

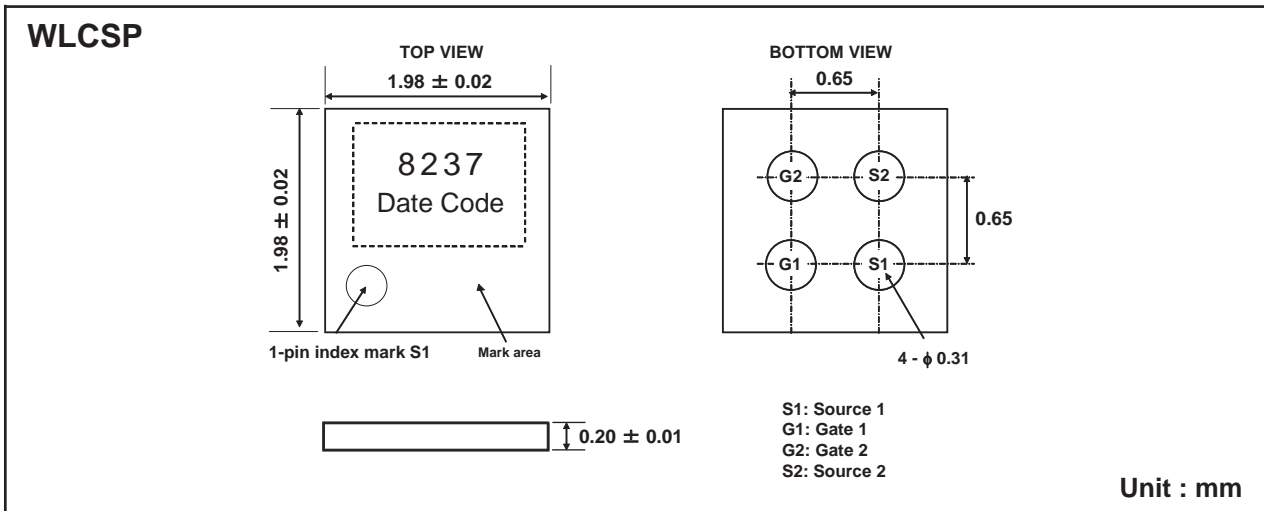


Dual N-Channel Enhancement Mode Field Effect Transistor

PRODUCT SUMMARY		
V _{SSS}	I _S	R _{SS(ON)} (mΩ) Max
16V	9A	9.5 @ V _{GS} =4.5V
		10.0 @ V _{GS} =4.0V
		11.0 @ V _{GS} =3.1V
		12.0 @ V _{GS} =2.5V

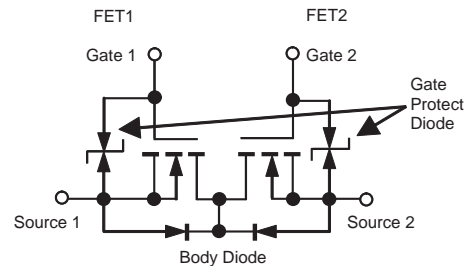
FEATURES

- Super high dense cell design for low R_{DS(ON)}.
- Rugged and reliable.
- Wafer level CSP.
- ESD Protected.



ABSOLUTE MAXIMUM RATINGS (T_A=25°C)

Symbol	Parameter	Limit	Units
V _{SSS}	Source-Source Voltage	16	V
V _{GSS}	Gate-Source Voltage	±10	V
I _S	Source Current-Continuous ^a	9	A
I _{SP}	-Pulsed ^b	90	A
P _T	Total Power Dissipation ^a	1.6	W
T _J , T _{STG}	Operating Junction and Storage Temperature Range	-55 to 150	°C



SC8237

Preliminary

ELECTRICAL CHARACTERISTICS (T_A=25°C unless otherwise noted)

Symbol	Parameter	Conditions	Min	Typ	Max	Units
OFF CHARACTERISTICS						
BV _{SSS}	Source-Source Breakdown Voltage	V _{GS} =0V, I _S =250uA	16			V
I _{SSS}	Zero Gate Voltage Source Current	V _{SS} =16V, V _{GS} =0V			1	uA
I _{GSS}	Gate-Body Leakage Current	V _{GS} = ±8V, V _{SS} =0V			±1	uA
ON CHARACTERISTICS						
V _{GS(th)}	Gate Threshold Voltage	V _{SS} =V _{GS} , I _S =1mA	0.4	0.7	1.2	V
R _{SS(ON)}	Source-Source On-State Resistance	V _{GS} =4.5V, I _S =4.5A	7.0	8.5	9.5	m ohm
		V _{GS} =4.0V, I _S =4.5A	7.5	8.8	10.0	m ohm
		V _{GS} =3.1V, I _S =4.5A	8.0	9.5	11.0	m ohm
		V _{GS} =2.5V, I _S =4.5A	8.5	10.0	12.0	m ohm
g _{FS}	Forward Transconductance	V _{SS} =5V, I _S =4.5A		14		S
DYNAMIC CHARACTERISTICS ^c						
C _{ISS}	Input Capacitance	V _{SS} =10V, V _{GS} =0V f=1.0MHz		480		pF
C _{OSS}	Output Capacitance			226		pF
C _{RSS}	Reverse Transfer Capacitance			85		pF
SWITCHING CHARACTERISTICS ^c						
t _{D(ON)}	Turn-On Delay Time	V _{DD} =13V I _S =4.5A		308		ns
t _r	Rise Time			1232		ns
t _{D(OFF)}	Turn-Off Delay Time	V _{GS} =4.0V R _{GEN} =6 ohm		3938		ns
t _f	Fall Time			2904		ns
Q _g	Total Gate Charge	V _{DD} =13V, I _S =9A, V _{G1S1} =4.0V		16.7		nC
DRAIN-SOURCE DIODE CHARACTERISTICS AND MAXIMUM RATINGS						
V _{FSS}	Diode Forward Voltage	V _{GS} =0V, I _S =1.5A		0.77	1.2	V
Note						
a. Mounted on FR4 board of 25.4mm x 25.4mm x 1.6mm.						
b. Pulse Test: Pulse Width < 10us, Duty Cycle < 1%.						
c. Guaranteed by design, not subject to production testing.						

Apr,24,2015