CM3 0 -0

DDR VDDQ and VTT Termination Voltage Regulator

ON Semiconductor

http://onsemi.com

WDFN8
DE SUFFIX
CASE 511BH

Product Description

Features

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Applications

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MARKING DIAGRAM

CM320 202DE = CM3202−02DE

ORDERING INFORMATION

Device	Package	Shipping†
CM3202−02DE	WDFN8 (Pb−Free)	3000/Tape & Reel

†For information on tape and reel specifications, including part orientation and tape sizes, please refer to our Tape and Reel Packaging Specification Brochure, BRD8011/D.

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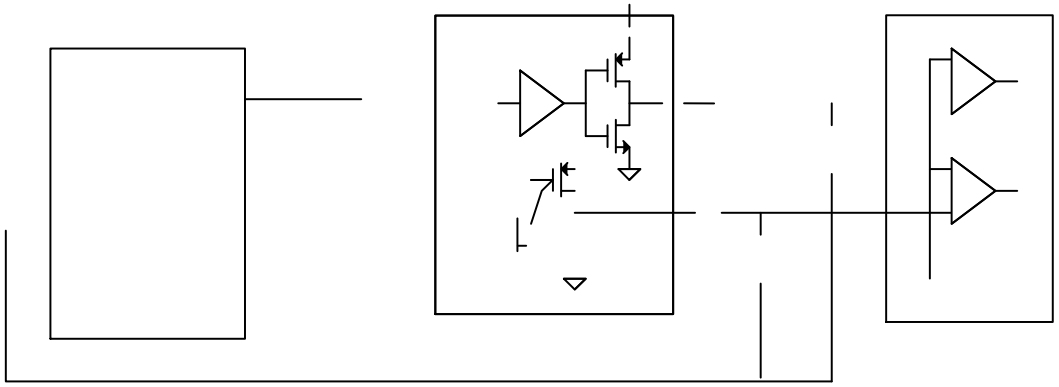
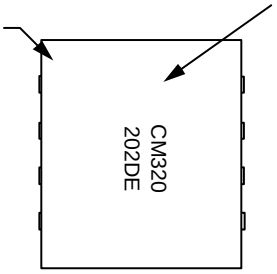


PACKAGE / PINOUT DIAGRAMS

Top View
(Pins Down View)



SPECIFICATIONS

Table 2. ABSOLUTE MAXIMUM RATINGS

Parameter	Rating	Units
VIN to GND	[GND − 0.3] to +6.0	V
Pin Voltages V_{DDQ}, V_{TT} to GND ADJSD to GND	 [GND − 0.3] to +6.0 [GND − 0.3] to +6.0	V
Output Current VDDQ / VTT, continuous (Note 1) VDDQ / VTT, peak VDDQ Source + VTT Source	 2.0 / ±2.0 2.8 / ±2.8 3	A
Temperature Operating Ambient Operating Junction Storage	 –40 to +85 –40 to +170 –40 to +150	°C
Thermal Resistance, R_{JA} (Note 2)	55	°C / W
Continuous Power Dissipation (Note 2) WDFN8, T_A = 25°C / 85°C	 2.6 / 1.5	W
ESD Protection (HBM)	2000	V
Lead Temperature (soldering, 10 sec)	300	°C

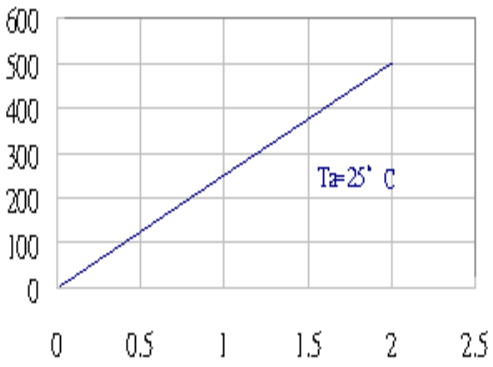
Stresses exceeding Maximum Ratings may damage the device. Maximum Ratings are stress ratings only. Functional operation above the Recommended Operating Conditions is not implied. Extended exposure to stresses above the Recommended Operating Conditions may affect device reliability.

1. Despite the fact that the device is designed to handle large continuous/peak output currents, it is not capable of handling these under all conditions. Limited by the package thermal resistance, the maximum output current of the device cannot exceed the limit imposed by the maximum power dissipation value.
2. Measured with the package using a 4 in^2 / 2 layers PCB with thermal vias.

Table 3. STANDARD OPERATING CONDITIONS

Parameter	Rating	Units
Ambient Operating Temperature Range	–40 to +85	°C
VDDQ Regulator Supply Voltage, VIN Load Current, Continuous Load Current, Peak (1 sec) C_{DDQ} to GND3.0 to 3.6 2.8 /	 3.0 to 3.6 0 to 2 2.5 220	 V A A220 0.3] to +6.0

TYPICAL OPERATING CHARACTERISTICS



APPLICATION INFORMATION (Cont'd)

$$I_{terminaton} = \frac{0\ \ mV}{Rt(2\ \ \Omega)} = 1\ \ .2\ mA$$

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CM3202−02 Regulator

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APPLICATION INFORMATION (Cont’d)

Adjusting VDDQ Output Voltage

APPLICATION INFORMATION (Cont'd)

PCB Layout Considerations

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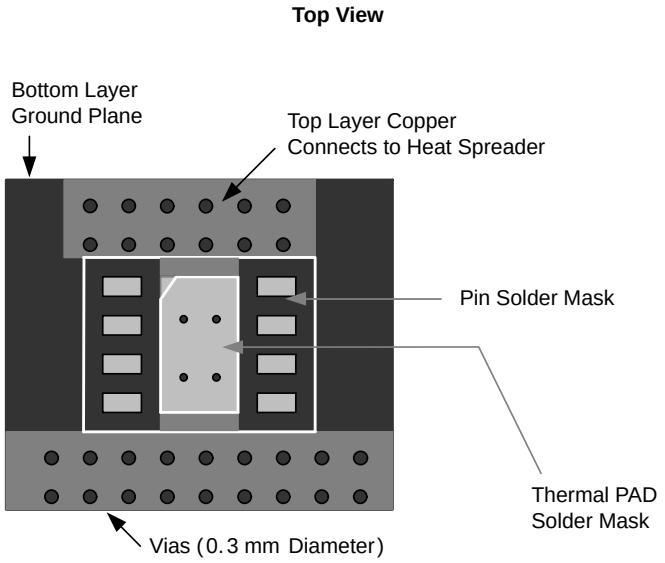
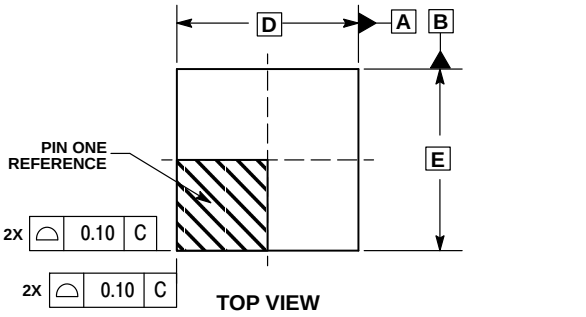


Figure 2. Thermal Layout for WDFN8 Package

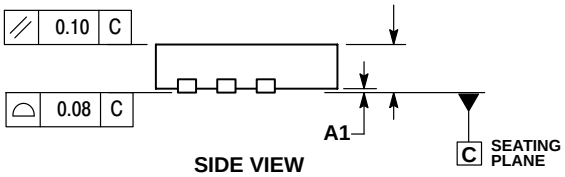
WDFN8 3x3, 0.65P
CASE 511BH
ISSUE O

DATE 21 JUL 2010

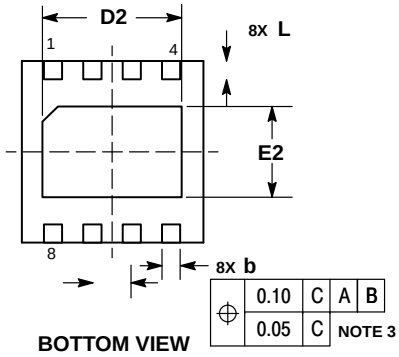
SCALE 2:1



TOP VIEW



SIDE VIEW

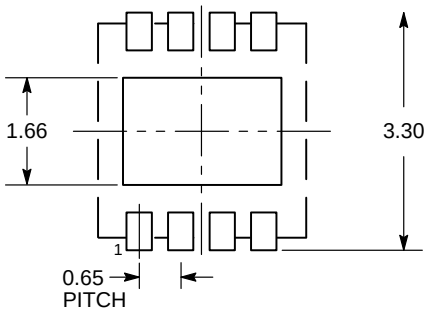


BOTTOM VIEW

NOTES:
1. DIMENSIONING AND TOLERANCING PER ASME Y14.5M, 1994.
2. CONTROLLING DIMENSION: MILLIMETERS.
3. DIMENSION b APPLIES TO PLATED TERMINAL AND IS MEASURED BETWEEN 0.15 AND 0.30 MM FROM TERMINAL TIP.
4. COPLANARITY APPLIES TO THE EXPOSED PAD AS WELL AS THE TERMINALS.

	MILLIMETERS	
DIM	**MIN**	**MAX**
A	0.70	0.80
A1	0.00	0.05
b	0.25	0.35
D	3.00 BSC	
D2	2.20	2.40
E	3.00 BSC	
E2	1.40	1.60
e	0.65 BSC	
L	0.20	0.40

SOLDERING FOOTPRINT*



*For additional information on our Pb−Free strategy and soldering details, please download the **onsemi** Soldering and Mounting Techniques Reference Manual, SOLDERRM/D.

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