CEDM8001
SURFACE MOUNT SILICON P-CHANNEL ENHANCEMENT-MODE MOSFET

Central™
Semiconductor Corp.

Top View   Bottom View

SOT-883L CASE

DESCRIPTION:
The CENTRAL SEMICONDUCTOR CEDM8001 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: F

COMPLEMENTARY N-CHANNEL: CEDM7001

FEATURES:
• 100mW Power Dissipation
• 0.4mm low package profile
• Low $r_{DS(ON)}$
• Low threshold voltage
• Logic level compatible
• Small leadless surface mount package

APPLICATIONS:
• Load/Power switches
• DC - DC converters
• Battery powered portable equipment

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	100	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
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
$Q_{g(tot)}$	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
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

R8 (19-September 2014)

CEDM8001

SURFACE MOUNT SILICON
P-CHANNEL
ENHANCEMENT-MODE
MOSFET

Central
Semiconductor Corp. ™

SOT-883L CASE - MECHANICAL OUTLINE

Pin 1 - 2
Identifier

B

A

C

1

2   3

D

TOP VIEW

E   F

SIDE VIEW

H

2   3

G
(2x)   1   J

K
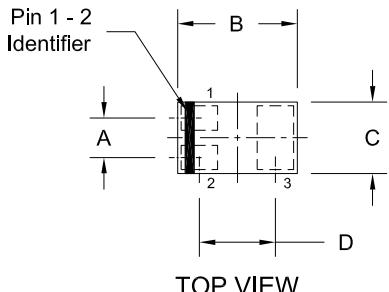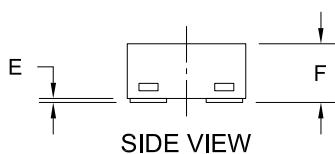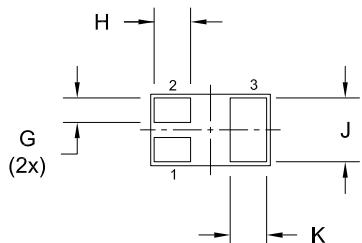
BOTTOM VIEW   R2

DIMENSIONS				
	INCHES		MILLIMETERS	
SYMBOL	MIN	MAX	MIN	MAX
A	0.014		0.35	
B	0.037	0.041	0.95	1.05
C	0.022	0.026	0.55	0.65
D	0.026		0.65	
E	0.000	0.002	0.00	0.05
F	0.012	0.016	0.30	0.40
G	0.005	0.007	0.13	0.18
H	0.008	0.012	0.20	0.30
J	0.018	0.022	0.45	0.55
K	0.008	0.012	0.20	0.30

SOT-883L (REV:R2)

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

MARKING CODE: F

Package Type Options (all dimensions are maximum - in mm)

Package	Length	Width	Height	P_D (mW)	Central Item Number
SOT-883L	**1.05**	**0.65**	**0.40**	**100**	**CEDM8001**
SOT-883VL	1.05	0.65	0.32	100	CEDM8001VL
SOT-953	1.05	1.05	0.50	250	CMNDM8001
SOT-523	1.70	1.70	0.78	250	CMUDM8001

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TYPICAL ELECTRICAL CHARACTERISTICS

Output Characteristics

T_A=25°C
Pulsed Test

V_{GS}=2.5V

V_{GS}=2.0V

V_{GS}=1.5V

V_{GS}=1.0V

I_D, Drain Current (A)

V_{DS}, Drain-Source Voltage (V)
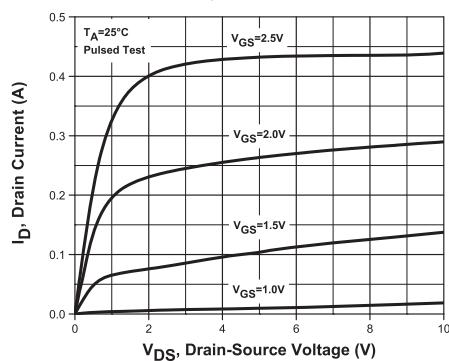
Drain Source On Resistance

T_A=25°C
Pulsed Test

V_{GS}=1.5V

V_{GS}=2.5V

V_{GS}=4.0V

$R_{DS(ON)}$, Drain-Source On-State Resistance (Ω)

I_D, Drain Current (mA)

Capacitance

c_{iss}

c_{oss}

c_{rss}

T_A=25°C
f=1.0MHz

C, Capacitance (pF)

V_R, Reverse Voltage (V)
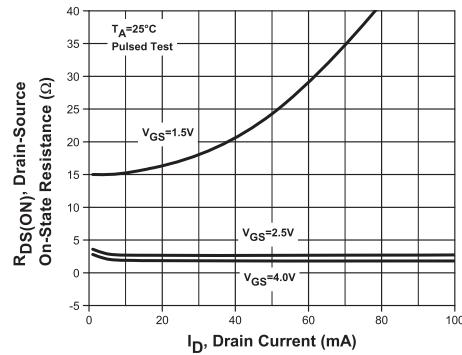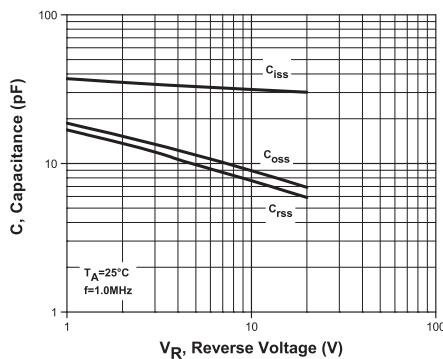
Transfer Characteristics

T_A=25°C
Pulsed Test
V_{DS}=10V

I_D, Drain Current (A)

V_{GS}, Gate-Source Voltage (V)

Power Derating

P_D, Power Derating (mW)

T_A, Ambient Temperature (°C)

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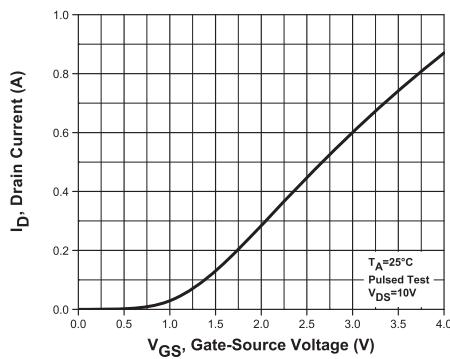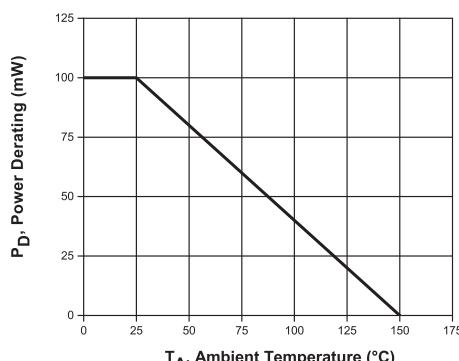
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REQUESTING PRODUCT PLATING

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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