



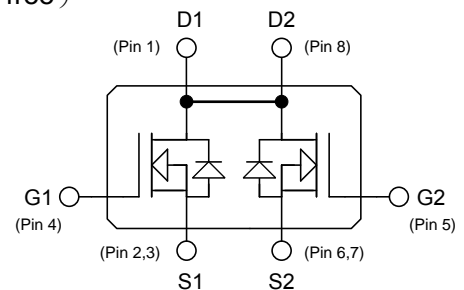
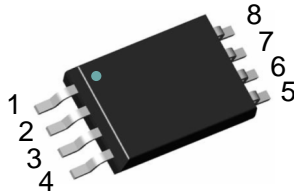
Dual N-Channel High Density Trench MOSFET (20V, 6.0A)

PRODUCT SUMMARY		
V_{DS}	I_D	$R_{DS(on)}$ (m-ohm) Max
20V	6.0A	28 @ $V_{GS}=4.0V, I_D=6.0A$
		40 @ $V_{GS}=2.5V, I_D=5.2A$

Features

- Advanced Trench Process Technology
- High Density Cell Design for Ultra Low On-Resistance
- Surface mount Package
- Ordering information : KF8205A (Lead (Pb) -free)
KF8205A-G (Lead (Pb) -free and halogen-free)

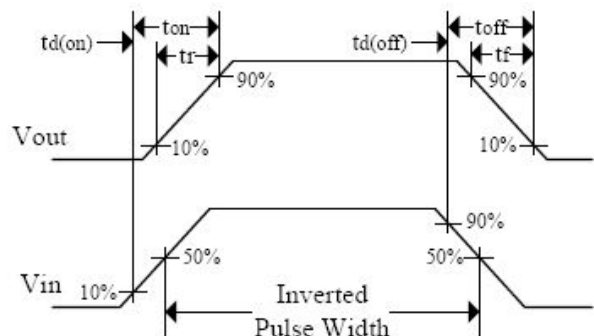
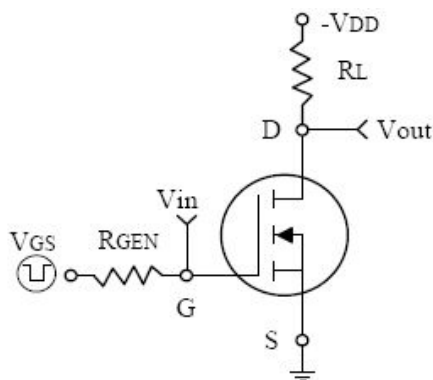
Pin 1/ 8: Drain
Pin 2/ 3: Source 1
Pin 4: Gate 1
Pin 5: Gate 2
Pin 6/ 7: Source 2



Absolute Maximum Ratings ($T_A=25^{\circ}C$, unless otherwise noted)

Symbol	Parameter	Ratings	Units
V_{DS}	Drain-Source Voltage	20	V
V_{GS}	Gate-Source Voltage	± 12	V
I_D	Drain Current (Continuous)	6.0	A
I_{DM}	Drain Current (Pulsed) ^a	20	A
P_D	Total Power Dissipation @ $T_A=25^{\circ}C$	2.0	W
I_S	Maximum Diode Forward Current	1.7	A
T_j, T_{stg}	Operating Junction and Storage Temperature Range	-55 to +150	$^{\circ}C$
$R_{\theta JA}$	Thermal Resistance Junction to Ambient (PCB mounted) ^b	62	$^{\circ}C/W$

a: Repetitive Rating: Pulse width limited by the maximum junction temperature.
b: 1-in² 2oz Cu PCB board



Switching Test Circuit and Switching Waveforms

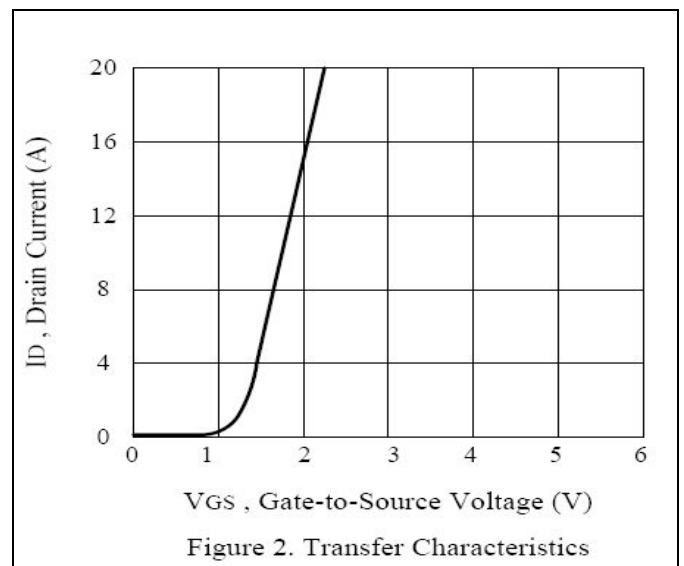
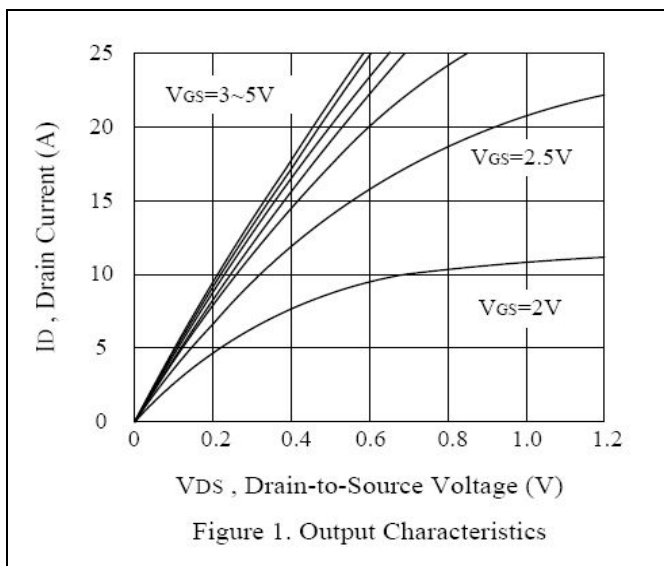


Electrical Characteristics (T_A=25°C, unless otherwise noted)

Symbol	Characteristic	Test Conditions	Min.	Typ.	Max.	Unit
• Off Characteristics						
BV _{DSS}	Drain-Source Breakdown Voltage	V _{GS} =0V, I _D =250uA	20	-	-	V
I _{DSS}	Zero Gate Voltage Drain Current	V _{DS} =20V, V _{GS} =0V	-	-	1	uA
I _{GSS}	Gate-Body Leakage Current	V _{GS} =±12V, V _{DS} =0V	-	-	±100	nA
• On Characteristics						
V _{GS(th)}	Gate Threshold Voltage	V _{DS} =V _{GS} , I _D =250uA	0.6	0.7	1.2	V
R _{DS(on)}	Drain-Source On-State Resistance	V _{GS} =4.0V, I _D =6.0A	-	20	28	mΩ
		V _{GS} =2.5V, I _D =5.2A	-	26	40	
g _{FS}	Forward Transconductance	V _{DS} =10V, I _D =6.0A	-	5	-	S
• Dynamic Characteristic						
C _{iss}	Input Capacitance	V _{DS} =8V, V _{GS} =0V, f=1MHz	-	559	-	PF
C _{oss}	Output Capacitance		-	148	-	
C _{rss}	Reverse Transfer Capacitance		-	127	-	
• Switching Characteristics						
Q _g	Total Gate Charge	V _{DS} =10V, I _D =3.0A, V _{GS} =4.5V	-	5	-	nC
Q _{gs}	Gate-Source Charge		-	0.9	-	
Q _{gd}	Gate-Drain Charge		-	1.4	-	
t _{d(on)}	Turn-on Delay Time	V _{DD} =10V, R _L =10Ω, I _D =1A, V _{GEN} =10V, R _G =6Ω	-	10.2	-	nS
t _r	Turn-on Rise Time		-	7	-	
t _{d(off)}	Turn-off Delay Time		-	33	-	
t _f	Turn-off Fall Time		-	6.8	-	
• Drain-Source Diode Characteristics						
V _{SD}	Drain-Source Diode Forward Voltage	V _{GS} =0V, I _S =1.7A	-	-	1.2	V

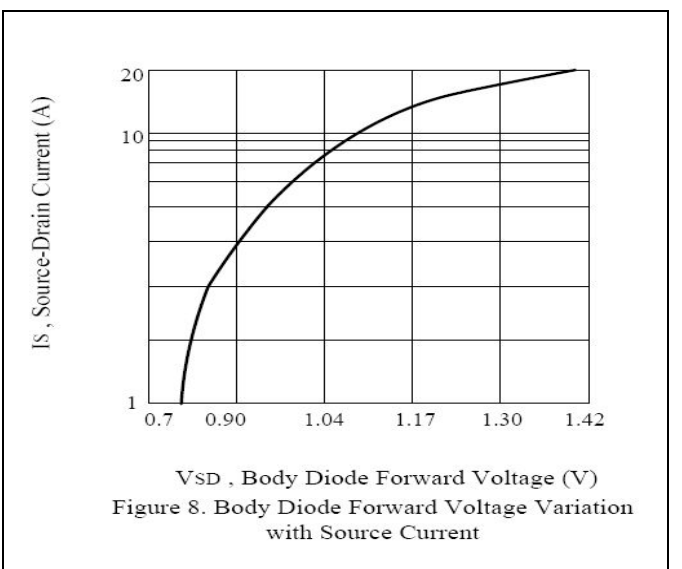
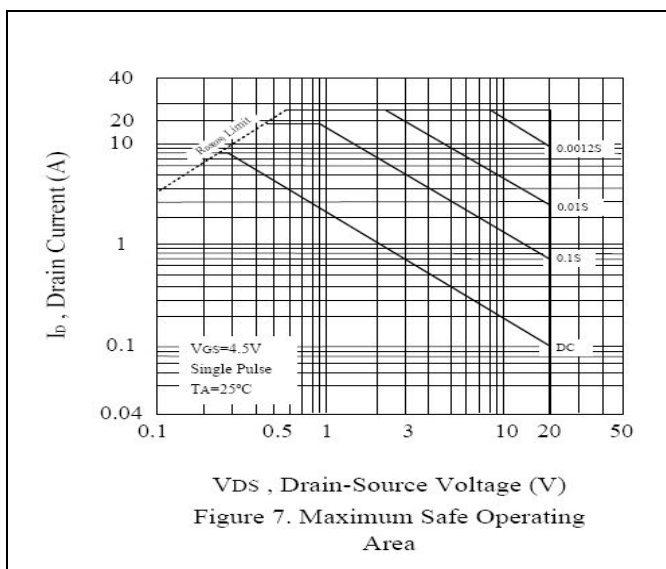
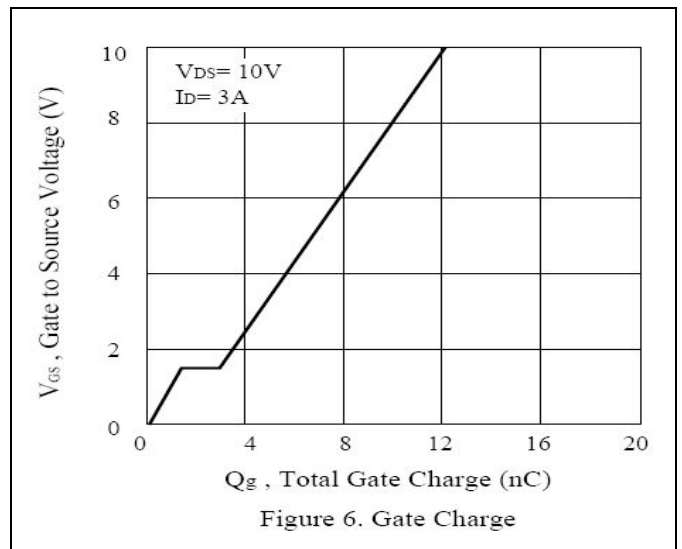
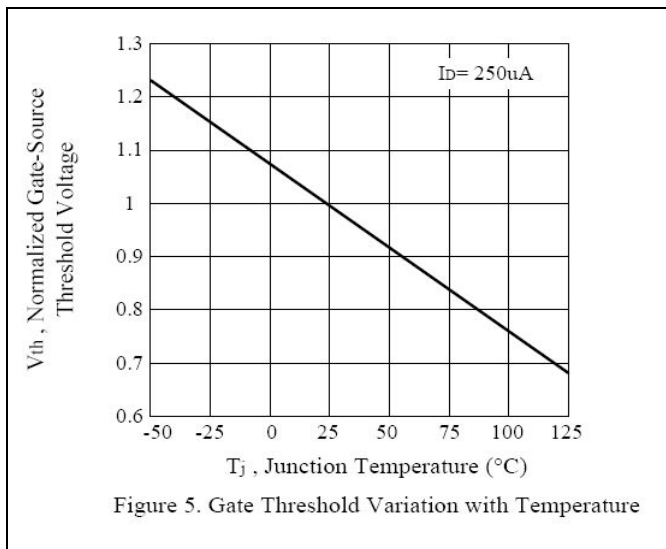
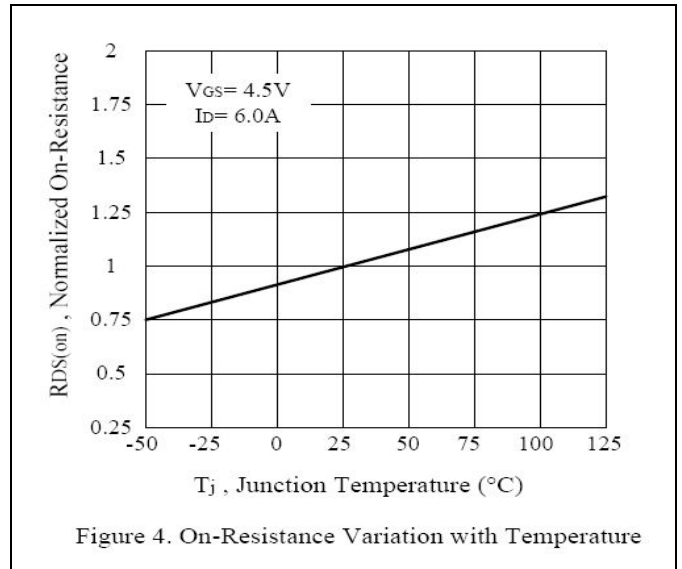
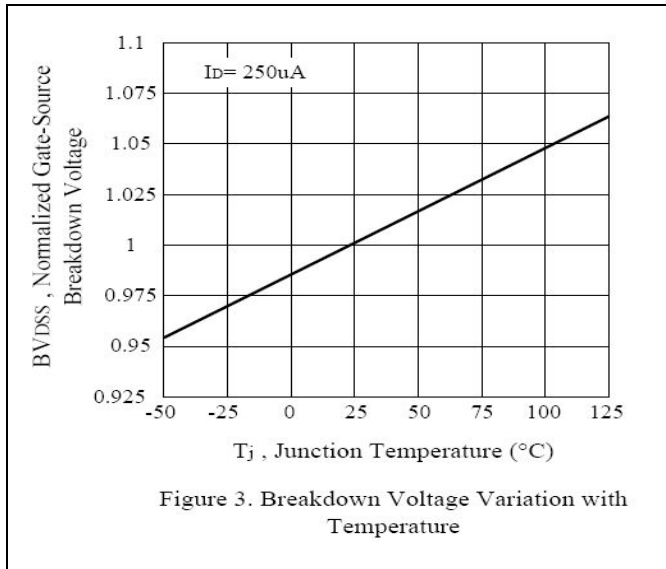
Note: Pulse Test: Pulse Width ≤300us, Duty Cycle≤2%

Characteristics Curve : 1





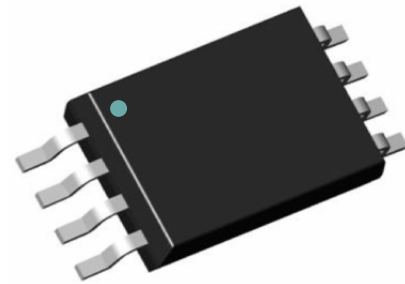
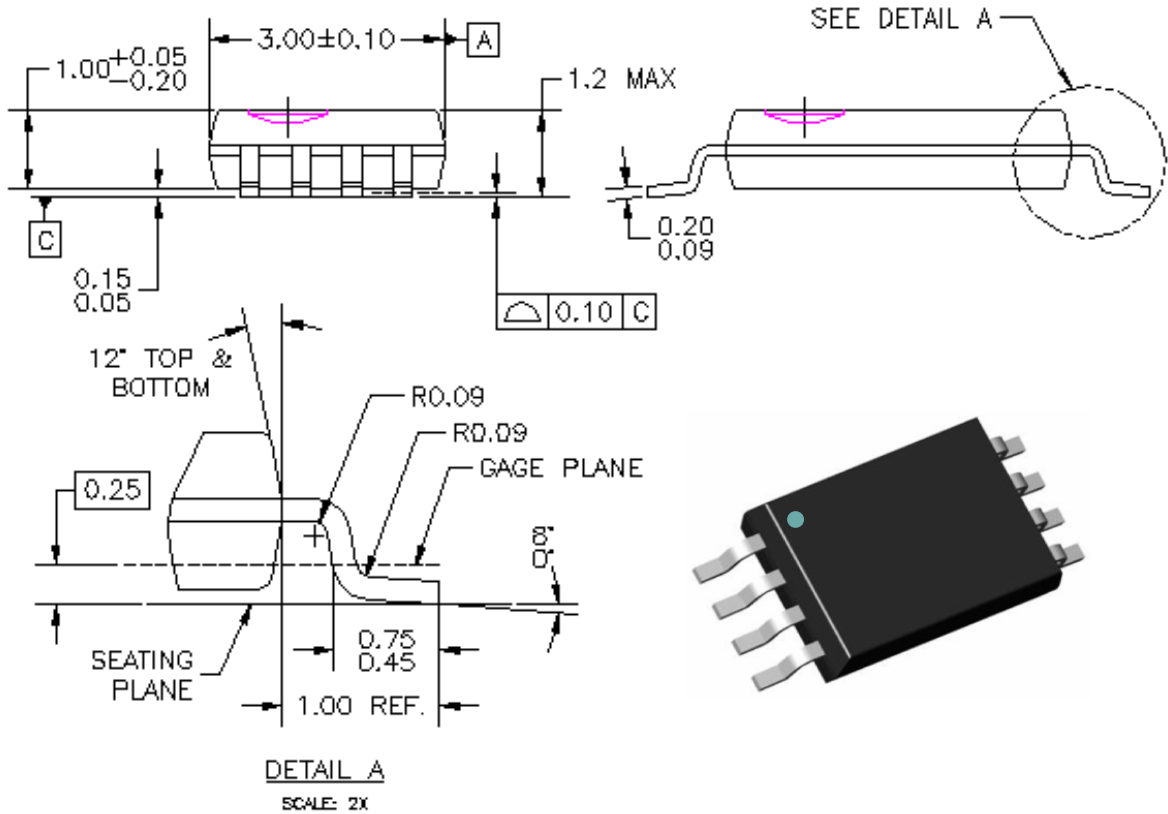
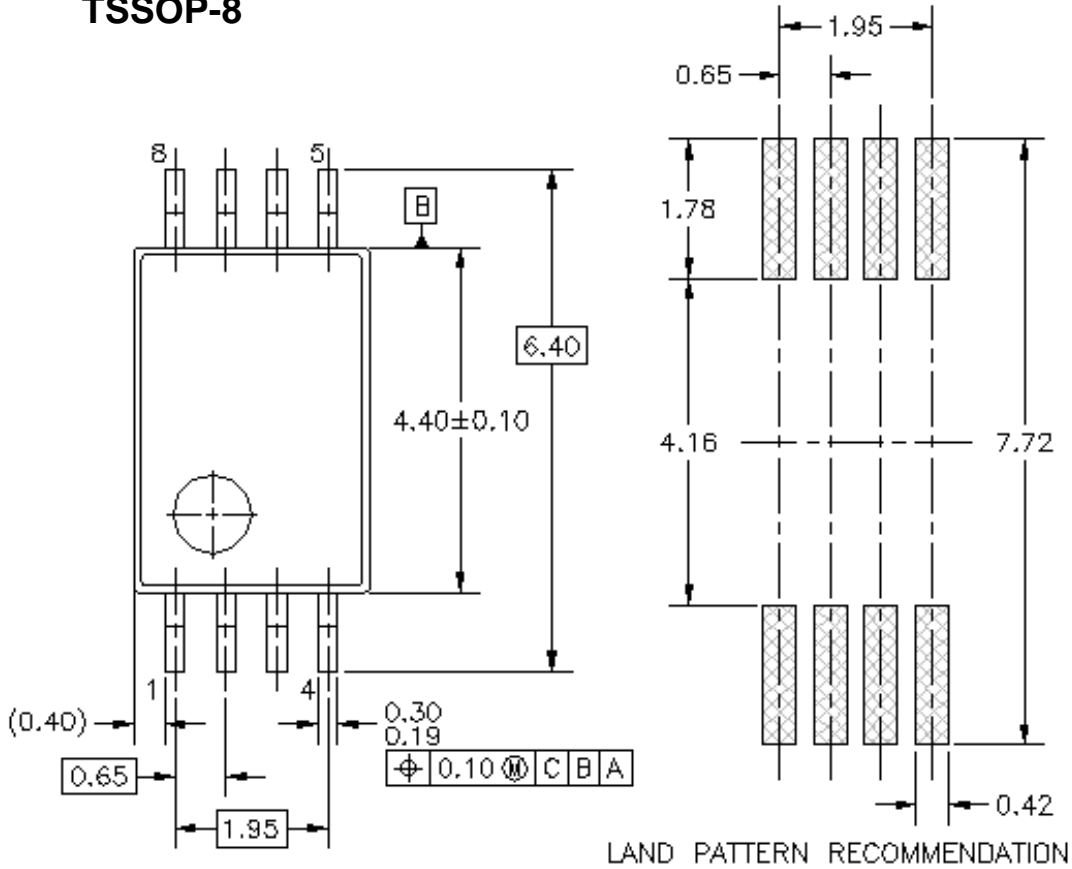
Characteristics Curve : 2





Product Dimensions

TSSOP-8



Dimensions shown below are in millimeters



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