

**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

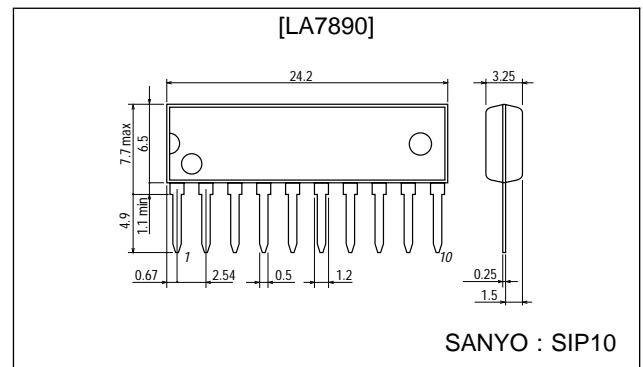
- Operational amplifier

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	$V_{CC \text{ max}}$		100	V
Allowable power dissipation	$Pd \text{ max}$	$T_a \leq 75^\circ\text{C}$	400	mW
Operating temperature	T_{opr}		-10 to +75	°C
Storage temperature	T_{stg}		-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	$V_{CC \text{ op}}$		60 to 90	V

■ Any and all SANYO products described or contained herein do not have specifications that can handle applications that require extremely high levels of reliability, such as life-support systems, aircraft's control systems, or other applications whose failure can be reasonably expected to result in serious physical and/or material damage. Consult with your SANYO representative nearest you before using any SANYO products described or contained herein in such applications.

■ SANYO assumes no responsibility for equipment failures that result from using products at values that exceed, even momentarily, rated values (such as maximum ratings, operating condition ranges, or other parameters) listed in products specifications of any and all SANYO products described or contained herein.

SANYO Electric Co.,Ltd. Semiconductor Company

TOKYO OFFICE Tokyo Bldg., 1-10, 1 Chome, Ueno, Taito-ku, TOKYO, 110-8534 JAPAN

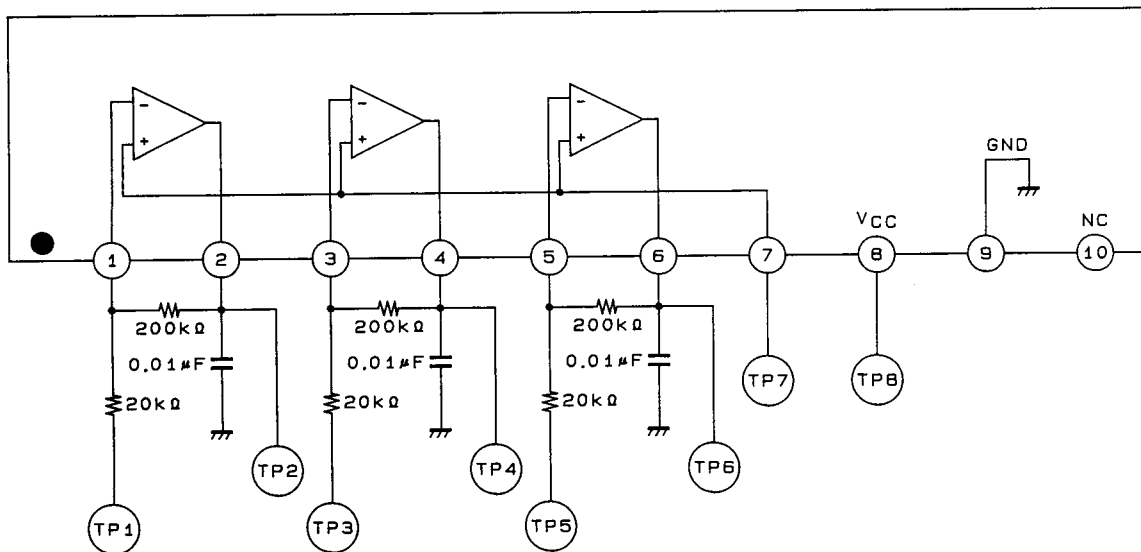
O3096HA(II)/41495TH(ID) No.4957-1/3

LA7890

Operating Characteristics at $T_a = 25^\circ\text{C}$, $V_{CC} = 80\text{ V}$

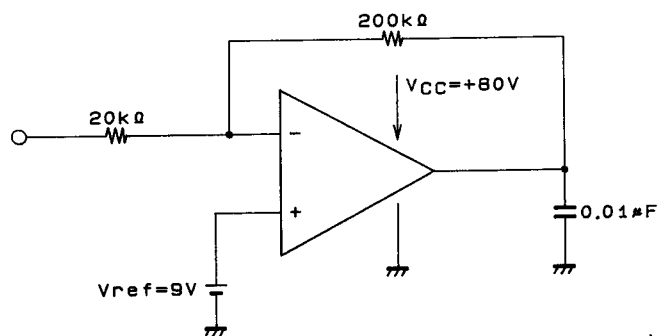
Parameter	Symbol	Conditions	min	typ	max	Unit
Current drain	I_{CC}	When 6 V DC is applied to TP1, TP3 and TP5, and 9 V is applied to TP7	1.9	2.2	2.7	mA
Minimum reference voltage	$V_{REF\ min}$	Reference value	0			V
Maximum reference voltage	$V_{REF\ max}$	Reference value			75	V
Minimum output voltage	$V_{OUT\ min\ (R)}$	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



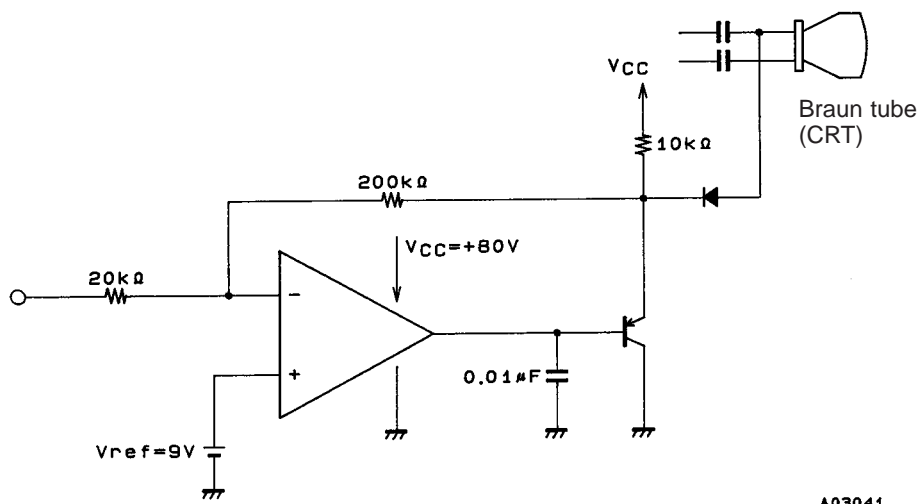
A03040

Test Circuit



A03039

Sample Application Circuit



- Specifications of any and all SANYO products described or contained herein stipulate the performance, characteristics, and functions of the described products in the independent state, and are not guarantees of the performance, characteristics, and functions of the described products as mounted in the customer's products or equipment. To verify symptoms and states that cannot be evaluated in an independent device, the customer should always evaluate and test devices mounted in the customer's products or equipment.
- SANYO Electric Co., Ltd. strives to supply high-quality high-reliability products. However, any and all semiconductor products fail with some probability. It is possible that these probabilistic failures could give rise to accidents or events that could endanger human lives, that could give rise to smoke or fire, or that could cause damage to other property. When designing equipment, adopt safety measures so that these kinds of accidents or events cannot occur. Such measures include but are not limited to protective circuits and error prevention circuits for safe design, redundant design, and structural design.
- In the event that any or all SANYO products(including technical data, services) described or contained herein are controlled under any of applicable local export control laws and regulations, such products must not be exported without obtaining the export license from the authorities concerned in accordance with the above law.
- No part of this publication may be reproduced or transmitted in any form or by any means, electronic or mechanical, including photocopying and recording, or any information storage or retrieval system, or otherwise, without the prior written permission of SANYO Electric Co., Ltd.
- Any and all information described or contained herein are subject to change without notice due to product/technology improvement, etc. When designing equipment, refer to the "Delivery Specification" for the SANYO product that you intend to use.
- Information (including circuit diagrams and circuit parameters) herein is for example only ; it is not guaranteed for volume production. SANYO believes information herein is accurate and reliable, but no guarantees are made or implied regarding its use or any infringements of intellectual property rights or other rights of third parties.

This catalog provides information as of October, 1996. Specifications and information herein are subject to change without notice.