

## 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

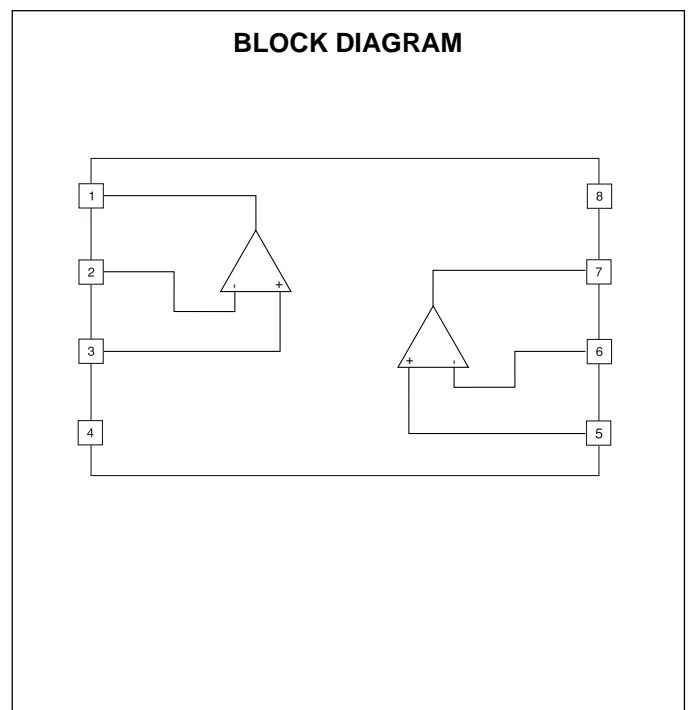
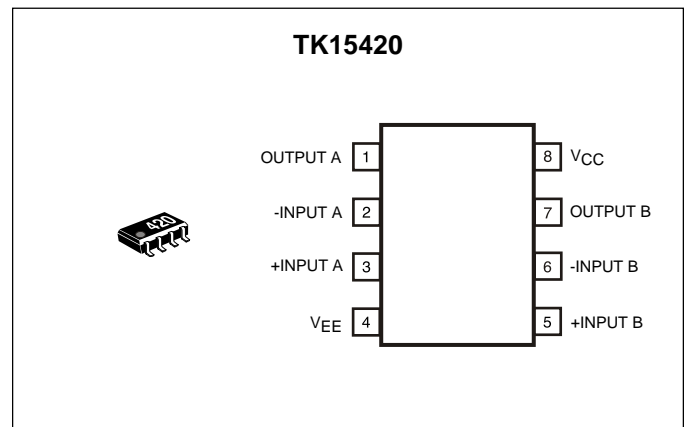
- Video Equipment
- Digital Cameras
- CCD Cameras
- TV Monitors
- Video Tape Recorders
- LCD Televisions

### 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

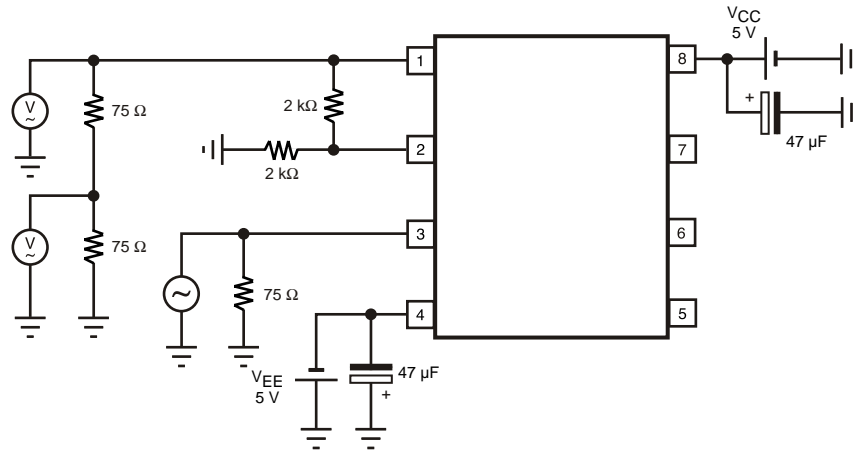
Test conditions:  $V_{CC} = 5.0$  V,  $V_{EE} = -5.0$  V,  $T_A = 25$  °C unless otherwise specified.

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	$\mu$ A
GVA	Voltage Gain	$f_{in} = 1$ MHz, $V_{IN} = 1$ V <sub>P-P</sub>	5.6	5.9	6.2	dB
fr	Frequency Response	$f_{in} = 1$ MHz / 10 MHz		-0.5		dB
$V_{OPP}$	Maximum Output Voltage Swing	DC voltage	5.0	5.7		V <sub>P-P</sub>
DG	Differential Gain	$V_{IN} = 1$ V <sub>P-P</sub> , Staircase	-3.0	0.3	+3.0	%
DP	Differential Phase	$V_{IN} = 1$ V <sub>P-P</sub> , Staircase	-3.0	0.4	+3.0	deg
CT	Cross Talk	$f_{IN} = 4.43$ MHz, $V_{IN} = 1$ V <sub>P-P</sub>	50.0	63.4		dB
SVRR	Supply Voltage Rejection Ratio	$\Delta V = 0.4$ V <sub>P-P</sub> , $f_{IN} = 100$ kHz		48.6		dB
$C_{IN}$	Input Capacitance			8.6		pF
$Z_{IN}$	Input Impedance			5.0		M $\Omega$

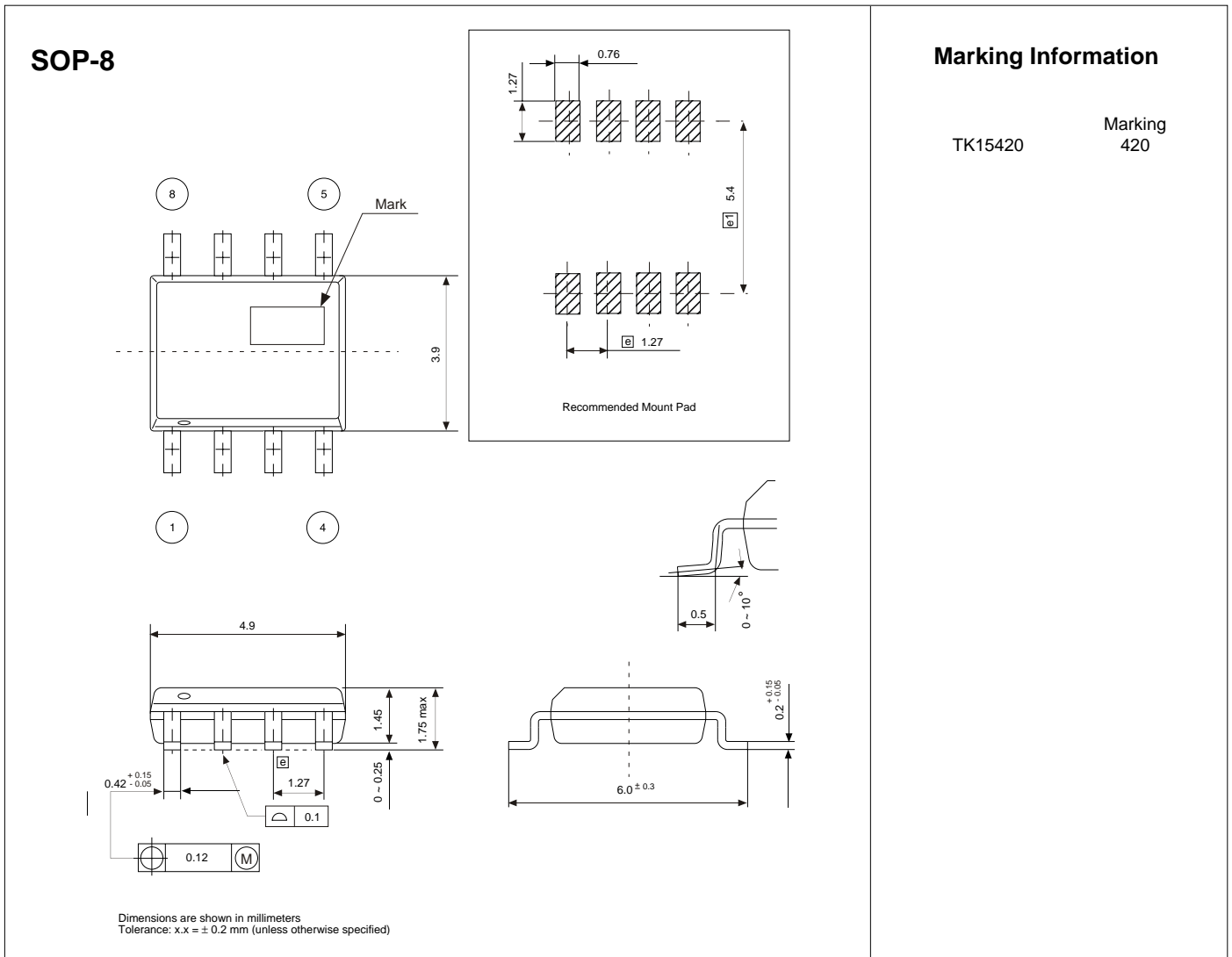
Note 1: Power dissipation is 400 mW when mounted as recommended. Derate at 3.2 mW/°C for operation above 25°C.

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

## TEST CIRCUIT



PACKAGE OUTLINE



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