Ordering number : EN7966

LA78041

Monolithic Linear IC

TV and CRT Display Vertical Output IC with Bus Control Support

ON Semiconductor®

http://onsemi.com

Overview

The LA78041 is a vertical deflection output IC for high image quality TV and CRT displays that supports the use of a bus control system signal-processing IC. The sawtooth waveform from the bus control system signal-processing IC can directly drive the deflection yoke (including the DC component). Color TV vertical deflection system adjustment functions can be controlled over a bus system by connecting the LA78041 to a our company LA768X series or LA769XX series bus control system signal-processing IC.

Since the LA78041 provides a maximum deflection current of 2.2Ap-p, it is optimal for large size CRTs.

Functions

- Low power operation achieved by using integrated charge pump circuit.
- Vertical output circuit.
- Thermal protection circuit.
- Excellent crossover characteristics.
- Supports DC coupling.

Specifications

Maximum Ratings at Ta = 25°C

Parameter	Symbol	Conditions	Ratings	Unit
Pump-up block supply voltage	+B2 max		34	V
Output block supply voltage	+B6 max		70	V
Allowable power dissipation	Pd max	Mounted on an arbitrarily large heat sink.	9	W
Deflection output current	I5 max		-1.5 to +1.5	Ap-o
Thermal resistance	θj-c		3	°C /W
Operating temperature	Topr		-20 to +85	°C
Storage temperature	Tstg		-40 to +150	°C

Stresses exceeding Maximum Ratings may damage the device. Maximum Ratings are stress ratings only. Functional operation above the Recommended Operating Conditions is not implied. Extended exposure to stresses above the Recommended Operating Conditions may affect device reliability.

Operating Conditions at Ta = 25°C

Parameter	Symbol	Conditions	Ratings	Unit
Recommended supply voltage	+B2		24	V
Operating supply voltage range	+B2op		16 to 33	V
Deflection output current	I5p-p		To 2.2	Ap-p

Operating Characteristics at Ta = 25°C, +B2 = 24V

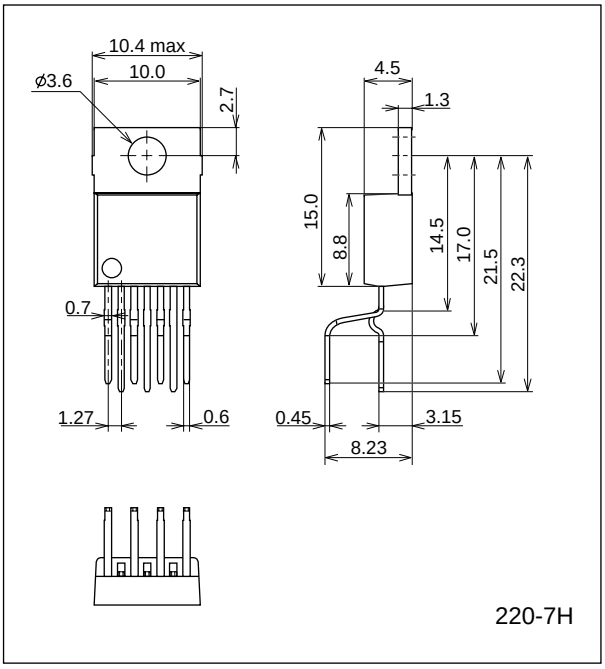
Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Deflection output saturation voltage (lower)	Vsat5-4	I5 = 1.1A			1.3	V
Deflection output saturation voltage (upper)	Vsat6-5	I5 = -1.1A			3.2	V
Pump-up charge saturation voltage	Vsat3-4	I3 = 20mA			1.8	V
Pump-up discharge saturation voltage	Vsat2-3	I3 = -1.1A			3.0	V
Idling current	Idl		20		50	mA
Midpoint voltage	Vmid		11.0	12.0	13.0	V

Note: Current flowing into the IC is positive (+) and current flowing out is negative (-).

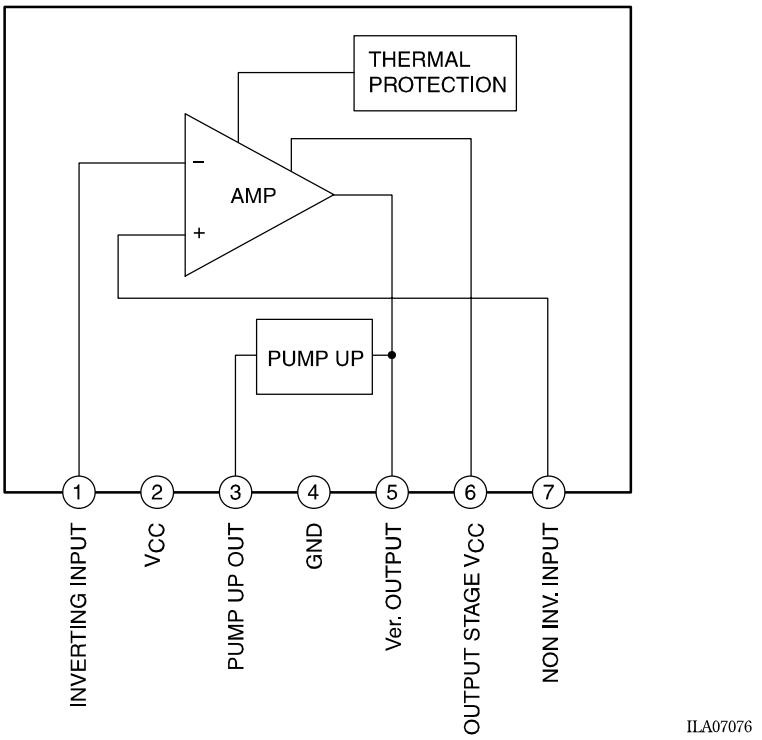
Package Dimensions

unit : mm

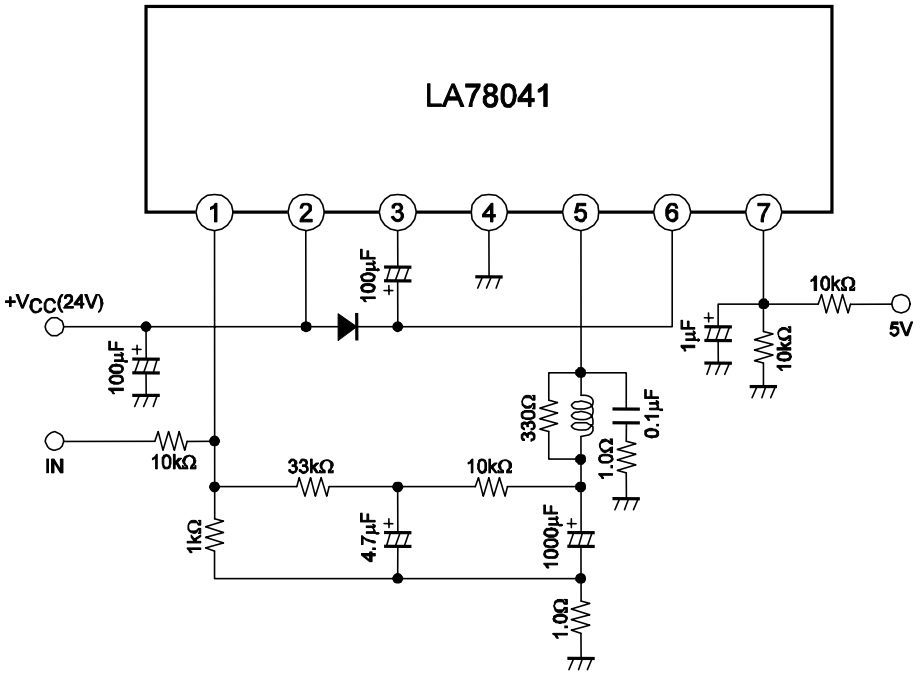
3286



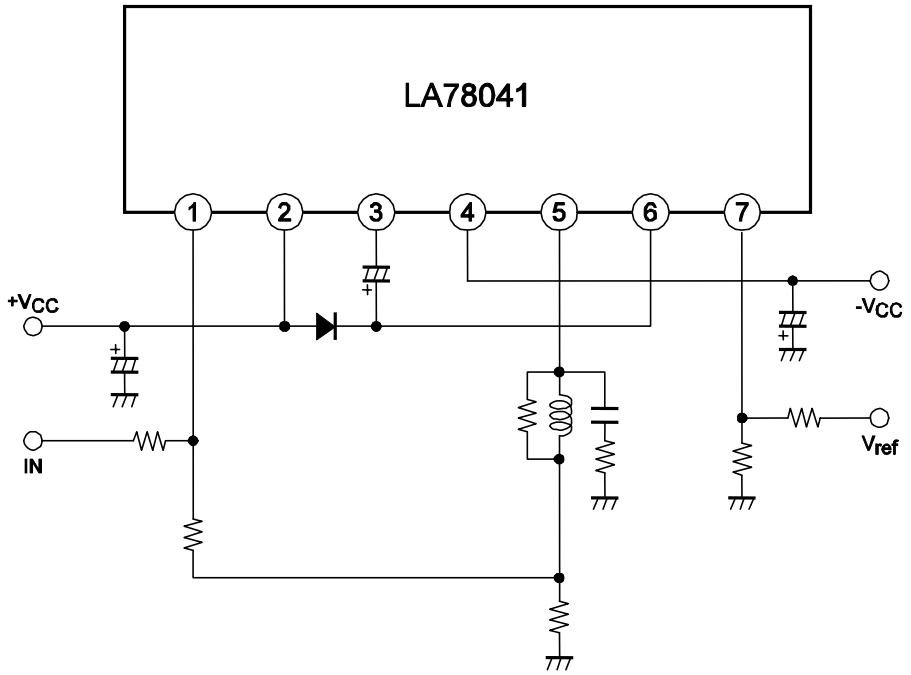
Block Diagram



Application Circuit Example 1 (Single power supply)



Application Circuit Example 2 (Dual power supply)



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