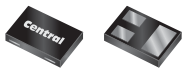
CEDM7004

SURFACE MOUNT SILICON N-CHANNEL ENHANCEMENT-MODE MOSFET



Top View Bottom View

SOT-883L CASE

www.centralsemi.com

DESCRIPTION:

The CENTRAL SEMICONDUCTOR CEDM7004 is an N-Channel Enhancement-mode 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 Threshold Voltage.

MARKING CODE: S

COMPLEMENTARY P-CHANNEL: CEDM8004

FEATURES:

- ESD protection up to 2kV
- 0.4mm low package profile
- Low $r_{DS(ON)}$
- Low threshold voltage
- Logic level compatible
- Small leadless surface mount package

APPLICATIONS:

- Load/Power switches
- Power supply converter circuits
- Battery powered portable devices

MAXIMUM RATING: (T_A=25°C)	**SYMBOL**		**UNITS**
Drain-Source Voltage	V_{DS}	30	V
Gate-Source Voltage	V_{GS}	8.0	V
Continuous Drain Current (T_L=25°C)	I_D	1.78	A
Peak Drain Current, tp≤10μs (T_L=25°C)	I_{DM}	3.56	A
Continuous Source Current (T_L=25°C)	I_S	1.78	A
Peak Source Current, tp≤10μs (T_L=25°C)	I_{SM}	3.56	A
Power Dissipation	P_D	100	mW
Operating and Storage Junction Temperature	T_J, T_{stg}	-65 to +150	°C

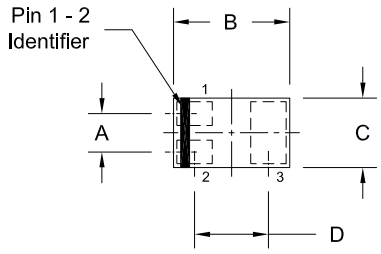
ELECTRICAL CHARACTERISTICS: (T_A=25°C unless otherwise noted)

SYMBOL	**TEST CONDITIONS**	**MIN**	**TYP**	**MAX**	**UNITS**
I_{GSSF}, I_{GSSR}	V_{GS}=8.0V, V_{DS}=0			3.0	μA
I_{DSS}	V_{DS}=30V, V_{GS}=0			1.0	μA
BV_{DSS}	V_{GS}=0, I_D=10μA	30			V
$V_{GS(th)}$	V_{DS}=V_{GS}, I_D=250μA	0.5		1.0	V
V_{SD}	V_{GS}=0, I_S=400mA	0.5		1.1	V
$r_{DS(ON)}$	V_{GS}=4.5V, I_D=200mA		280	460	mΩ
$r_{DS(ON)}$	V_{GS}=2.5V, I_D=100mA		390	560	mΩ
$r_{DS(ON)}$	V_{GS}=1.8V, I_D=75mA		550	730	mΩ
$Q_{g(tot)}$	V_{DS}=15V, V_{GS}=4.5V, I_D=1.0A		0.792		nC
Q_{gs}	V_{DS}=15V, V_{GS}=4.5V, I_D=1.0A		0.15		nC
Q_{gd}	V_{DS}=15V, V_{GS}=4.5V, I_D=1.0A		0.23		nC
g_{FS}	V_{DS} =10V, I_D=100mA	200			mS
C_{rss}	V_{DS}=25V, V_{GS}=0, f=1.0MHz		5.0		pF
C_{iss}	V_{DS}=25V, V_{GS}=0, f=1.0MHz		43		pF
C_{oss}	V_{DS}=25V, V_{GS}=0, f=1.0MHz		8.0		pF
t_{on}	V_{DS}=5.0V, V_{GS}=4.0V, I_D=75mA, R_G=10Ω		20		ns
t_{off}	V_{DS}=5.0V, V_{GS}=4.0V, I_D=75mA, R_G=10Ω		75		ns

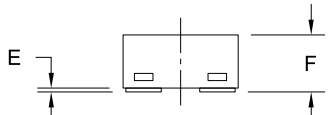
CEDM7004

SURFACE MOUNT SILICON N-CHANNEL ENHANCEMENT-MODE MOSFET

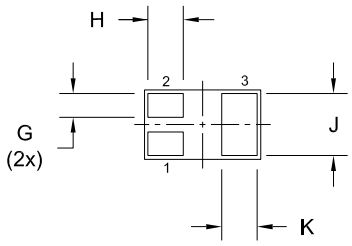
SOT-883L CASE - MECHANICAL OUTLINE



TOP VIEW



SIDE VIEW

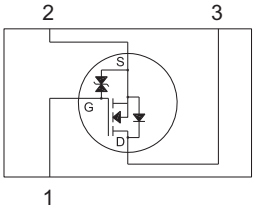


BOTTOM VIEW R2

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)

PIN CONFIGURATION
(Bottom View)



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

MARKING CODE: S

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

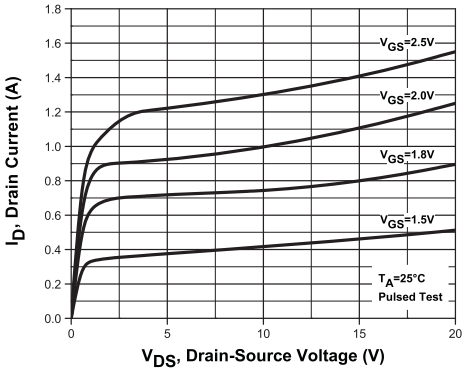
Package	Length	Width	Height	P_D (mW)	Central Item Number
SOT-883L	**1.05**	**0.65**	**0.40**	**100**	**CEDM7004**
SOT-883VL	1.05	0.65	0.32	100	CEDM7004VL
SOT-523	1.70	1.70	0.78	250	CMUDM7004

CEDM7004

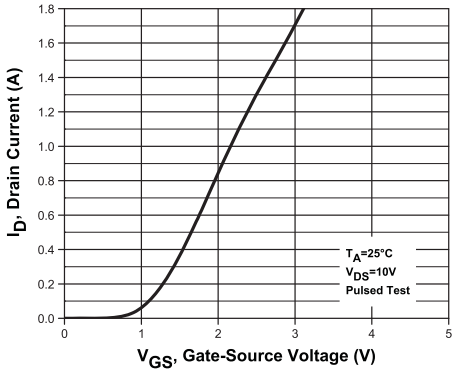
SURFACE MOUNT SILICON N-CHANNEL ENHANCEMENT-MODE MOSFET

TYPICAL ELECTRICAL CHARACTERISTICS

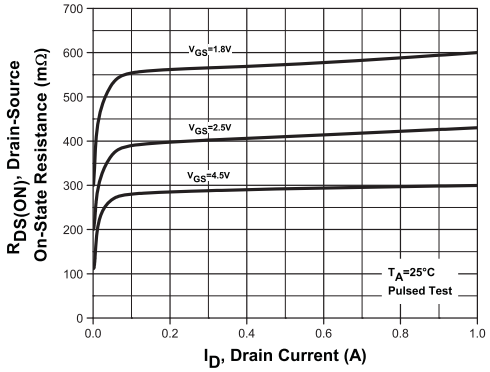
Output Characteristics



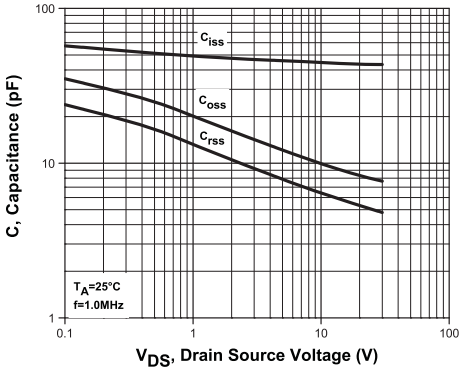
Transfer Characteristics



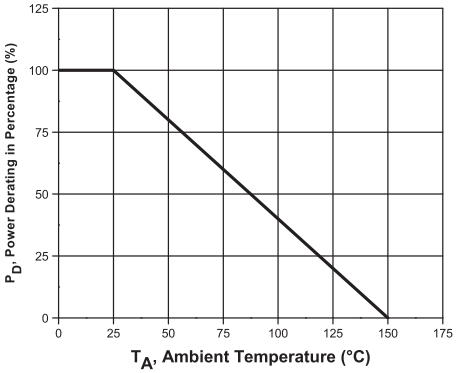
Drain Source On Resistance



Capacitance



Normalized 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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