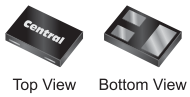
CEDM7001

SURFACE MOUNT SILICON N-CHANNEL ENHANCEMENT-MODE MOSFET



Top View Bottom View

SOT-883L CASE

www.centralsemi.com

DESCRIPTION:

The CENTRAL SEMICONDUCTOR CEDM7001 is an N-Channel Enhancement-mode silicon MOSFET, manufactured by the N-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: H

COMPLEMENTARY P-CHANNEL: CEDM8001

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
Peak Drain Current, tp=10μs	I_{DM}	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)

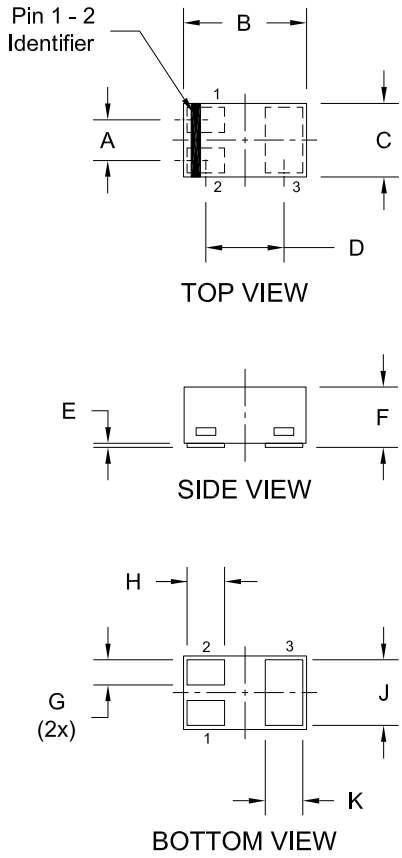
SYMBOL	**TEST CONDITIONS**	**MIN**	**TYP**	**MAX**	**UNITS**
I_{GSSF}, I_{GSSR}	V_{GS}=10V, V_{DS}=0			1.0	μA
I_{DSS}	V_{DS}=20V, V_{GS}=0			1.0	μA
BV_{DSS}	V_{GS}=0, I_D=100μA	20			V
$V_{GS(th)}$	V_{DS}=V_{GS}, I_D=250μA	0.6		0.9	V
$r_{DS(ON)}$	V_{GS}=4.0V, I_D=10mA		0.9	3.0	Ω
$r_{DS(ON)}$	V_{GS}=2.5V, I_D=10mA		1.3	4.0	Ω
$r_{DS(ON)}$	V_{GS}=1.5V, I_D=1.0mA			15	Ω
g_{FS}	V_{DS}=10V, I_D=100mA	100			mS
C_{rss}	V_{DS}=3.0V, V_{GS}=0, f=1.0MHz		4.0		pF
C_{iss}	V_{DS}=3.0V, V_{GS}=0, f=1.0MHz		9.0		pF
C_{oss}	V_{DS}=3.0V, V_{GS}=0, f=1.0MHz		9.5		pF
$Q_{g(tot)}$	V_{DS}=10V, V_{GS}=4.5V, I_D=100mA		0.566		nC
Q_{gs}	V_{DS}=10V, V_{GS}=4.5V, I_D=100mA		0.16		nC
Q_{gd}	V_{DS}=10V, V_{GS}=4.5V, I_D=100mA		0.08		nC
t_{on}	V_{DD}=3.0V, V_{GS}=2.5V, I_D=10mA		50		ns
t_{off}	V_{DD}=3.0V, V_{GS}=2.5V, I_D=10mA		75		ns

R9 (19-September 2014)

CEDM7001

SURFACE MOUNT SILICON N-CHANNEL ENHANCEMENT-MODE MOSFET

SOT-883L CASE - MECHANICAL OUTLINE



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: H

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

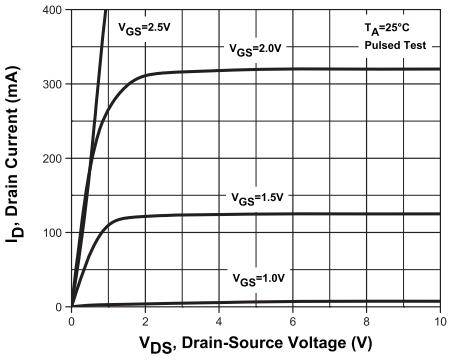
Package	Length	Width	Height	P_D (mW)	Central Item Number
SOT-883L	**1.05**	**0.65**	**0.40**	**100**	**CEDM7001**
SOT-883VL	1.05	0.65	0.32	100	CEDM7001VL
SOT-953	1.05	1.05	0.50	250	CMNDM7001
SOT-523	1.70	1.70	0.78	250	CMUDM7001

CEDM7001

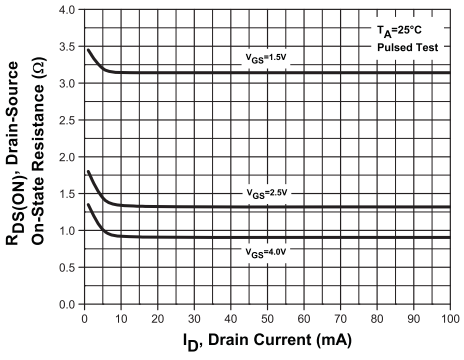
SURFACE MOUNT SILICON N-CHANNEL ENHANCEMENT-MODE MOSFET

TYPICAL ELECTRICAL CHARACTERISTICS

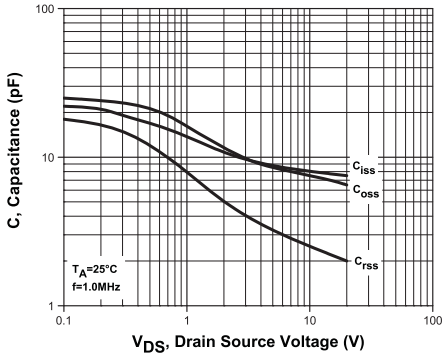
Output Characteristics



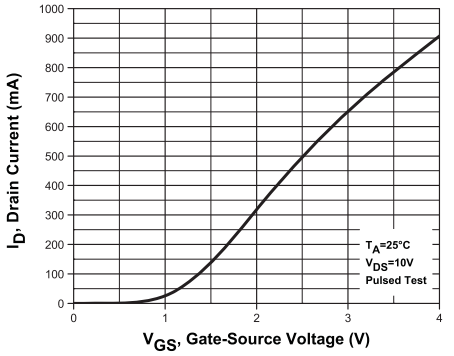
Drain Source On Resistance



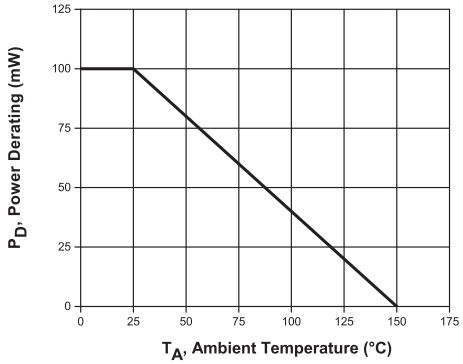
Capacitance



Transfer Characteristics



Power Derating



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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