CEDM7004VL

SURFACE MOUNT SILICON N-CHANNEL ENHANCEMENT-MODE MOSFET



APPLICATIONS:

Load/Power switches

- Power supply converter circuits
- Battery powered portable devices



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DESCRIPTION:

The CENTRAL SEMICONDUCTOR CEDM7004VL 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: CEDM8004VL

FEATURES:

- ESD protection up to 2kV
- 0.32mm very low package profile
- Low rDS(ON)
- · Low threshold voltage
- Logic level compatible
- Small 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	ID	450	mA
Continuous Drain Current (TL=25°C)	۱ _D	1.78	А
Peak Drain Current, tp≤10µs (T _L =25°C)	I _{DM}	3.56	А
Continuous Source Current (TL=25°C)	IS	1.78	А
Peak Source Current, tp≤10µs (T _L =25°C)	ISM	3.56	А
Power Dissipation	PD	100	mW
Operating and Storage Junction Temperature	T _J , T _{stg}	-65 to +150	°C

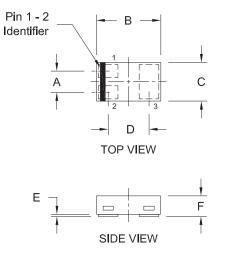
ELECTRICAL CHARACTERISTICS: (T_A=25°C unless otherwise noted)

SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNITS	
IGSSF, IGSSF	V _{GS} =8.0V, V _{DS} =0			3.0	μA	
IDSS	V _{DS} =30V, V _{GS} =0			1.0	μA	
BVDSS	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	
rDS(ON)	V _{GS} =2.5V, I _D =100mA		390	560	mΩ	
rDS(ON)	V _{GS} =1.8V, I _D =75mA		550	730	mΩ	
9FS Í	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	
Q _{g(tot)}	V _{DS} =15V, V _{GS} =4.5V, I _D =1.0A		0.792		nC	
Qgs	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	
ton	V_{DS} =5.0V, V_{GS} =4.0V, I_{D} =75mA, R_{G} =10 Ω		20		ns	
^t off	V_{DS} =5.0V, V_{GS} =4.0V, I_{D} =75mA, R_{G} =10 Ω		75		ns	
				R2 (2	1-November 2	.014)





SURFACE MOUNT SILICON N-CHANNEL ENHANCEMENT-MODE MOSFET



DIMENSIONS				
	INCHES		MILLIM	ETERS
SYMBOL	MIN	MAX	MIN	MAX
A	0.014		0.	35
В	0.037	0.041	0.95	1.05
С	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
Н	0.008	0.012	0.20	0.30
Ĵ	0.018	0.022	0.45	0.55
K	0.008	0.012	0.20	0.30
SOT-883VL (REV:R0)				

SOT-883VL CASE - MECHANICAL OUTLINE

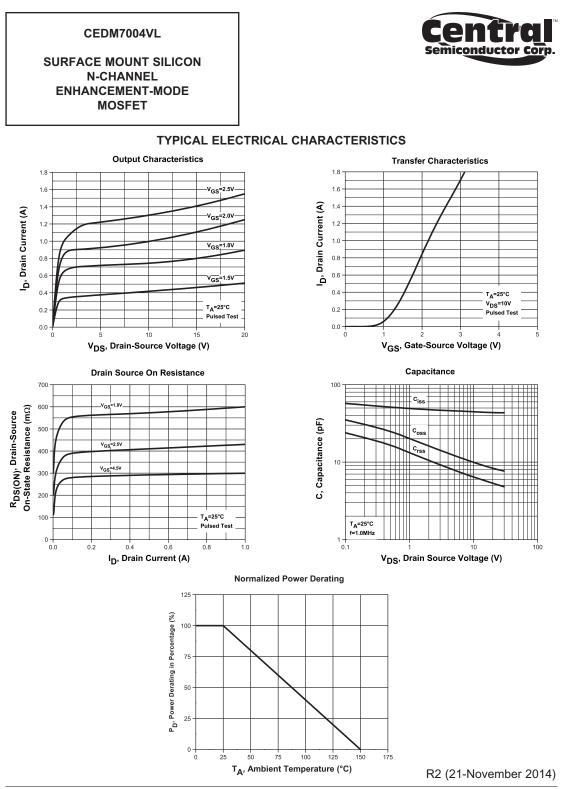
MARKING CODE: S

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	CEDM7004VL
SOT-883L	1.05	0.65	0.40	100	CEDM7004
SOT-523	1.70	1.70	0.78	250	CMUDM7004

R2 (21-November 2014)

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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

DESIGNER SUPPORT/SERVICES

Central's applications engineering team is ready to discuss your design challenges. Just ask.

- Free guick 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

· Custom product packing

Custom bar coding for shipments

- Special wafer diffusions
- PbSn plating options
- Package details
- Application notes
- · Application and design sample kits
- · Custom product and package development

REQUESTING PRODUCT PLATING

- If requesting Tin/Lead plated devices, add the suffix "TIN/LEAD" to the part number when 1. 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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Product End of Life Notification

PDN ID:	PDN01168
Notification Date:	4/01/21
Last Buy Date:	
Last Shipment Date	Stock Only

http://www.centralsemi.com

Please be advised that Central Semiconductor must immediately discontinue the product(s) listed in the attached PDN notice. Orders can only be accepted for products with available inventory on hand.

You may have purchased one or more of the products listed. Please do not hesitate to contact your local Central Semiconductor sales representative with any questions or needs you may have. Central regrets any inconvenience this may cause.

Sincerely,

Central Semiconductor Corp.

DISCLAIMER: This End of Life (EOL) notification is in accordance with JEDEC standard JESD48 - Product Discontinuance. Central Semiconductor Corp. will make every effort to offer life-time buy (LTB) opportunities and/or offer replacement devices to existing customers for discontinued devices, however, one or both may not be possible for all devices. Please contact your local Central Semiconductor sales representative for LTB opportunities/additional information.



Product End of Life Notification

PDN ID:	PDN01168
Notification Date:	4/01/21
Last Buy Date:	
Last Shipment Date	Stock Only

Summary:All devices manufactured in the SOT-883VL package are discontinued and now classified as End of Life (EOL).

Although Central Semiconductor Corp. makes every effort to continue to produce devices that have been proclaimed EOL (End of Life) by other manufacturers, it is an accepted industry practice to discontinue certain devices when customer demand falls below a minimum level of sustainability. Accordingly, the following product(s) have been transitioned to End of Life status as part of Central's ongoing Product Management Process. Any replacement products are noted below. The effective date for placing last purchase orders will be six (6) months from the date of this notice and twelve (12) months from the notice date for final shipments, and minimum order quantities may apply. The last purchase and shipment dates may be extended if inventory is available.

* All Plating types (PBFREE,TIN/LEAD) for each item listed are included in this notice.

Central Part Number	Replacement
CEDM7001VL BK	N/A
CEDM7001VL TR	N/A
CEDM7004VL BK	N/A
CEDM7004VL TR	N/A
CEDM8001VL BK	N/A
CEDM8001VL TR	N/A
CEDM8004VL TR	N/A
CET3904EVL TR	N/A
CET3906EVL TR	N/A

Central would be happy to assist you by providing additional information or technical data to help locate an alternate source if we have no replacement available. Please email your requests to engineering@centralsemi.com.

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