
■ ELECTRICAL CHARACTERISTICS (T_A=25°C, unless otherwise specified)

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
OFF CHARACTERISTICS						
Drain-Source Breakdown Voltage	BV _{DSS}	V _{GS} =0V, I _D =250uA	20			V
Drain-Source Leakage Current	I _{DSS}	V _{DS} =16V, V _{GS} =0V			1	uA
Gate-Source Leakage Current	I _{GSS}	V _{DS} =0V, V _{GS} =±8V			±100	nA
ON CHARACTERISTICS						
Gate Threshold Voltage	V _{GS(TH)}	V _{DS} =V _{GS} , I _D =250uA	0.5	0.7	1.5	V
Drain-Source On-State Resistance (Note2)	R _{DS(ON)}	V _{GS} =4.5V, I _D =6A		28	32	mΩ
		V _{GS} =2.5V, I _D =5.2A		38	45	mΩ
DYNAMIC CHARACTERISTICS						
Input Capacitance	C _{ISS}	V _{GS} =0V, V _{DS} =15V, f=1.0MHz		520		pF
Output Capacitance	C _{OSS}			110		pF
Reverse Transfer Capacitance	C _{RSS}			70		pF
SWITCHING CHARACTERISTICS						
Total Gate Charge (Note)	Q _G	V _{DS} =10V, V _{GS} =-4.5V, I _D =6A		10		nC
Gate-Source Charge	Q _{GS}			3.6		nC
Gate-Drain Charge	Q _{GD}			2		nC
Turn-ON Delay Time (Note)	t _{D(ON)}	V _{DD} =10V, V _{GS} =4.5V, I _D =1A, R _G =0.2Ω		17		ns
Turn-ON Rise Time	t _R			15		ns
Turn-OFF Delay Time	t _{D(OFF)}			45		ns
Turn-OFF Fall Time	t _F			25		ns
SOURCE- DRAIN DIODE RATINGS AND CHARACTERISTICS						
Maximum Continuous Drain-Source Diode Forward Current	I _S				2.5	A
Drain-Source Diode Forward Voltage(Note2)	V _{SD}	I _S =1.7A, V _{GS} =0V	0.6		1.3	V

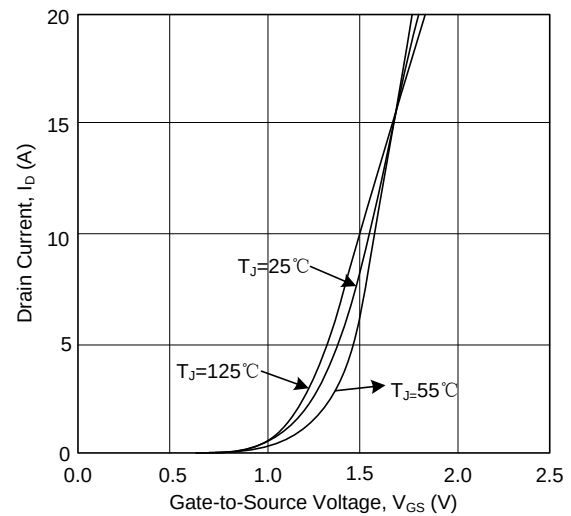
Note: Pulse width ≤300us, duty cycle ≤2%.

■ TYPICAL CHARACTERISTICS

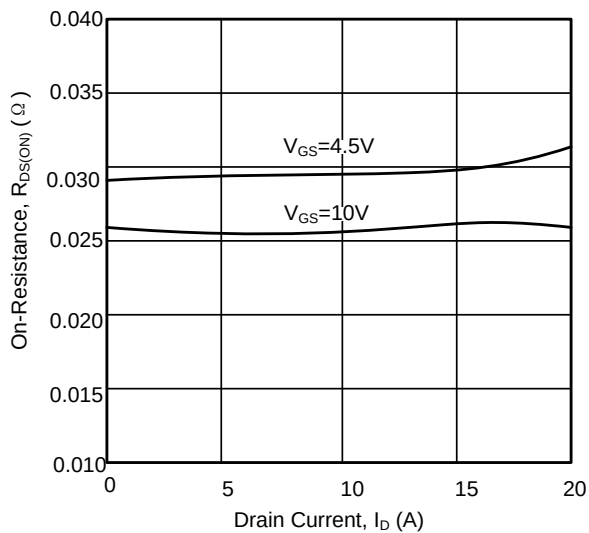
Output Characteristics



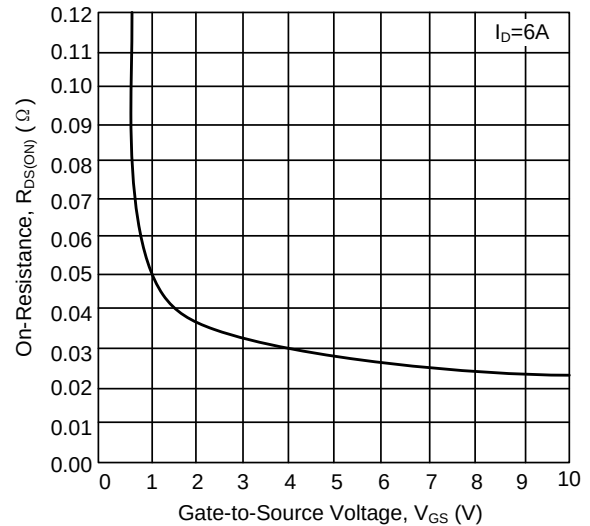
Transfer Characteristics



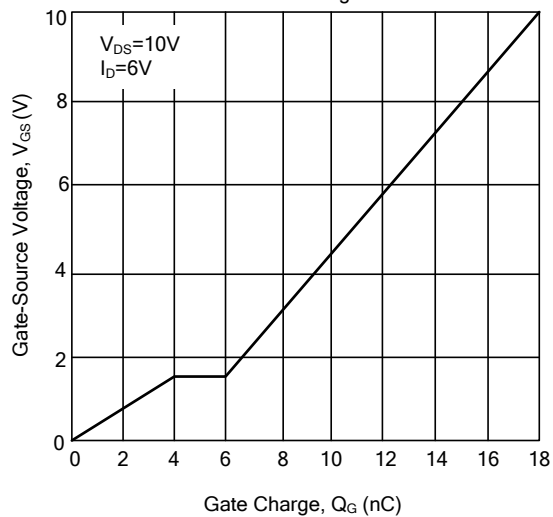
On-Resistance vs. Drain Current



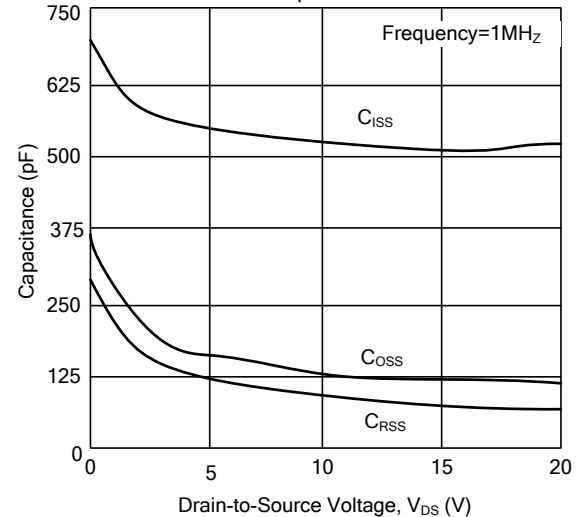
On-Resistance vs. Gate-to-Source Voltage



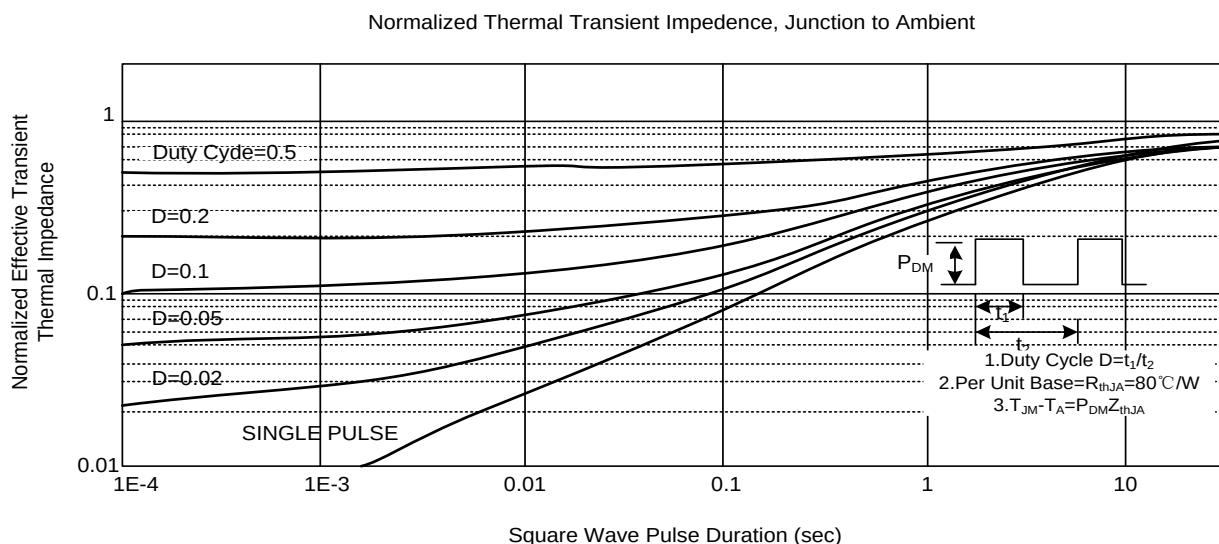
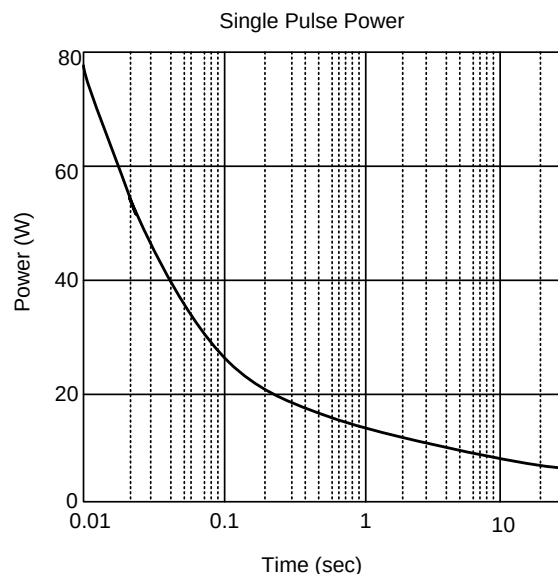
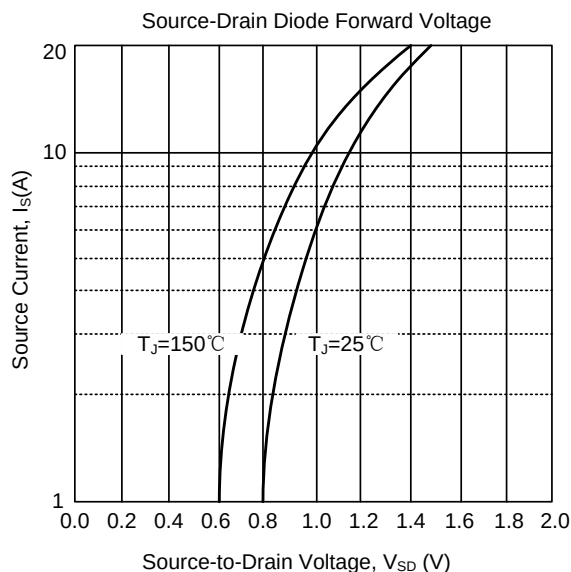
Gate Charge



Capacitance



TYPICAL CHARACTERISTICS (Cont.)



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