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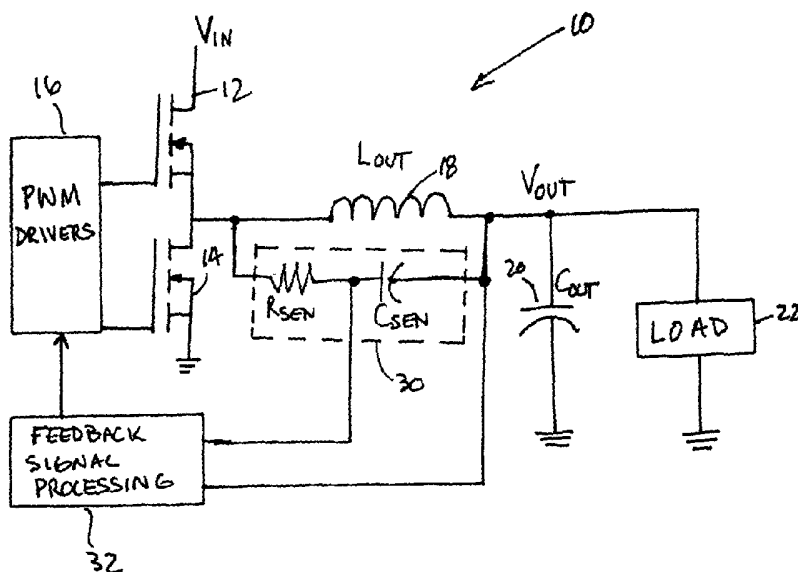
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[Continued on next page]

(54) Title: THERMALLY COMPENSATED CURRENT SENSING OF INTRINSIC POWER CONVERTER ELEMENTS



(57) Abstract: A DC-to-DC converter includes one or more power switches, a pulse width modulation circuit for generating control pulses for the power switches, and an output inductor connected to the power switches. A thermally compensated current sensor is connected to an intrinsic current sensing element exhibiting a temperature-based parameter non-linearity. The thermally compensated current sensor has a temperature coefficient that substantially matches a temperature coefficient of an intrinsic power converter element used to measure current flow, thus linearizing the current measurement. Also, a current feedback loop circuit cooperates with the pulse width modulation circuit to control the power switches responsive to the thermally compensated current sensor.



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According to International Patent Classification (IPC) or to both national classification and IPC		
<b>B. FIELDS SEARCHED</b>		
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Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched		
Electronic data base consulted during the international search (name of data base and, where practical, search terms used) EPO-Internal, WPI Data, PAJ		
<b>C. DOCUMENTS CONSIDERED TO BE RELEVANT</b>		
Category °	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
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A	US 4 334 263 A (ADACHI) 8 July 1982 (1982-07-08)  column 1, line 60 -column 4, line 20; figures 1,2  --- -/--	1, 3, 4, 7, 9, 10, 19, 24, 26
<input checked="" type="checkbox"/> Further documents are listed in the continuation of box C.		
<input checked="" type="checkbox"/> Patent family members are listed in annex.		
° Special categories of cited documents :		
*A* document defining the general state of the art which is not considered to be of particular relevance *E* earlier document but published on or after the international filing date *L* document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified) *O* document referring to an oral disclosure, use, exhibition or other means *P* document published prior to the international filing date but later than the priority date claimed *T* later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention *X* document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone *Y* document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art. *&* document member of the same patent family		
Date of the actual completion of the international search  9 December 2002		Date of mailing of the international search report  17/12/2002
Name and mailing address of the ISA European Patent Office, P.B. 5818 Patentlaan 2 NL - 2280 HV Rijswijk Tel. (+31-70) 340-2040, Tx. 31 651 epo nl, Fax: (+31-70) 340-3016		Authorized officer  Calarasanu, P

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