

NCP51199, NCV51199

C1 = 1 μ F (Low ESR)
C2 = 470 μ

C4 = 1000 μ F + 10 μ F (10 μ F ceramic)

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ABSOLUTE MAXIMUM RATINGS

Rating	Symbol	Value	Unit
Input Supply Voltage Range ($V_{CC} \geq PV_{CC}$) (Note 1)	PV_{CC}, V_{CC}	-0.3 to 6	V
Output Voltage Range	V_{TT}	-0.3 to 6	V
Reference Input Range	V_{REF}	-0.3 to 6	V
Maximum Junction Temperature	$T_{J(max)}$	125	

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ELECTRICAL CHARACTERISTICS

$PV_{CC} = 1.8\text{ V} / 1.5\text{ V}$; $V_{CC} = 5\text{ V}$; $V_{REF} = 0.9\text{ V} / 0.75\text{ V}$; $C_{OUT} = 10\text{ }\mu\text{F}$ (Ceramic); $T_A = +25^\circ\text{C}$, unless otherwise noted.

Parameter	Test Conditions	Symbol	Min	Typ	Max	Unit
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REGULATOR OUTPUT

Output Offset Voltage	$I_{out} = 0\text{ A}$	V_{OS}	-20	-	+20	mV
Load Regulation	$V_{REF} = 900\text{ mV}$, $I_{out} = \pm 1.8\text{ A}$, $PV_{CC} = 1.8\text{ V}$ $V_{REF} = 750\text{ mV}$, $I_{out} = \pm 1.4\text{ A}$, $PV_{CC} = 1.5\text{ V}$	Reg_{load}	-10	-	+10	mV

INPUT AND STANDBY CURRENTS

Bias Supply Current	$I_{out} = 0\text{ A}$	I_{BIAS}	-	0.8	2.5	mA
Standby Current	$V_{REF} < 0.2\text{ V}$ (Shutdown), $R_{LOAD} = 180\Omega$	I_{STB}	-	1	90	μA

CURRENT LIMIT PROTECTION

Current Limit	$PV_{CC} = 1.8\text{ V}$, $V_{REF} = 0.9\text{ V}$	I_{LIM}	2.0	-	3.5	A
	$PV_{CC} = 1.5\text{ V}$, $V_{REF} = 0.75\text{ V}$		1.5			

TYPICAL CHARACTERISTICS

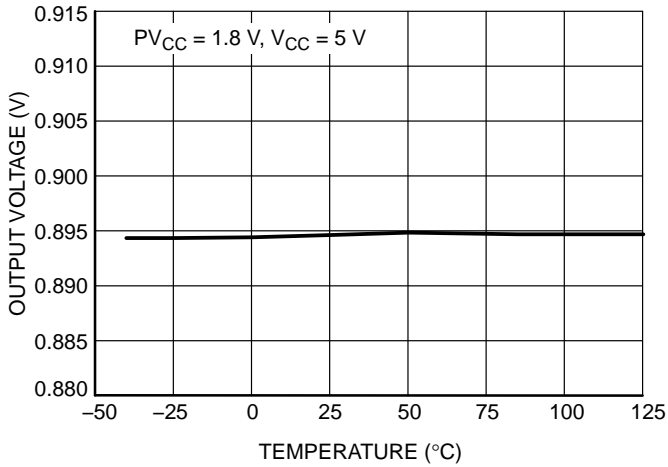


Figure 2. Output Voltage vs. Temperature

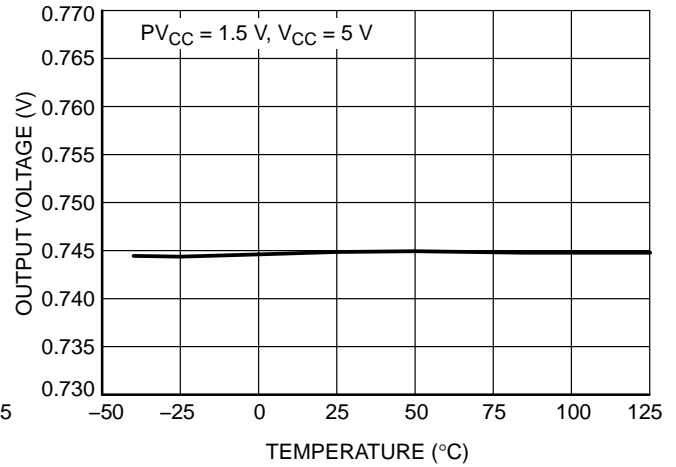


Figure 3. Output Voltage vs. Temperature

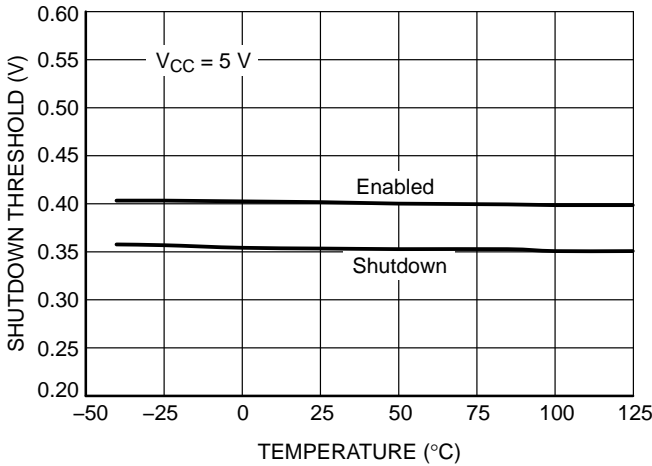


Figure 4. Shutdown Threshold vs. Temperature

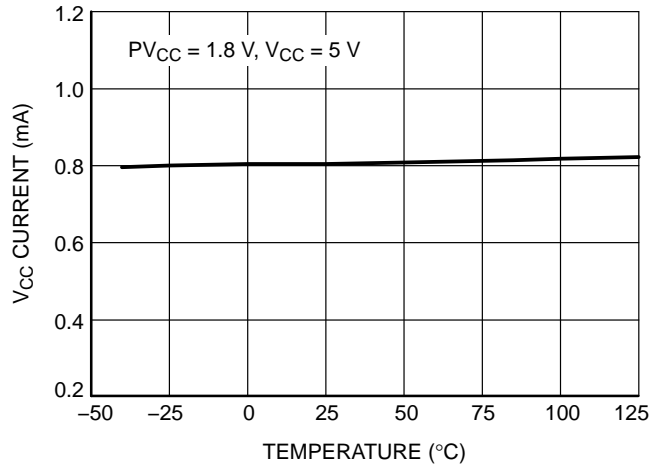


Figure 5. VCC Current vs. Temperature

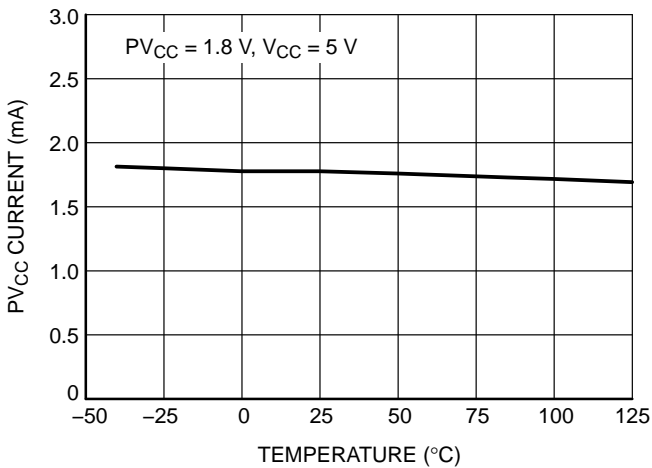


Figure 6. PVCC Current vs. Temperature

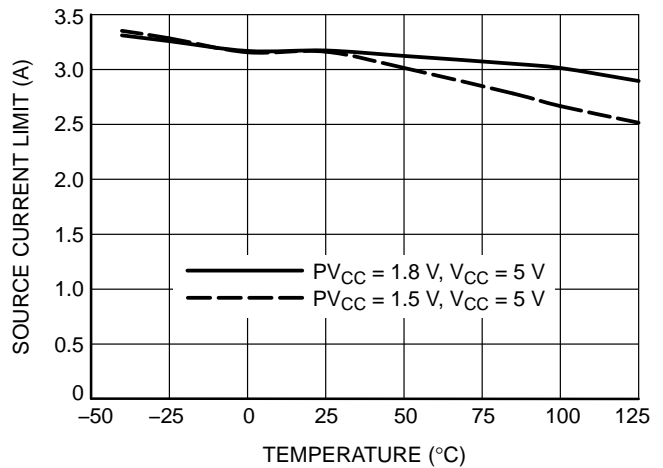


Figure 7. Source Current Limits vs. Temperature

NCP51199, NCV51199

TYPICAL CHARACTERISTICS

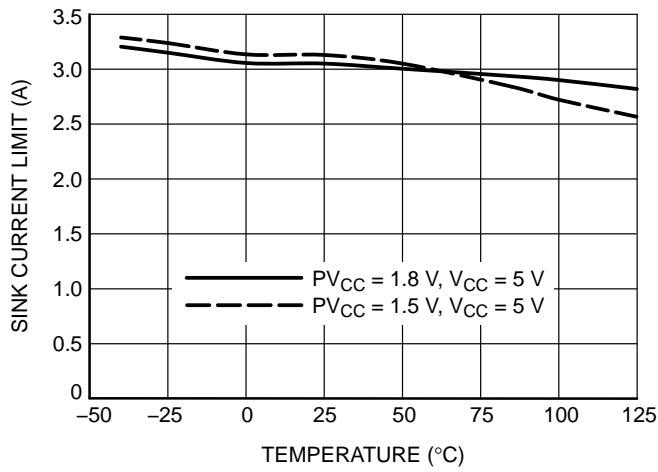


Figure 8. Sink Current Limits vs. Temperature

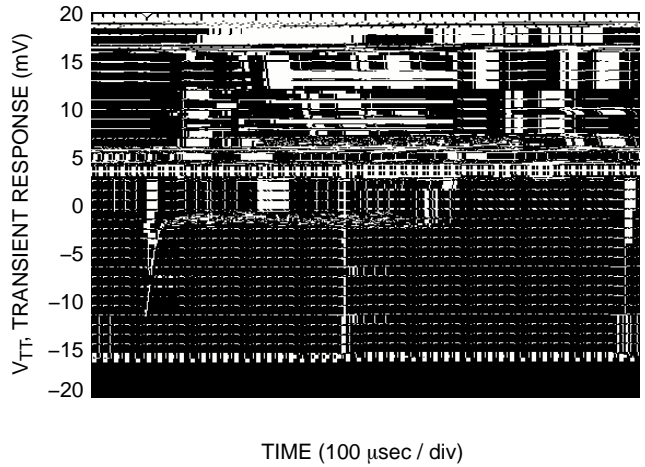
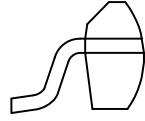


Figure 9. 1.25 V, ±1.6 A Transient Response

Table 1. ORDERING INFORMATION



А А -

В В

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