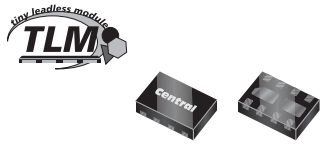
CTLDM8120-M832DS

SURFACE MOUNT
DUAL P-CHANNEL
ENHANCEMENT-MODE
SILICON MOSFET



Top View Bottom View

TLM832DS CASE

APPLICATIONS:
- Switching Circuits
- DC-DC Converters
- Battery powered portable devices

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DESCRIPTION:
The CENTRAL SEMICONDUCTOR CTLDM8120-M832DS is an Enhancement-mode Dual P-Channel 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: CFVS

FEATURES:
- ESD protection up to 2kV
- Low $r_{DS(ON)}$ (0.24Ω MAX @ V_{GS}=1.8V)
- High current (I_D=0.95A)
- Logic level compatibility

MAXIMUM RATINGS: (T_A=25°C)	**SYMBOL**		**UNITS**
Drain-Source Voltage	V_{DS}	20	V
Gate-Source Voltage	V_{GS}	8.0	V
Continuous Drain Current (Steady State)	I_D	0.86	A
Continuous Drain Current, t≤5.0s	I_D	0.95	A
Continuous Source Current (Body Diode)	I_S	0.36	A
Maximum Pulsed Drain Current, tp=10μs	I_{DM}	4.0	A
Maximum Pulsed Source Current, tp=10μs	I_{SM}	4.0	A
Power Dissipation (Note 1)	P_D	1.65	W
Operating and Storage Junction Temperature	T_J, T_{stg}	-65 to +150	°C
Thermal Resistance (Note 1)	Θ_{JA}	76	°C/W

ELECTRICAL CHARACTERISTICS PER TRANSISTOR: (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		1.0	50	nA
I_{DSS}	V_{DS}=20V, V_{GS}=0		5.0	500	nA
BV_{DSS}	V_{GS}=0, I_D=250μA	20	24		V
$V_{GS(th)}$	V_{DS}=V_{GS}, I_D=250μA	0.45	0.76	1.0	V
V_{SD}	V_{GS}=0, I_S=360mA			0.9	V
$r_{DS(ON)}$	V_{GS}=4.5V, I_D=0.95A		0.085	0.150	Ω
$r_{DS(ON)}$	V_{GS}=4.5V, I_D=0.77A		0.085	0.142	Ω
$r_{DS(ON)}$	V_{GS}=2.5V, I_D=0.67A		0.130	0.200	Ω
$r_{DS(ON)}$	V_{GS}=1.8V, I_D=0.2A		0.190	0.240	Ω
$Q_{g(tot)}$	V_{DS}=10V, V_{GS}=4.5V, I_D=1.0A		3.56		nC
Q_{gs}	V_{DS}=10V, V_{GS}=4.5V, I_D=1.0A		0.36		nC
Q_{gd}	V_{DS}=10V, V_{GS}=4.5V, I_D=1.0A		1.52		nC
g_{FS}	V_{DS}=10V, I_D=810mA	2.0			S
C_{rss}	V_{DS}=16V, V_{GS}=0, f=1.0MHz		80		pF
C_{iss}	V_{DS}=16V, V_{GS}=0, f=1.0MHz		200		pF
C_{oss}	V_{DS}=16V, V_{GS}=0, f=1.0MHz		60		pF
t_{on}	V_{DD}=10V, V_{GS}=4.5V, I_D=0.95A, R_G=6.0Ω		20		ns
t_{off}	V_{DD}=10V, V_{GS}=4.5V, I_D=0.95A, R_G=6.0Ω		25		ns

Notes: (1) FR-4 Epoxy PCB with copper mounting pad area of 54mm^2

R0 (2-March 2012)

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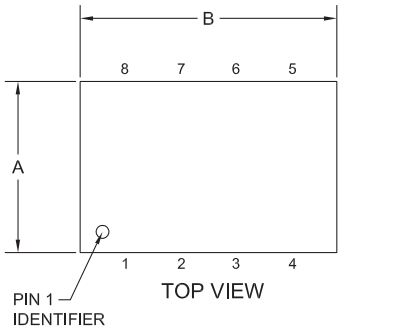
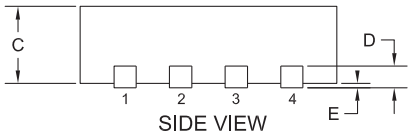
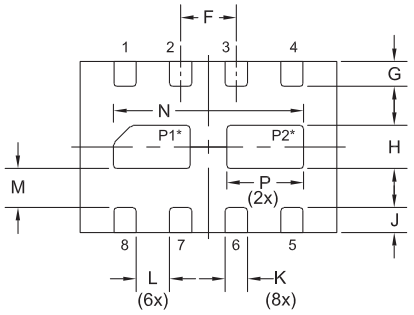
ENHANCEMENT-MODE
SILICON MOSFET

TLM832DS CASE - MECHANICAL OUTLINE





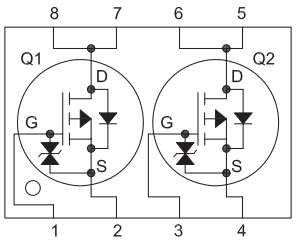


* Exposed pad P1 common to pins 7 and 8
Exposed pad P2 common to pins 5 and 6

DIMENSIONS				
	INCHES		MILLIMETERS	
SYMBOL	MIN	MAX	MIN	MAX
A	0.077	0.081	1.95	2.05
B	0.116	0.120	2.95	3.05
C	0.031	0.039	0.80	1.00
D	0.006	0.010	0.16	0.25
E	0.000	0.002	0.00	0.05
F	0.026		0.65	
G	0.008	0.016	0.19	0.40
H	0.014	0.024	0.35	0.61
J	0.008	0.016	0.19	0.40
K	0.008	0.012	0.21	0.31
L	0.013	0.017	0.34	0.44
M	0.006	–	0.15	–
N	0.087		2.22	
P	0.029	0.039	0.74	1.00

TLM832DS (REV:R1)

PIN CONFIGURATION



LEAD CODE:

1) Gate Q1
2) Source Q1
3) Gate Q2
4) Source Q2
5) Drain Q2
6) Drain Q2
7) Drain Q1
8) Drain Q1

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R0 (2-March 2012)

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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www.centralsemi.com

Worldwide Field Representatives:
www.centralsemi.com/wwreps

Worldwide Distributors:
www.centralsemi.com/wwdistributors

http://www.centralsemi.com

Product End of Life Notification

PDN ID:	PDN01077
Notification Date:	4/05/18
Last Buy Date:	N/A
Last Shipment Date	N/A

Please be advised that Central Semiconductor must immediately discontinue the product(s) listed in the attached PDN notice. We are unable to accept any further orders for these products **unless** we have 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.

http://www.centralsemi.com

Product End of Life Notification

PDN ID:	PDN01077
Notification Date:	4/05/18
Last Buy Date:	N/A
Last Shipment Date	N/A

Summary:The following devices in the TLM832DS package are being discontinued and are 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 various 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 Product Management Process. Any replacement product will be noted below. The effective date for placing the last purchase order will be six(6) months from the date of this notice and twelve(12) months from the notice date for final shipments; this may be extended if inventory is available.

Central Part Number	Replacement
CTLDM303N-M832DS BK	N/A
CTLDM303N-M832DS TR	N/A
CTLDM304P-M832DS TR	N/A
CTLDM7120-M832DS BK	N/A
CTLDM7120-M832DS TR	N/A
CTLDM8120-M832DS BK	N/A
CTLDM8120-M832DS TR	N/A
CTLSH1-40M832DS BK	N/A
CTLSH1-40M832DS TR	N/A
CTLSH1-50M832DS BK	N/A
CTLSH1-50M832DS 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.