

75 Ω VIDEO LINE DRIVER

FEATURES

- Fixed Gain (6 dB)
- Internal 75 Ω Drivers
- Very Small Output Capacitor at SAG Function Pin
- Active High ON/OFF Control
- Very Low Standby Current (typ. $I_{CCS} \leq 25 \mu A$)
- Internal Summing Circuit of Y/C Signal.

APPLICATIONS

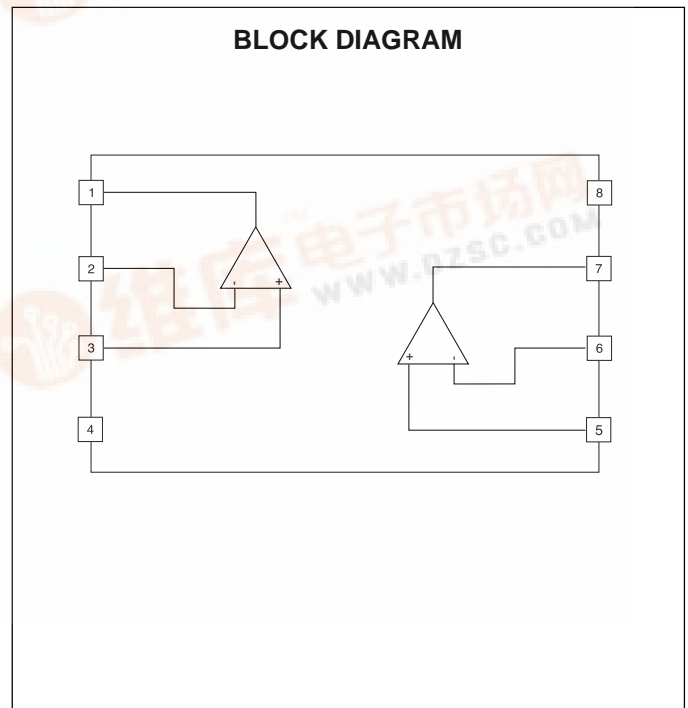
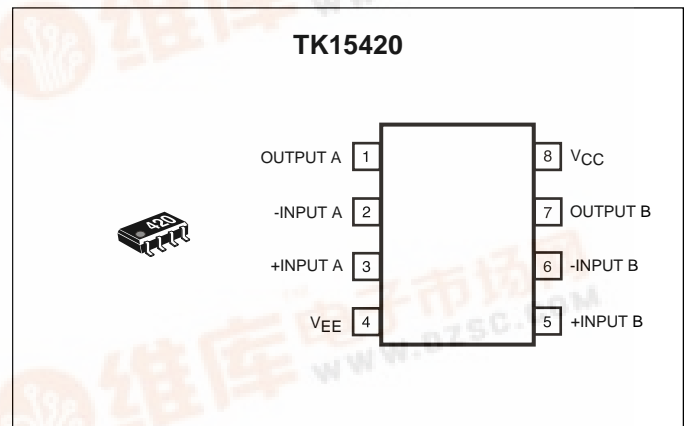
- Video Equipment
- Digital Cameras
- CCD Cameras
- TV Monitors
- Video Tape Recorders
- LCD Televisions

DESCRIPTION

The TK15420M is a video line driver IC which contains 2 channels. It is an operational amplifier type and the voltage gain is adjustable with an external resistor.

It is suitable for replacement of Motorola's video line driver IC MC14577CF.

The TK15420M is available in the SOP-8 surface mount package.



ORDERING INFORMATION

TK15420M Tape/Reel Code

TAPE/REEL CODE
TL: Tape Left



TK15420

ABSOLUTE MAXIMUM RATINGS

Supply Voltage	14 V	Storage Temperature Range	-55 to +150 °C
Operating Voltage Range	4.0 to 12.0 V	Operating Temperature Range	-25 to +85 °C
Power Dissipation (Note 1)	400 mW	Input Frequency	20 MHz

TK15408M ELECTRICAL CHARACTERISTICS

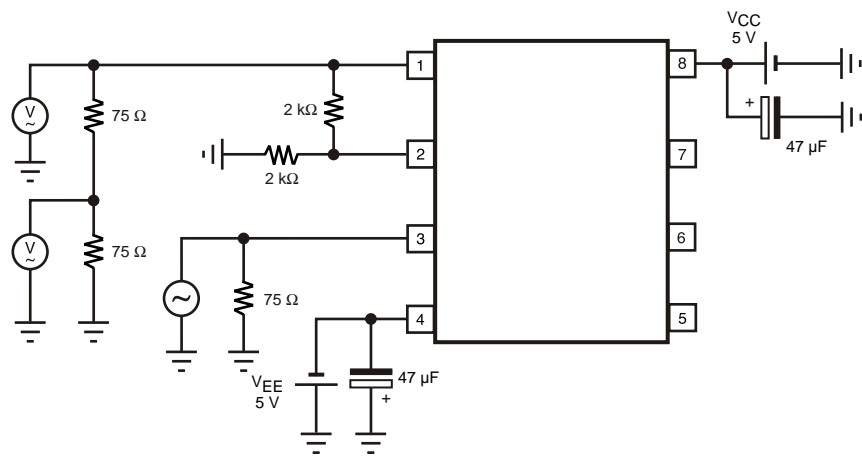
Test conditions: $V_{CC} = 5.0\text{ V}$, $V_{EE} = -5.0\text{ V}$, $T_A = 25\text{ °C}$ unless otherwise specified.

SYMBOL	PARAMETER	TEST CONDITIONS	MIN	TYP	MAX	UNITS
I_{CC}	Supply Current	No signal		16.9	23.0	mA
I_{IB}	Input Bias Current	Input terminal		5.0	15.0	μA
GVA	Voltage Gain	$f_{in} = 1\text{ MHz}$, $V_{IN} = 1\text{ V}_{P-P}$	5.6	5.9	6.2	dB
fr	Frequency Response	$f_{in} = 1\text{ MHz} / 10\text{ MHz}$		-0.5		dB
V_{OPP}	Maximum Output Voltage Swing	DC voltage	5.0	5.7		V_{P-P}
DG	Differential Gain	$V_{IN} = 1\text{ V}_{P-P}$, Staircase	-3.0	0.3	+3.0	%
DP	Differential Phase	$V_{IN} = 1\text{ V}_{P-P}$, Staircase	-3.0	0.4	+3.0	deg
CT	Cross Talk	$f_{IN} = 4.43\text{ MHz}$, $V_{IN} = 1\text{ V}_{P-P}$	50.0	63.4		dB
SVRR	Supply Voltage Rejection Ratio	$\Delta V = 0.4\text{ V}_{P-P}$, $f_{IN} = 100\text{ kHz}$		48.6		dB
C_{IN}	Input Capacitance			8.6		pF
Z_{IN}	Input Impedance			5.0		$M\Omega$

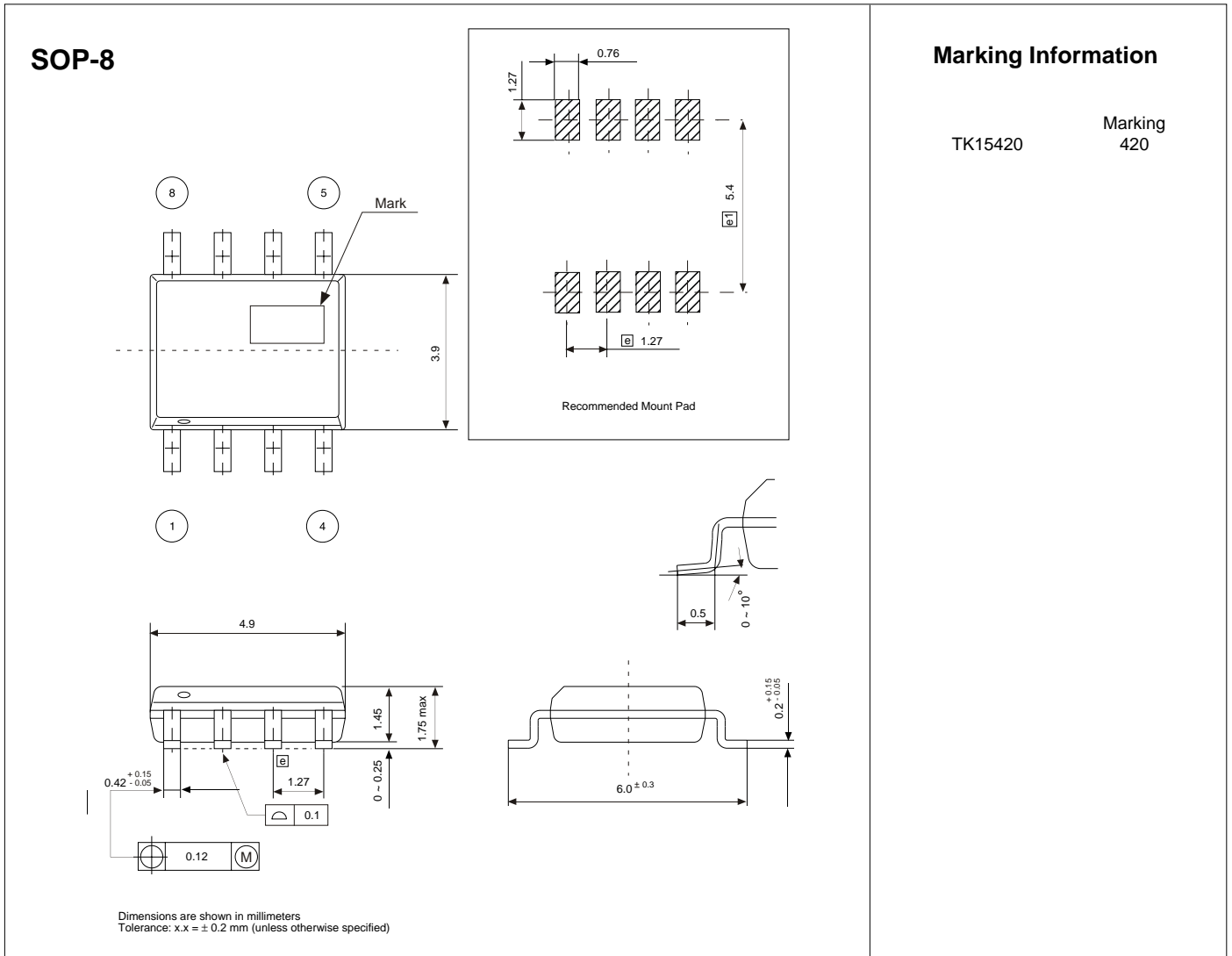
Note 1: Power dissipation is 400 mW when mounted as recommended. Derate at 3.2 mW/°C for operation above 25°C.

Note 2: Turn on in order of V_{EE} and V_{CC} when using this IC with two power supplies.

TEST CIRCUIT



PACKAGE OUTLINE



Toko America, Inc. Headquarters
 1250 Feehanville Drive, Mount Prospect, Illinois 60056
 Tel: (847) 297-0070 Fax: (847) 699-7864

TOKO AMERICA REGIONAL OFFICES

Midwest Regional Office
 Toko America, Inc.
 1250 Feehanville Drive
 Mount Prospect, IL 60056
 Tel: (847) 297-0070
 Fax: (847) 699-7864

Western Regional Office
 Toko America, Inc.
 2480 North First Street, Suite 260
 San Jose, CA 95131
 Tel: (408) 432-8281
 Fax: (408) 943-9790

Eastern Regional Office
 Toko America, Inc.
 107 Mill Plain Road
 Danbury, CT 06811
 Tel: (203) 748-6871
 Fax: (203) 797-1223

Semiconductor Technical Support
 Toko Design Center
 4755 Forge Road
 Colorado Springs, CO 80907
 Tel: (719) 528-2200
 Fax: (719) 528-2375

Visit our Internet site at <http://www.tokoam.com>

The information furnished by TOKO, Inc. is believed to be accurate and reliable. However, TOKO reserves the right to make changes or improvements in the design, specification or manufacture of its products without further notice. TOKO does not assume any liability arising from the application or use of any product or circuit described herein, nor for any infringements of patents or other rights of third parties which may result from the use of its products. No license is granted by implication or otherwise under any patent or patent rights of TOKO, Inc.