

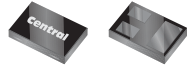
CEDM8001

**SURFACE MOUNT  
P-CHANNEL  
ENHANCEMENT-MODE  
SILICON MOSFET**



www.centrasemi.com

**TLP**™  
Tiny  
Leadless  
Package



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**

**FEATURES:**

- 100mW Power Dissipation
- 0.4mm Low Package Profile
- Low  $r_{DS(ON)}$
- Low Threshold Voltage
- Logic Level Compatible
- Small, TLP™ 1x0.6mm, SOT-883L Leadless Surface Mount Package

**APPLICATIONS:**

- Load/Power Switches
- DC - DC Converters
- Battery Powered Portable Equipment

**MAXIMUM RATINGS:** ( $T_A=25^\circ\text{C}$ )

Drain-Source Voltage
Gate-Source Voltage
Continuous Drain Current (Steady State)
Continuous Drain Current
Power Dissipation
Operating and Storage Junction Temperature

**SYMBOL**

$V_{DS}$	20
$V_{GS}$	10
$I_D$	100
$I_D$	200
$P_D$	100
$T_J, T_{stg}$	-65 to +150

**UNITS**

V
V
mA
mA
mW
$^\circ\text{C}$

**ELECTRICAL CHARACTERISTICS:** ( $T_A=25^\circ\text{C}$  unless otherwise noted)

SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNITS
$I_{GSSF}, I_{GSSR}$	$V_{GS}=10\text{V}, V_{DS}=0$			1.0	$\mu\text{A}$
$I_{DSS}$	$V_{DS}=20\text{V}, V_{GS}=0$			1.0	$\mu\text{A}$
$BV_{DSS}$	$V_{GS}=0, I_D=100\mu\text{A}$	20			V
$V_{GS(th)}$	$V_{DS}=V_{GS}, I_D=250\mu\text{A}$	0.6		1.1	V
$r_{DS(ON)}$	$V_{GS}=4.0\text{V}, I_D=10\text{mA}$		1.9	8.0	$\Omega$
$r_{DS(ON)}$	$V_{GS}=2.5\text{V}, I_D=10\text{mA}$		2.4	12	$\Omega$
$r_{DS(ON)}$	$V_{GS}=1.5\text{V}, I_D=1.0\text{mA}$			45	$\Omega$
$Q_g(\text{tot})$	$V_{DS}=10\text{V}, V_{GS}=4.5\text{V}, I_D=100\text{mA}$		0.658		nC
$Q_{gs}$	$V_{DS}=10\text{V}, V_{GS}=4.5\text{V}, I_D=100\text{mA}$		0.158		nC
$Q_{gd}$	$V_{DS}=10\text{V}, V_{GS}=4.5\text{V}, I_D=100\text{mA}$		0.181		nC
$\theta_{FS}$	$V_{DS}=10\text{V}, I_D=100\text{mA}$	100			mS
$C_{rSS}$	$V_{DS}=3.0\text{V}, V_{GS}=0, f=1.0\text{MHz}$		15		pF
$C_{iSS}$	$V_{DS}=3.0\text{V}, V_{GS}=0, f=1.0\text{MHz}$		45		pF
$C_{OSS}$	$V_{DS}=3.0\text{V}, V_{GS}=0, f=1.0\text{MHz}$		15		pF
$t_{on}$	$V_{DD}=3.0\text{V}, V_{GS}=2.5\text{V}, I_D=10\text{mA}$		35		ns
$t_{off}$	$V_{DD}=3.0\text{V}, V_{GS}=2.5\text{V}, I_D=10\text{mA}$		80		ns

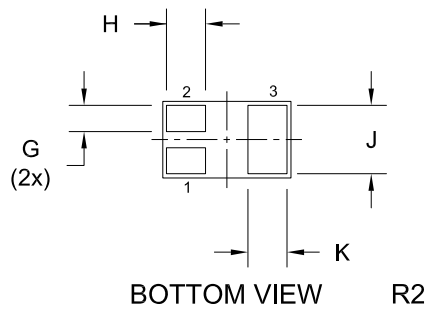
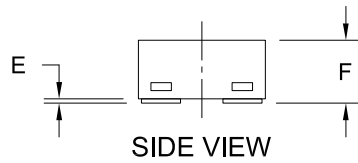
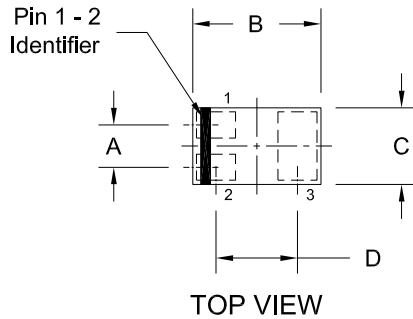
R7 (22-August 2011)

CEDM8001

SURFACE MOUNT  
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SOT-883L CASE - MECHANICAL OUTLINE



DIMENSIONS				
SYMBOL	INCHES		MILLIMETERS	
	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

R7 (22-August 2011)