Ordering number: EN 4957A

Monolithic Linear IC

LA7890

RGB Cutoff Adjustment IC

Overview

The LA7890 is a DC-controlled, CRT display RGB cutoff adjustment IC. It can be used for a wide range of applications, regardless of whether they employ a Trinitron tube or a dot-matrix tube display.

Function

- Operational amplifier

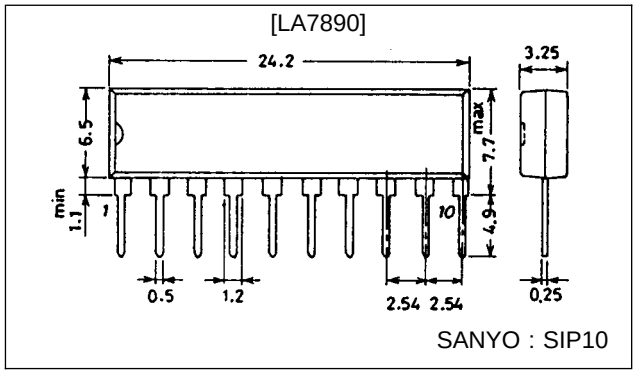
Features

- DC control
- Temperature drift stability
- 100 V maximum supply voltage

Package Dimensions

unit : mm

3043A-SIP10



Specifications

Maximum Ratings at Ta = 25°C

Parameter	Symbol	Conditions	Ratings	Unit
Maximum supply voltage	V_{CC} max		100	V
Allowable power dissipation	Pd max	Ta ≦ 75°C	400	mW
Operating temperature	Topr		–10 to +75	°C
Storage temperature	Tstg		–55 to +150	°C

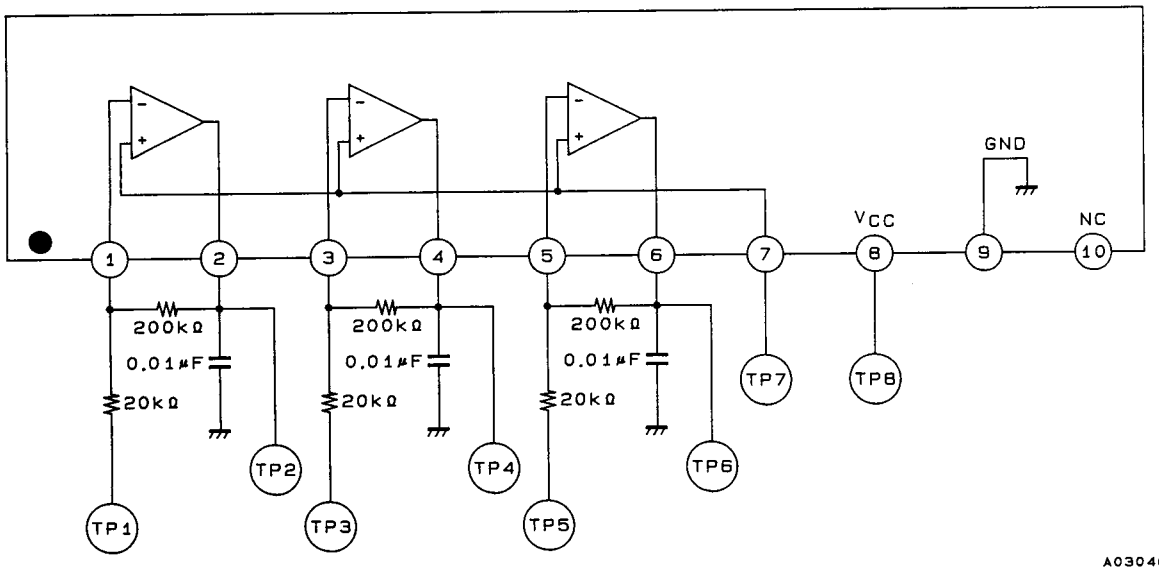
Recommended Operating Conditions at Ta = 25°C

Parameter	Symbol	Conditions	Ratings	Unit
Recommended supply voltage	V_{CC}		80	V
Operating supply voltage	V_{CC} op		60 to 90	V

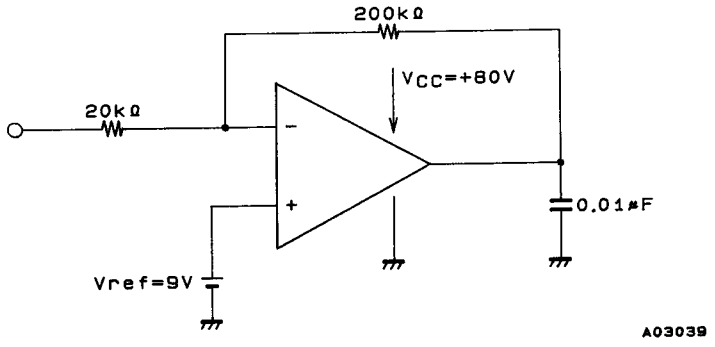
Operating Characteristics at Ta = 25°C, V_{CC} = 80 V

Parameter	Symbol	Conditions	min	typ	max	Unit
Current drain	I_{CC}	When 6 V DC is applied to TP1, TP3 and TP5, and 9 V is applied to TP7	1.9	2.2	2.7	mA
Minimum reference voltage	V_{REF} min	Reference value	0			V
Maximum reference voltage	V_{REF} max	Reference value			75	V
Minimum output voltage	V_{OUT} min (R)	When 12 V DC is applied to TP1, TP3 and TP5, and 9 V is applied to TP7			0.3	V
	V_{OUT} min (G)				0.3	V
	V_{OUT} min (B)				0.3	V
Maximum output voltage	V_{OUT} max (R)	When 0 V DC is applied to TP1, TP3 and TP5, and 9 V is applied to TP7	77			V
	V_{OUT} max (G)		77			V
	V_{OUT} max (B)		77			V
High-level output voltage	V_{OUT} high (R)	When 3 V DC is applied to TP1, TP3 and TP5, and 9 V is applied to TP7	67	69	71	V
	V_{OUT} high (G)		67	69	71	V
	V_{OUT} high (B)		67	69	71	V
Mid-level output voltage	V_{OUT} mid (R)	When 6 V DC is applied to TP1, TP3 and TP5, and 9 V is applied to TP7	37	39	41	V
	V_{OUT} mid (G)		37	39	41	V
	V_{OUT} mid (B)		37	39	41	V
Low-level output voltage	V_{OUT} low (R)	When 9 V DC is applied to TP1, TP3 and TP5, and 9 V is applied to TP7	7	9	11	V
	V_{OUT} low (G)		7	9	11	V
	V_{OUT} low (B)		7	9	11	V

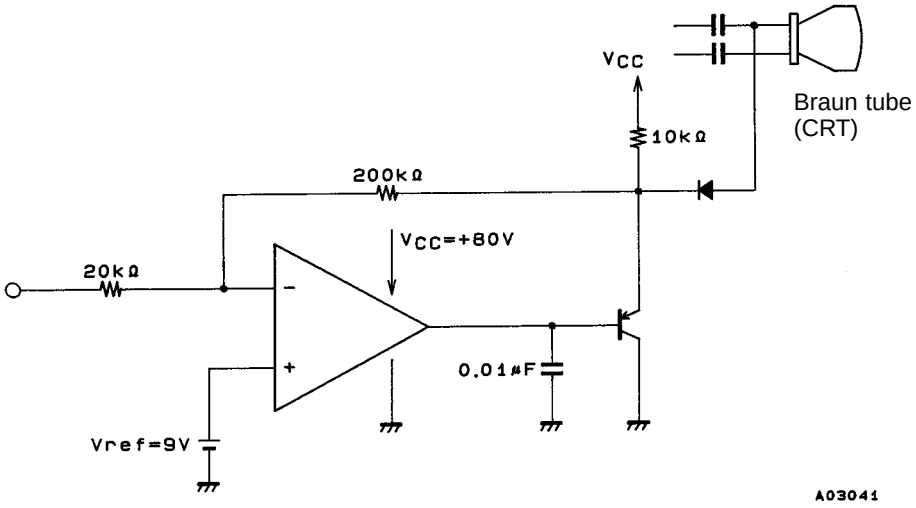
Internal Equivalent Circuit Block Diagram



Test Circuit



Sample Application Circuit



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