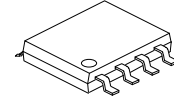
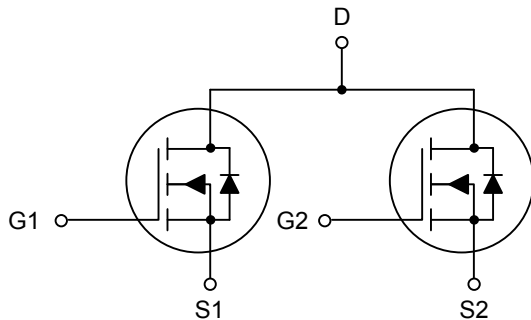


**UT8205A****Power MOSFET****N-CHANNEL ENHANCEMENT
MODE****DESCRIPTION**

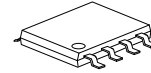
The **UT8205A** uses advanced technology to provide fast switching, low on-resistance and cost-effectiveness. This device is suitable for all commercial-industrial surface mount applications.

FEATURES

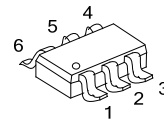
- * $R_{DS(ON)} \leq 28m\Omega$ @ $V_{GS}=4.5V$, $I_D=6.0A$
- * Fast switching capability
- * Avalanche energy Specified
- * Improved dv/dt capability, high ruggedness

SYMBOL

SOP-8



TSSOP-8



SOT-26

ORDERING INFORMATION

Ordering Number		Package	Pin Assignment								Packing
Lead Free	Halogen Free		1	2	3	4	5	6	7	8	
UT8205AL-AL6-R	UT8205AG-AG6-R	SOT-26	S1	D	S2	G2	D	G1	-	-	Tape Reel
UT8205AL-S08-R	UT8205AG-S08-R	SOP-8	D	S1	S1	G1	G2	S2	S2	D	Tape Reel
UT8205AL-P08-R	UT8205AG-P08-R	TSSOP-8	D	S1	S1	G1	G2	S2	S2	D	Tape Reel

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

UT8205AG-AG6-R		(1) Packing Type	(1) R: Tape Reel
		(2) Package Type	(2) AG6: SOT-26, P08: TSSOP-8, S08: SOP-8
		(3) Green Package	(3) G: Halogen Free and Lead Free, L: Lead Free

MARKING

SOP-8	TSSOP-8	SOT-26

■ ABSOLUTE MAXIMUM RATINGS

PARAMETER		SYMBOL	RATINGS	UNIT
Drain-Source Voltage		V_{DS}	20	V
Gate-Source Voltage		V_{GS}	± 8	V
Drain Current (Note 3)	Continuous	I_D	6	A
	Pulsed	I_{DM}	20	A
Power Dissipation ($T_A=25^\circ\text{C}$) (Note 2)	SOT-26	P_D	1.14	W
	SOP-8		1.6	W
	TSSOP-8		1.5	W
Junction Temperature		T_J	+150	$^\circ\text{C}$
Storage Temperature		T_{STG}	-55 ~ +150	$^\circ\text{C}$

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

■ THERMAL DATA (Note)

PARAMETER		SYMBOL	RATINGS	UNIT
Junction to Ambient	SOT-26	θ_{JA}	110	$^\circ\text{C/W}$
	SOP-8		78	$^\circ\text{C/W}$
	TSSOP-8		83	$^\circ\text{C/W}$

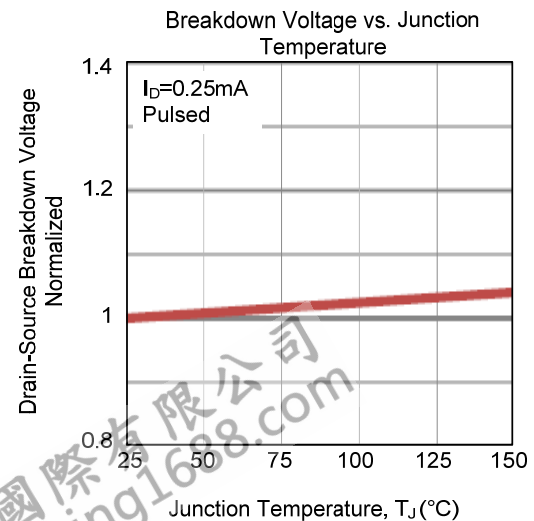
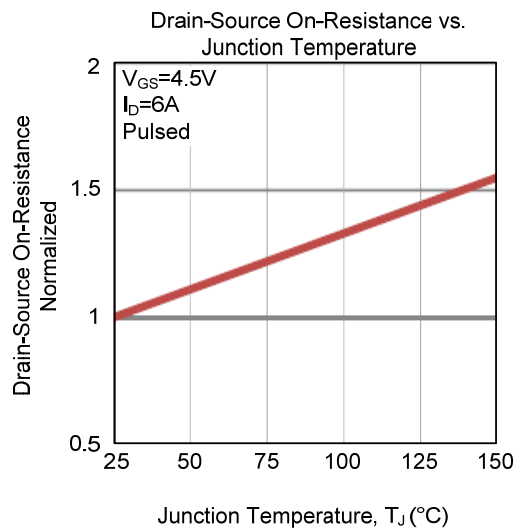
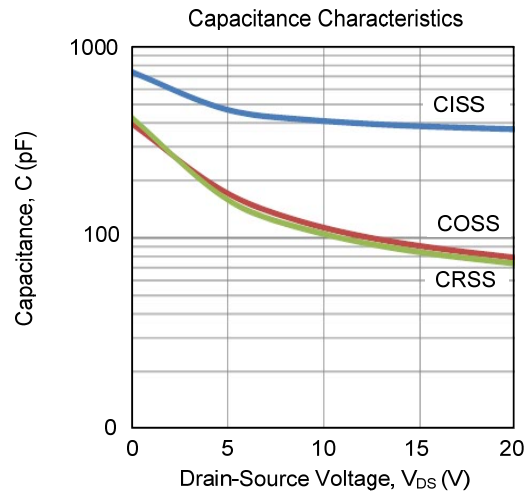
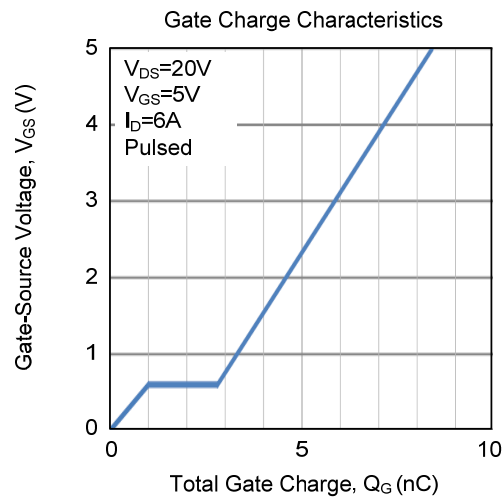
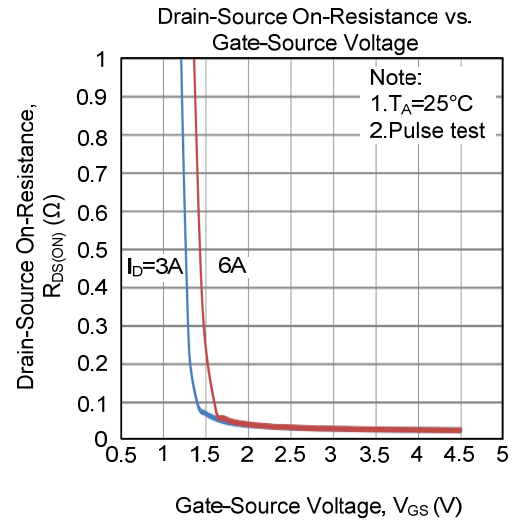
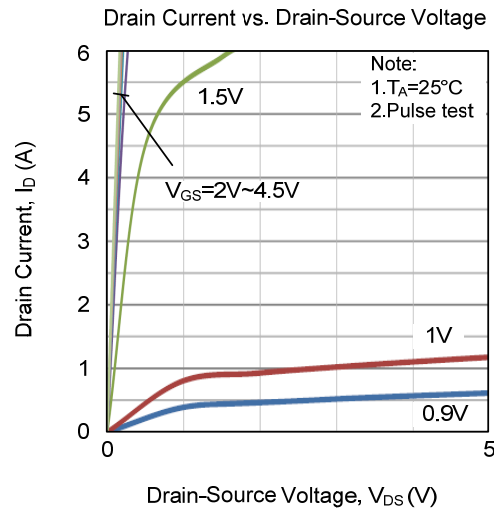
Note: Device mounted on FR-4 substrate PC board, 2oz copper, with 1inch square copper plate.

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

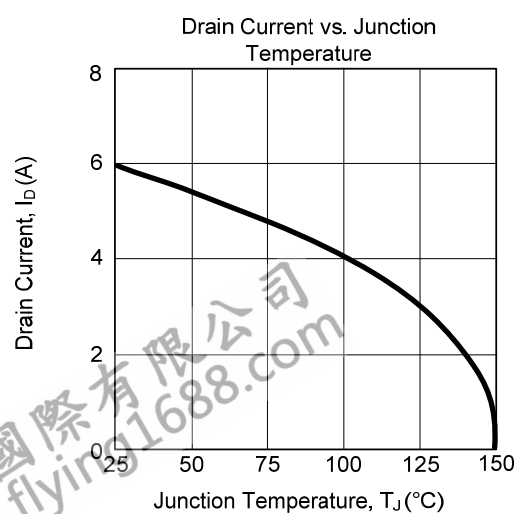
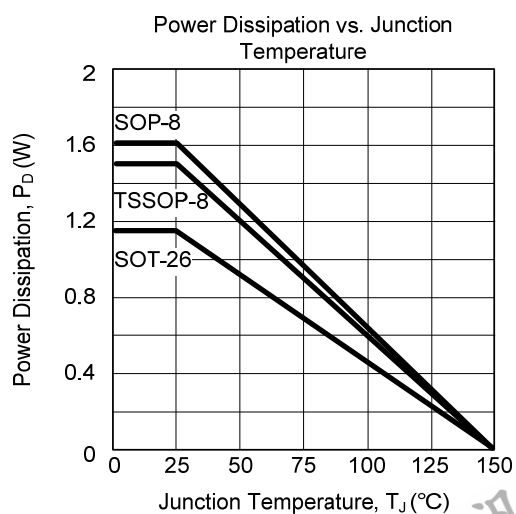
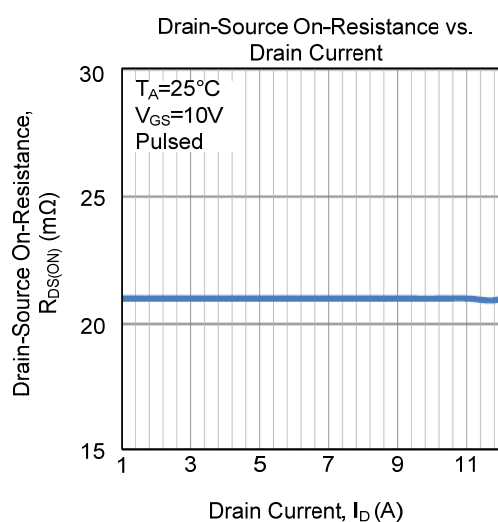
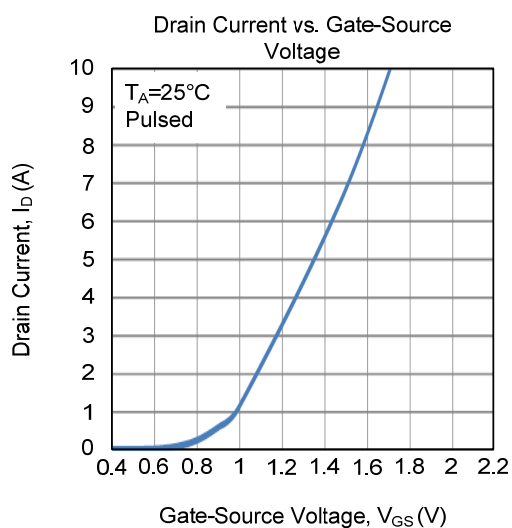
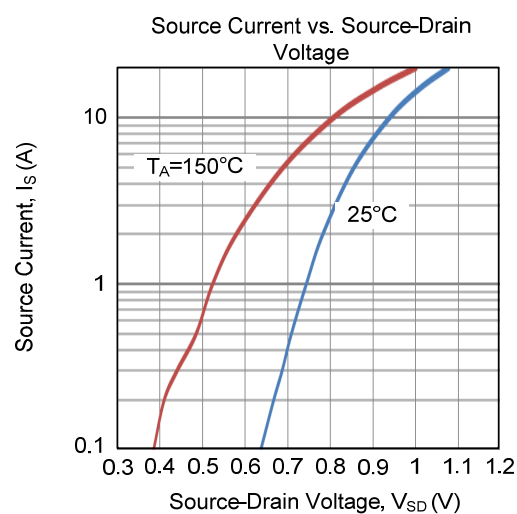
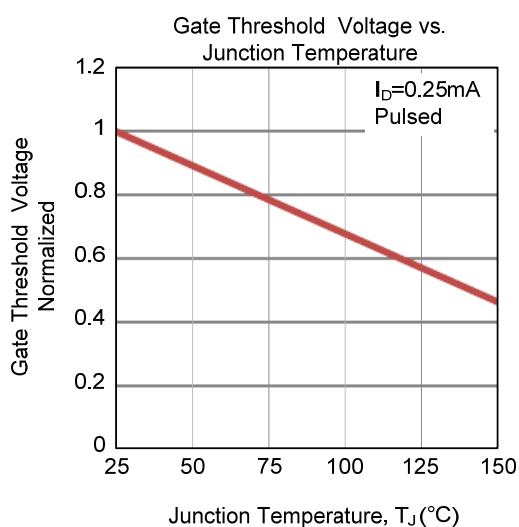
PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
OFF CHARACTERISTICS						
Drain-Source Breakdown Voltage	BV _{DSS}	V _{GS} =0V, I _D =250μA	20			V
Breakdown Voltage Temperature Coefficient	$\frac{\Delta BV_{DSS}}{\Delta T_J}$	I _D =1mA, Reference to 25°C		0.03		V/°C
Drain-Source Leakage Current	I _{DSS}	V _{DS} =20V, V _{GS} =0V,			1	μA
Gate-Source Leakage Current	I _{GSS}	V _{GS} =±8V			±100	nA
ON CHARACTERISTICS						
Gate Threshold Voltage	V _{GS(TH)}	V _{DS} =V _{GS} , I _D =250μA	0.5		1.5	V
Drain-Source On-State Resistance (Note)	R _{DS(ON)}	V _{GS} =4.5V, I _D =6.0A			28	mΩ
		V _{GS} =2.5V, I _D =5.2A			38	mΩ
DYNAMIC PARAMETERS						
Input Capacitance	C _{ISS}	V _{DS} =20V, V _{GS} =0V, f=1.0MHz		370		pF
Output Capacitance	C _{OSS}			78		pF
Reverse Transfer Capacitance	C _{RSS}			73		pF
SWITCHING PARAMETERS						
Total Gate Charge(Note)	Q _G	V _{DS} =20V, V _{GS} =5V, I _D =6.0A		8.4		nC
Gate Source Charge	Q _{GS}			1		nC
Gate Drain Charge	Q _{GD}			1.8		nC
Turn-ON Delay Time (Note)	t _{D(ON)}	V _{GS} =5V, V _{DS} =10V, R _D =10Ω, R _G =6Ω, I _D =6A		3.6		ns
Turn-ON Rise Time	t _R			2.7		ns
Turn-OFF Delay Time	t _{D(OFF)}			19		ns
Turn-OFF Fall-Time	t _F			7.6		ns
SOURCE- DRAIN DIODE RATINGS AND CHARACTERISTICS						
Drain-Source Diode Forward Voltage (Note)	V _{SD}	I _S =1.7A, V _{GS} =0V			1.2	V
Diode Continuous Forward Current	I _S	V _D =V _G , V _S =1.3V			1.54	A

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

■ TYPICAL CHARACTERISTICS



■ TYPICAL CHARACTERISTICS (Cont.)



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