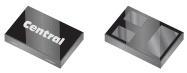
CEDM7004

SURFACE MOUNT
N-CHANNEL
ENHANCEMENT-MODE
SILICON MOSFET

TLP™ Tiny Leadless Package



Top View Bottom View

SOT-883L CASE

• Devices are ***Halogen Free*** by design

APPLICATIONS:
- Load/Power Switches
- Power Supply Converter Circuits
- Battery Powered Portable Devices

Central Semiconductor Corp.

www.centralsemi.com

DESCRIPTION:

The CENTRAL SEMICONDUCTOR CEDM7004 is an Enhancement-mode N-Channel Field Effect Transistor, 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

FEATURES:
- ESD Protection up to 2kV
- 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

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

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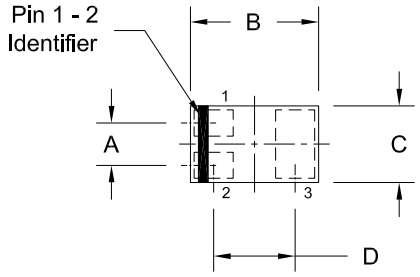
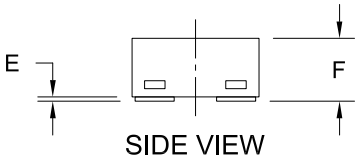
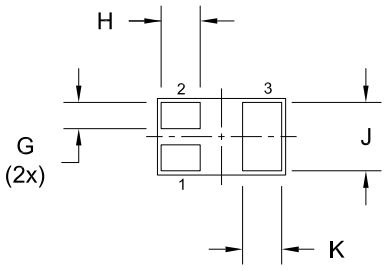
SOT-883L CASE - MECHANICAL OUTLINE



TOP VIEW



SIDE VIEW

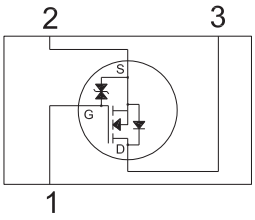


BOTTOM VIEW R2

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

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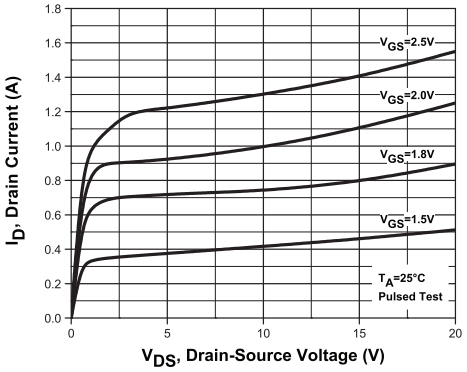
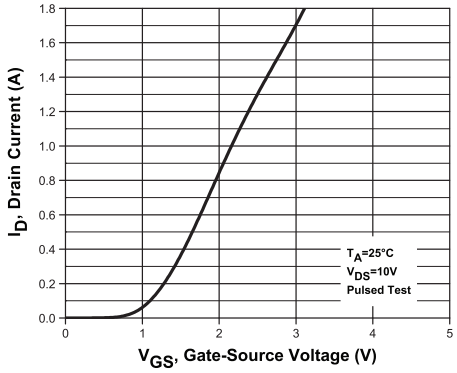
TYPICAL ELECTRICAL CHARACTERISTICS

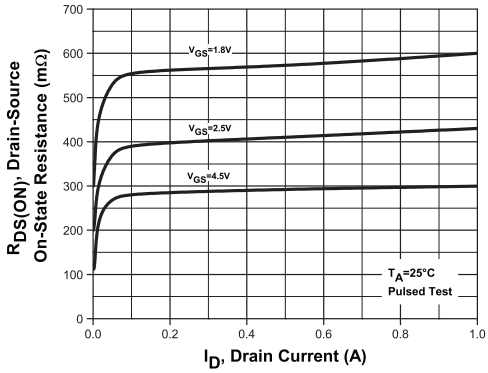
Output Characteristics



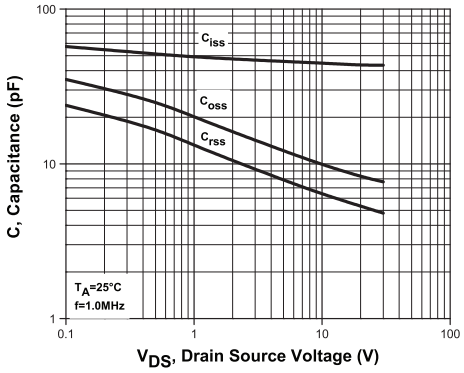
Transfer Characteristics



Drain Source On Resistance



Capacitance



Normalized Power Derating