

Test Procedure for the NCP5212AGEVB Evaluation Board



ON Semiconductor



Demonstration Board Jumper Location Map





Equipment List

| Item | Qty | Description | | |
|------|-----|--|--|--|
| 1 | 1 | Electronic Load. KIKUSUI-PLZ153W or equivalent. | | |
| 2 | 2 | Power Supply. AGILENT-E3632A or equivalent. (Note: build-in ammeter) | | |
| 3 | 1 | Digital Multimeter. AGILENT-34401A or equivalent. | | |
| 4 | 1 | Tekronix TDS460A CRO or equivalent. | | |

Demonstration Board Jumper Setting

| Jumper | Status | Description | | |
|--------|--------|--|--|--|
| JP1 | | Sync (not used for demo board test) | | |
| | - | Default = open | | |
| ID2 | | Mode selection | | |
| JP2 | - | Default = see "Demo board jumper location map" diagram | | |
| | | Device enable pin. | | |
| ID2 | | Open = device is operating | | |
| JFS | - | Short = device shut down | | |
| | | Default = open | | |

Demonstration Board Terminal Pins List

| Terminal | Description | |
|----------|--|--|
| VIN | Device input voltage (5-27V) | |
| PGND | Device power ground | |
| +5V | Device analog circuit bias $(4.5 \sim 5.5 \text{V})$ | |
| AGND | Device analog ground | |

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Test Procedures

- 1. All Jumpers are set as "Default"
- 2. Set up the demonstration board shown at "Equipment Set Up Diagram"
- 3. Set PSU1=20V, PSU2=5V. For safety set current limit of PSU1=2A, PSU2=0.1A
- 4. Measuring results are tabulated in the following table

| e-Load | PSU1 Current Consumption | Vo | LED | Comment |
|----------------|-----------------------------|----------------|----------------------|------------------------------|
| 0 | ~0A | 1.52-1.54V | ON | See scope waveform 1 |
| 2 | 0.15-19A | 1.52-1.54V | ON | See scope waveform 2 |
| 5 | 0.38-0.47A | 1.52-1.54V | ON | See scope waveform 3 |
| 8 | 0.62-0.76A | 1.52-1.54V | ON | See scope waveform 3 |
| 8 → 15A | - | Vo → 0V | $ON \rightarrow OFF$ | Over current protection test |
| | | | | · |

Note: PSU = Power Supply Unit e-Load = Electronic Load

Note:

The current consumption of PSU2 should be below 20mA for all tests.





Scope Waveform 1 – e-Load=0A

Scope Waveform 2 – e-Load=2A





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