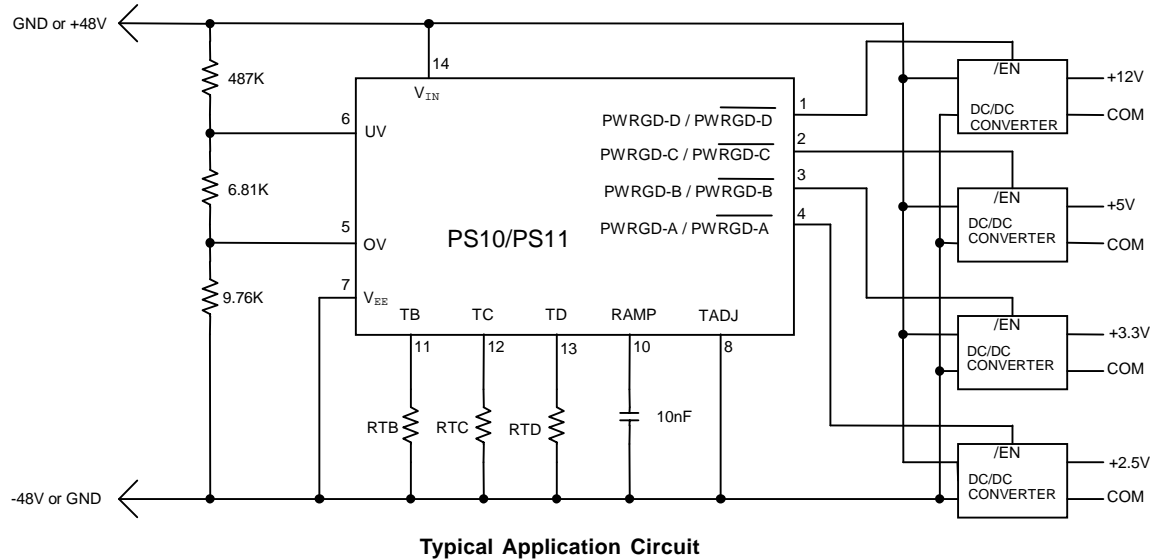


Product Summary Sheet

Applications

- -48V Telecom & Networking
- -24V Cellular and Fixed Wireless Systems
- -24V PBX Systems
- Distributed Power Systems
- Power Supply Control
- 48V Datacom Applications
- Storage Systems

PS10NG & PS11NG Quad Power Sequencing Controller ICs



Product Overview:

Many systems or ICs require sequencing. Examples include telecom cards (that may contain several DC/DC converters), microprocessors, FPGAs, DSP chips, MEMs drivers, high voltage display drivers, or even entire subsystems. In power supply applications, sequencing can prevent glitching of the input rail that might cause reset or EMI faults. In ICs with multi-supply rails, if the power rails are not brought up in a certain sequence, and in some cases brought down in sequence, it may be possible to latchup or even damage the ICs. In industrial and commercial applications controllers often must be initialized before bringing up power sub-systems to ensure controlled startup.

The PS10/PS11 provide sequencing and supervisory functions by combining four programmable 555-type timers with UV/OV input supervisors and four open drain flags. After the input voltage rail (+/-10V to +/-90V) is within resistor programmed limits, the first timer is enabled after which PWRGD_A becomes ACTIVE. The second timer then engages and thereafter PWRGD_B becomes ACTIVE. This continues until all of the outputs have become ACTIVE. ACTIVE means "high impedance" for the PS10 or "low impedance" for the PS11. The UV input may be used as an enable to "daisy chain" PS10/PS11's together to sequence additional systems. The first timer and POR (power on reset) period are programmed with a capacitor. The other three timers are programmed with resistors. Timing may be programmed from 5ms to 200ms nominally. Timer tolerances are nominally 25%, however, 5% is available through the factory on a special order basis. UV and OV tolerance of 5% is also available.

Features:

4 Output Power Good Signals

Benefits:

Ideal for the following applications:

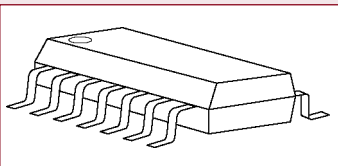
Power Supplies: turns on up to 4 (or more through daisy-chaining) DC-DC converters sequentially. This eliminates the potential for a large start up current. Such a current may cause a dip and thus reset other converters.

Industrial & Commercial: certain industrial and commercial subsystems require sequencing to ensure that control circuitry has initialized before power circuitry turns on.

ICs: certain ICs like DSP chips, FPGAs, microprocessors, MEMs drivers and display drivers require sequencing of their rails to prevent latchup or damage.

High Voltage Open Drain Power Good Pins	Eliminates the need for optocouplers or level shift components.
Programmable Timing between Goods	Provides flexibility that allows each converter to be turned Power on at a preset time. Timing between the Power-Good signals can be programmed using external resistors. The delay can be set anywhere from 5ms to 200ms.

Package Type:



14 Pin SOIC

PS10NG & PS11NG

QuadPower Sequencing Controller ICs

Features:

Power Down Sequencing (PS11 only)

Programmable UV

Programmable OV

Low supply current <450uA

Few components - discrete components to program timers.

14 Lead SOIC Package

Benefits:

Offered in PS11 only where the power-good signals are active low. When there is a need to turn off each DC-DC converter sequentially, then a capacitor can be added from power goods B, C and D to ground. These capacitors and the DC-DC- converter "enable pin" pull up currents set the charge rate hence the sequencing time.

Enables operation of the DC-DC converters at a certain input voltage. This voltage is programmable by using external resistors. The 100mV hysteresis at the UV pin, allows disabling the converters at a lower input voltage than the turn on.

Allows protection of DC-DC converters in the event of the bus over voltage.

Less power dissipation means higher reliability and higher system efficiency.

Simple and accurate.

Saves valuable board space.

Electrical Specifications

Device	Supply Voltage V_{EE}	Supply Current I_{EE} typ.	Power Good	UVH typ.	UVL typ.	UV-hyst.	td* min	td* max
PS10	-10 to -90	<0.4mA	Active High	1.26	1.16	100mV	3ms	250ms
PS11	-10 to -90	<0.4mA	Active Low	1.26	1.16	100mV	3ms	250ms

* td is the time delay between Power Good B, C and D and can be set anywhere from 5ms to 200ms.

Ordering Information / Availability

Part Number	Package	Datasheet	Samples	Demo Boards	Lead Time
PS10NG/PS11NG	14 Pin SO	Now	Now	PS10DB1 PS11DB1 Now	6 - 8 weeks ARO

Product Contact

If you have questions regarding the PS10/PS11NG or would like to receive samples, contact Supertex Applications at:

Telephone: (800) 222-9883
 Fax: (408) 222-4895
 Email: apps@supertex.com
 Web: www.supertex.com

Samples can be requested on the Supertex website.

Supertex Sales:

Contact your Supertex Area Sales Office

Supertex inc.
 1235 Bordeaux Drive, Sunnyvale, CA 94089