ON Semiconductor

PRODUCT BULLETIN # 16505

Issue Date: 17-Aug-2010

TITLE: NCV8184 Datasheet Change (Current Limit Spec)

PROPOSED FIRST SHIP DATE: 17-Aug-2010

AFFECTED CHANGE CATEGORY(S): Datasheet Only

FOR ANY QUESTIONS CONCERNING THIS NOTIFICATION:

Contact your local ON Semiconductor sales office or Bill Fontes<Bill.Fontes@onsemi.com>

NOTIFICATION TYPE:

ON Semiconductor considers this change approved unless specific conditions of acceptance are provided in writing. To do so, contact <quality@onsemi.com>.

DESCRIPTION AND PURPOSE:

For the parameter “Current Limit”, the maximum limit will be lowered from 400mA to 225mA.

ELECTRICAL CHARACTERISTICS (V_{IN} = 14 V; V_{REF}/ENABLE > 2.1 V; −40°C < T_J < +150°C; C_{OUT} = 1.0 μF; I_{OUT} = 1.0 mA; Adj = V_{OUT}; $C_{OUT-ESR}$ = 1.0 Ω, unless otherwise specified.)

Parameter	Test Conditions	Min	Typ	Max	Unit
REGULATOR OUTPUT					
V_{REF}/ENABLE − V_{OUT} V_{OUT} Tracking Error	5.7 V ≤ V_{IN} ≤ 26 V, 100 μA ≤ I_{OUT} ≤ 60 mA 2.1 V ≤ V_{REF}/ENABLE ≤ (V_{IN} − 600 mV)	−3.0	–	3.0	mV
Dropout Voltage (V_{IN} − V_{OUT})	I_{OUT} = 100 μA I_{OUT} = 5.0 mA I_{OUT} = 60 mA	– – –	100 250 350	150 500 600	mV mV mV
Line Regulation	5.7 V ≤ V_{IN} ≤ 26 V, V_{REF}/ENABLE = 5.0 V	–	–	3.0	mV
Load Regulation	100 μA ≤ I_{OUT} ≤ 60 mA, V_{REF}/ENABLE = 5.0 V	–	–	3.0	mV
Adj Input Bias Current	V_{REF}/ENABLE = 5.0 V	–	0.2	6.0	μA
Current Limit	V_{IN} = 14 V, V_{REF} = 5.0 V, V_{OUT} = 90% of V_{REF} (Note 3)	70	–	225	mA
Quiescent Current (I_{IN} − I_{OUT})	V_{IN} = 12 V, I_{OUT} = 60 mA V_{IN} = 12 V, I_{OUT} = 100 μA V_{IN} = 12 V, V_{REF}/ENABLE = 0 V	– – –	5.0 50 –	7.0 70 20	mA μA μA
Ripple Rejection	f = 120 Hz, I_{OUT} = 60 mA, 6.0 V ≤ V_{IN} ≤ 26 V	60	–	–	dB
Thermal Shutdown	Guaranteed by Design	150	180	210	°C
V_{REF}/ENABLE					
Enable Voltage	–	0.8	–	2.1	V
Input Bias Current	V_{REF}/ENABLE = 5.0 V	–	0.2	3.0	μA

3. V_{OUT} connected to Adj lead.

The purpose of this change is to align the datasheet more closely with the device capability. Manufacturing data has shown that the NCV8184 is easily capable of meeting this tighter specification.

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List of Affected Parts:

NCV8184PDG
NCV8184PDR2G
NCV8184DG
NCV8184DR2G
NCV8184DTRKG