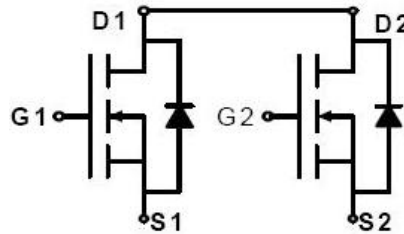
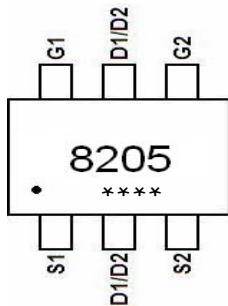
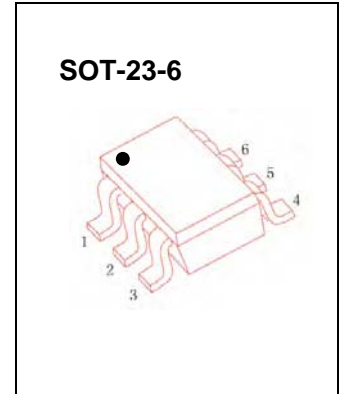


## Dual N-Channel Enhancement Mode Field Effect Transistor

### DESCRIPTION

The FTK8205 use advanced trench technology to provide excellent  $R_{DS(ON)}$ , low gate charge and operation with gate voltages as low as 2.5V.

This device is suitable for use as a Battery protection , Switching application.



### ABSOLUTE MAXIMUM RATINGS ( $T_a=25^\circ\text{C}$ unless otherwise noted)

Parameter	Symbol	Rating	Unit
Drain-Source Voltage	$V_{DS}$	20	V
Drain Current - Continuous	$I_D(T_a=25^\circ\text{C})$	6	A
Drain Current - Continuous	$I_D(T_a=70^\circ\text{C})$	4.8	A
Drain Current – Pulsed	$I_{DM}$	20	A
Gate-Source Voltage	$V_{GS}$	$\pm 12$	V
Maximum Power Dissipation	$P_D(T_a=25^\circ\text{C})$	1.14	W
Thermal Resistance Junction-to-Ambient	$R_{\theta JA}$	110	$^\circ\text{C}/\text{W}$
Junction Temperature	$T_j$	150	$^\circ\text{C}$
Storage Temperature Range	$T_{stg}$	-55 ~ 150	$^\circ\text{C}$



# FTK8205

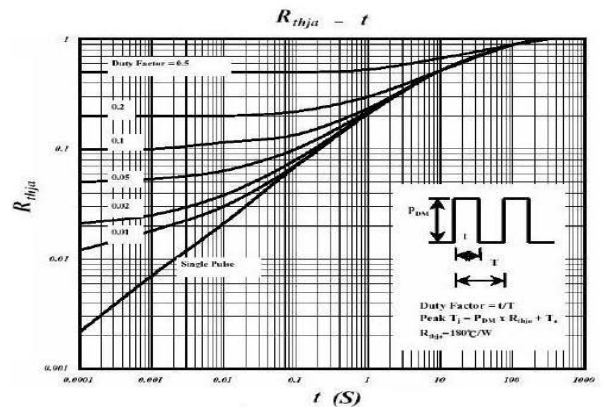
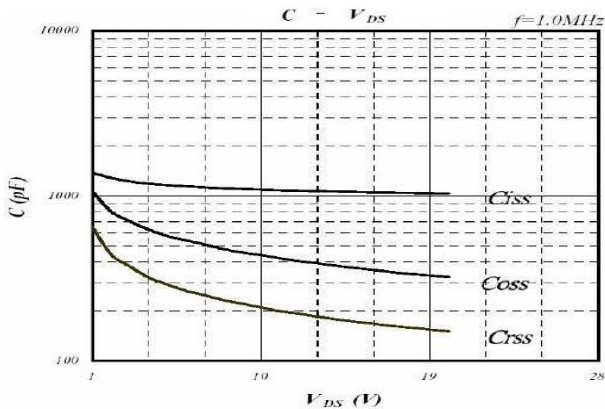
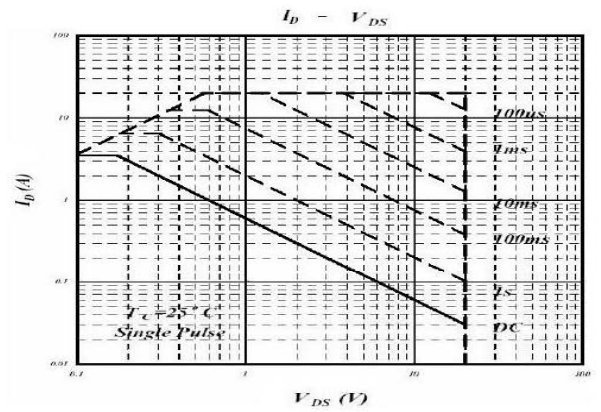
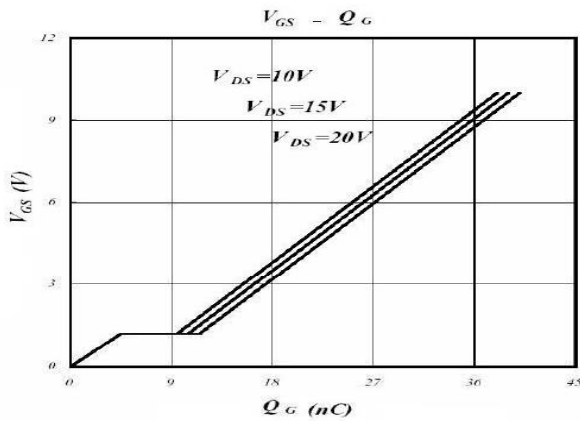
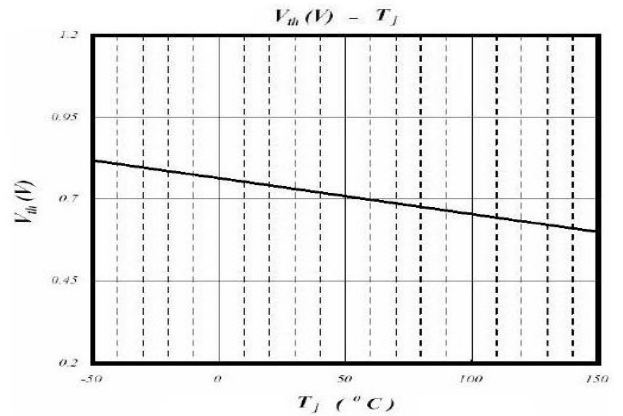
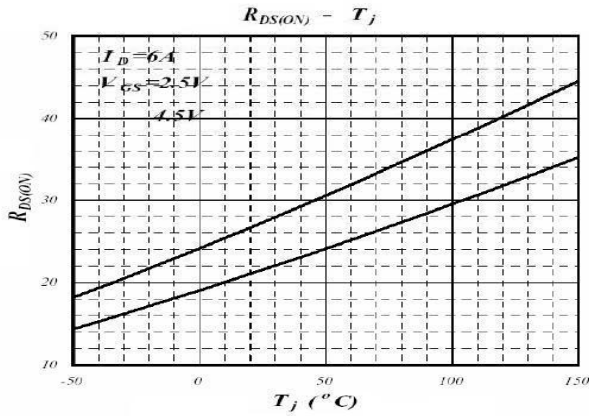
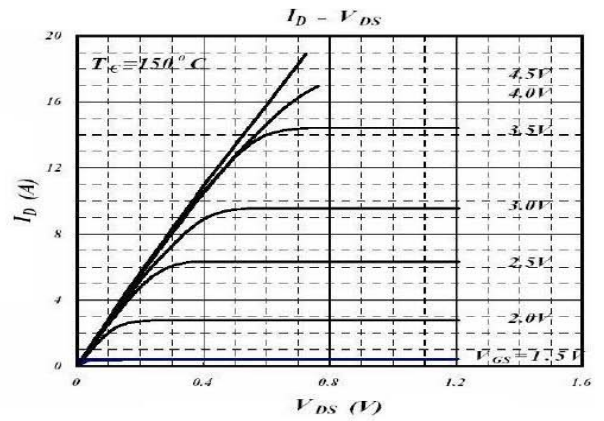
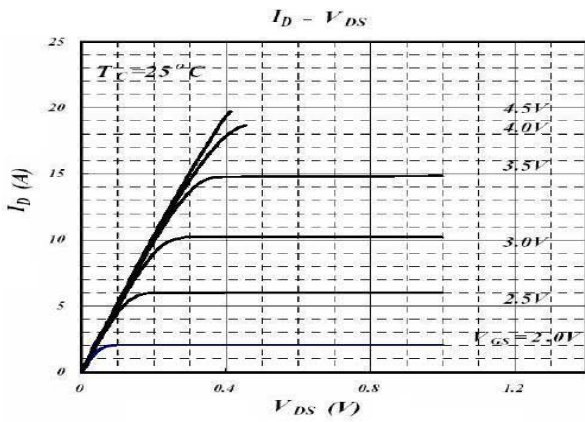
## ELECTRICAL CHARACTERISTICS (T<sub>a</sub>=25 °C unless otherwise noted)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit	
Drain-Source Breakdown Voltage	BV <sub>DSS</sub>	V <sub>GS</sub> =0V, I <sub>D</sub> =250μA	20			V	
Drain-Source Leakage Current(T <sub>i</sub> =25°C)	I <sub>DSS</sub>	V <sub>DS</sub> =20V, V <sub>GS</sub> =0V			1	μA	
Drain-Source Leakage Current(T <sub>i</sub> =70°C)	I <sub>DSS</sub>	V <sub>DS</sub> =16V, V <sub>GS</sub> =0V			25	μA	
Gate-Source Leakage Current	I <sub>GSS</sub>	V <sub>GS</sub> =±10V, V <sub>DS</sub> =0V			±100	nA	
Gate Threshold Voltage	V <sub>GS(th)</sub>	V <sub>DS</sub> =V <sub>GS</sub> , I <sub>D</sub> =250μA	0.5		1.2	V	
Static Drain-Source On-Resistance	R <sub>DS(on)</sub>	V <sub>GS</sub> =4.5V, I <sub>D</sub> =6.0A			24	mΩ	
		V <sub>GS</sub> =2.5V, I <sub>D</sub> =5.2A			30	mΩ	
Forward Transconductance	g <sub>FS</sub>	V <sub>DS</sub> =10V, I <sub>D</sub> =6.0A		20		S	
Forward On Voltage	V <sub>SD</sub>	V <sub>GS</sub> =0V, I <sub>S</sub> =1.7A			1.2	V	
Input Capacitance	C <sub>iss</sub>	V <sub>DS</sub> =20V, V <sub>GS</sub> =0V f=1.0MHz		1035		pF	
Output Capacitance	C <sub>oss</sub>				320		pF
Reverse Transfer Capacitance	C <sub>rss</sub>				150		pF
Turn-on Delay Time	t <sub>d(on)</sub>				30		ns
Rise Time	t <sub>r</sub>	V <sub>DS</sub> =10V, I <sub>D</sub> =1A V <sub>GS</sub> =5V, R <sub>G</sub> =6Ω R <sub>D</sub> =10Ω			70		ns
Turn-off Delay Time	t <sub>d(off)</sub>				40		ns
Fall Time	t <sub>f</sub>				65		ns

Notes:

1. Surface Mounted on FR4 Board, t<sub>s</sub> ≤ 10 sec.
2. Pulse Test: Pulse Width ≤ 300μs, Duty Cycle ≤ 2%.

## Typical Characteristics



## SOT-23-6 PACKAGE INFORMATION

