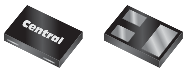
CEDM8004VL

SURFACE MOUNT SILICON P-CHANNEL ENHANCEMENT-MODE MOSFET


Top View Bottom View

SOT-883VL CASE

Central Semiconductor Corp.

www.centralsemi.com

DESCRIPTION:
The CENTRAL SEMICONDUCTOR CEDM8004VL is an P-Channel Enhancement-mode 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 threshold voltage.

MARKING CODE: V

COMPLEMENTARY N-CHANNEL: CEDM7004VL

FEATURES:
- ESD protection up to 2kV
- 0.32mm very 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	I_D	450	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}=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=100μA	30			V
$V_{GS(th)}$	V_{DS}=V_{GS}, I_D=250μA	0.5		1.0	V
V_{SD}	V_{GS}=0, I_S=100mA			1.1	V
$r_{DS(ON)}$	V_{GS}=4.5V, I_D=430mA		1.0	1.1	Ω
$r_{DS(ON)}$	V_{GS}=2.5V, I_D=200mA		1.6	2.0	Ω
$r_{DS(ON)}$	V_{GS}=1.8V, I_D=100mA		2.6	3.3	Ω
g_{FS}	V_{DS} =10V, I_D=100mA	200			mS
C_{rss}	V_{DS}=25V, V_{GS}=0, f=1.0MHz		8.9	10	pF
C_{iss}	V_{DS}=25V, V_{GS}=0, f=1.0MHz		45	55	pF
C_{oss}	V_{DS}=25V, V_{GS}=0, f=1.0MHz		8.5	15	pF
$Q_{g(tot)}$	V_{DS}=10V, V_{GS}=4.5V, I_D=1.0A		0.88		nC
Q_{gs}	V_{DS}=10V, V_{GS}=4.5V, I_D=1.0A		0.35		nC
Q_{gd}	V_{DS}=10V, V_{GS}=4.5V, I_D=1.0A		0.128		nC

R3 (21-November 2014)

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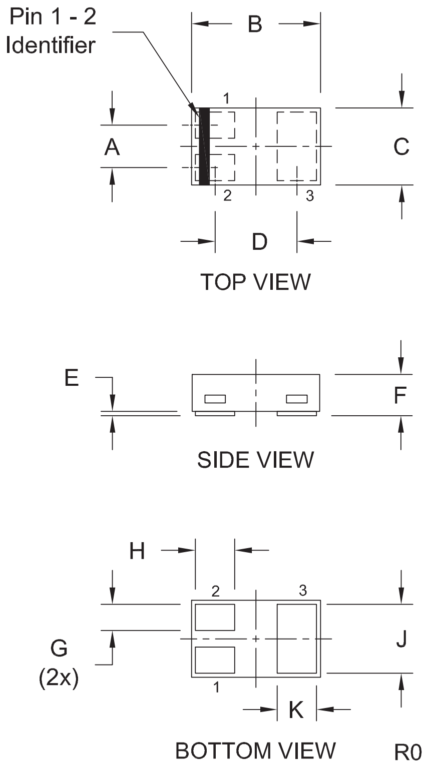
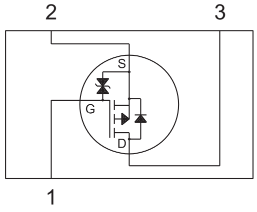
SOT-883VL CASE - MECHANICAL OUTLINE



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	0.013	0.30	0.32
G	0.004	0.008	0.10	0.20
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-883VL (REV:R0)

PIN CONFIGURATION
(Bottom View)



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

MARKING CODE: V

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

Package	Length	Width	Height	P_D (mW)	Central Item Number
SOT-883VL	**1.05**	**0.65**	**0.32**	**100**	**CEDM8004VL**
SOT-883L	1.05	0.65	0.40	100	CEDM8004
SOT-523	1.70	1.70	0.78	250	CMUDM8004

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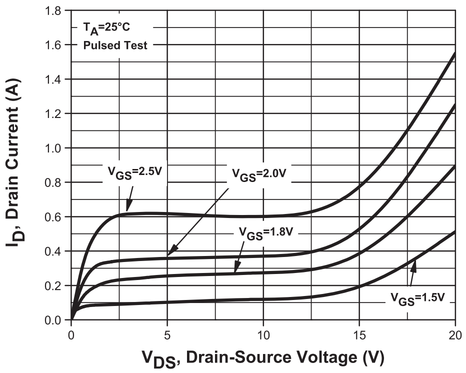
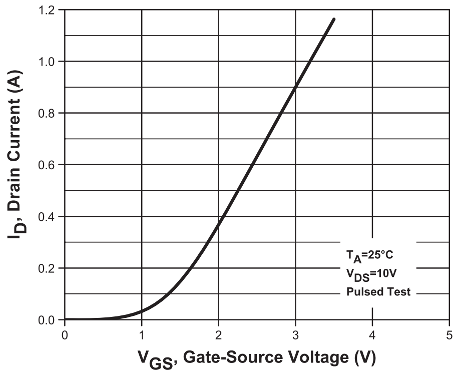
TYPICAL ELECTRICAL CHARACTERISTICS

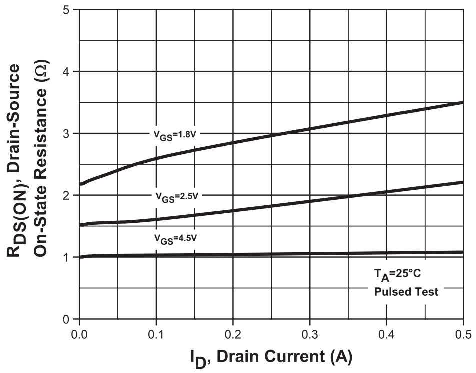
Output Characteristics



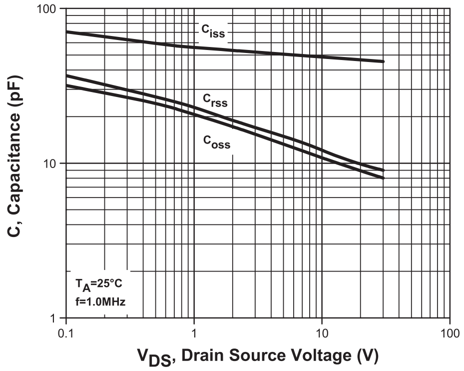
Transfer Characteristics



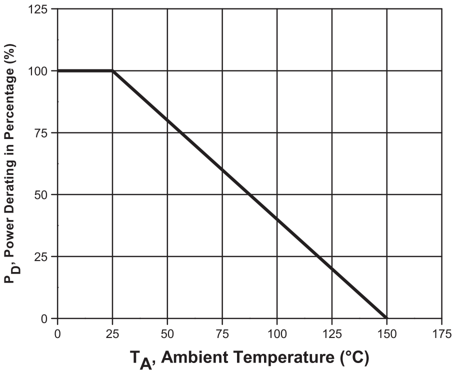
Drain Source On Resistance



Capacitance



Normalized Power Derating



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SERVICES

- Bonded Inventory
- Custom Electrical Screening
- Custom Electrical Characteristic Curves
- SPICE Models
- Custom Packaging
- Package Base Options
- Custom Device Development / Multi Discrete Modules (MDM™)
- Bare Die for Hybrid Applications

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