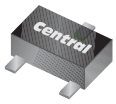
CMUDM8001

SURFACE MOUNT
P-CHANNEL
ENHANCEMENT-MODE
SILICON MOSFET

ULTRAmini™



SOT-523 CASE

Central Semiconductor Corp.

www.centralsemi.com

DESCRIPTION:

The CENTRAL SEMICONDUCTOR CMUDM8001 is a P-Channel Enhancement-mode Silicon MOSFET, manufactured by the P-Channel DMOS Process, designed for high speed pulsed amplifier and driver applications. This MOSFET offers Low $r_{DS(ON)}$ and Low Theshold Voltage.

MARKING CODE: C8A

APPLICATIONS:

- Load/Power Switches
- Power Supply Converter Circuits
- Battery Powered Portable Equipment

FEATURES:

- Power Dissipation 250mW
- Low $r_{DS(ON)}$
- Low Threshold Voltage
- Logic Level Compatible
- Small, SOT-523 Surface Mount Package
- Complementary Device: CMUDM7001

MAXIMUM RATINGS: (T_A=25°C)	**SYMBOL**		**UNITS**
Drain-Source Voltage	V_{DS}	20	V
Gate-Source Voltage	V_{GS}	10	V
Continuous Drain Current (Steady State)	I_D	100	mA
Continuous Drain Current	I_D	200	mA
Power Dissipation	P_D	250	mW
Operating and Storage Junction Temperature	T_J, T_{stg}	-65 to +150	°C

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

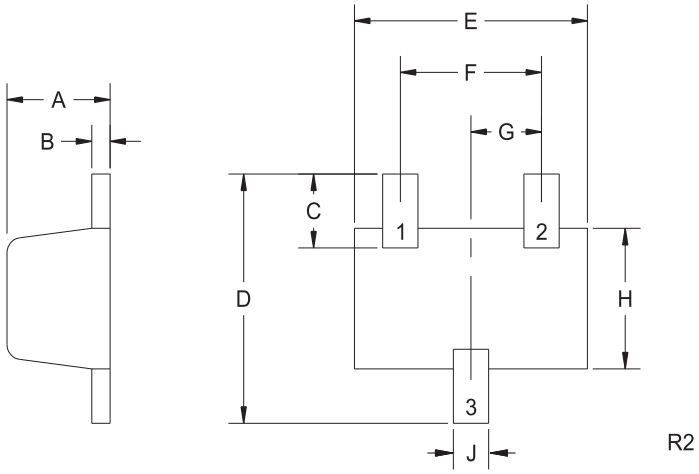
SYMBOL	**TEST CONDITIONS**	**MIN**	**TYP**	**MAX**	**UNITS**
I_{GSSF}, I_{GSSR}	V_{GS}=10V, V_{DS}=0			1.0	μA
I_{DSS}	V_{DS}=20V, V_{GS}=0			1.0	μA
BV_{DSS}	V_{GS}=0, I_D=100μA	20			V
$V_{GS(th)}$	V_{DS}=V_{GS}, I_D=250μA	0.6		1.1	V
$r_{DS(ON)}$	V_{GS}=4.0V, I_D=10mA		1.9	8.0	Ω
$r_{DS(ON)}$	V_{GS}=2.5V, I_D=10mA		2.4	12	Ω
$r_{DS(ON)}$	V_{GS}=1.5V, I_D=1.0mA			45	Ω
$Q_{g(tot)}$	V_{DS}=10V, V_{GS}=4.5V, I_D=100mA		0.658		nC
Q_{gs}	V_{DS}=10V, V_{GS}=4.5V, I_D=100mA		0.158		nC
Q_{gd}	V_{DS}=10V, V_{GS}=4.5V, I_D=100mA		0.181		nC
g_{FS}	V_{DS}=10V, I_D=100mA	100			mS
C_{rss}	V_{DS}=3.0V, V_{GS}=0, f=1.0MHz		15		pF
C_{iss}	V_{DS}=3.0V, V_{GS}=0, f=1.0MHz		45		pF
C_{oss}	V_{DS}=3.0V, V_{GS}=0, f=1.0MHz		15		pF
t_{on}	V_{DD}=3.0V, V_{GS}=2.5V, I_D=10mA		35		ns
t_{off}	V_{DD}=3.0V, V_{GS}=2.5V, I_D=10mA		80		ns

R3 (22-August 2011)

CMUDM8001

SURFACE MOUNT
P-CHANNEL
ENHANCEMENT-MODE
SILICON MOSFET

SOT-523 CASE - MECHANICAL OUTLINE



(Bottom View)

LEAD CODE:
1) Gate
2) Source
3) Drain

MARKING CODE: C8A

DIMENSIONS				
	INCHES		MILLIMETERS	
SYMBOL	MIN	MAX	MIN	MAX
A	0.023	0.031	0.58	0.78
B	0.002	0.008	0.04	0.20
C	0.013	0.021	0.34	0.54
D	0.059	0.067	1.50	1.70
E	0.059	0.067	1.50	1.70
F	0.035	0.043	0.90	1.10
G	0.020		0.50	
H	0.031	0.039	0.78	0.98
J	0.010	0.014	0.25	0.35

SOT-523 (REV: R2)

OUTSTANDING SUPPORT AND SUPERIOR SERVICES

PRODUCT SUPPORT

Central's operations team provides the highest level of support to insure product is delivered on-time.

- Supply management (Customer portals)
- Inventory bonding
- Consolidated shipping options
- Custom bar coding for shipments
- Custom product packing

DESIGNER SUPPORT/SERVICES

Central's applications engineering team is ready to discuss your design challenges. Just ask.

- Free quick ship samples (2nd day air)
- Online technical data and parametric search
- SPICE models
- Custom electrical curves
- Environmental regulation compliance
- Customer specific screening
- Up-screening capabilities
- Special wafer diffusions
- PbSn plating options
- Package details
- Application notes
- Application and design sample kits
- Custom product and package development

REQUESTING PRODUCT PLATING

1. If requesting Tin/Lead plated devices, add the suffix " TIN/LEAD" to the part number when ordering (example: 2N2222A TIN/LEAD).
2. If requesting Lead (Pb) Free plated devices, add the suffix " PBFREE" to the part number when ordering (example: 2N2222A PBFREE).

CONTACT US

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