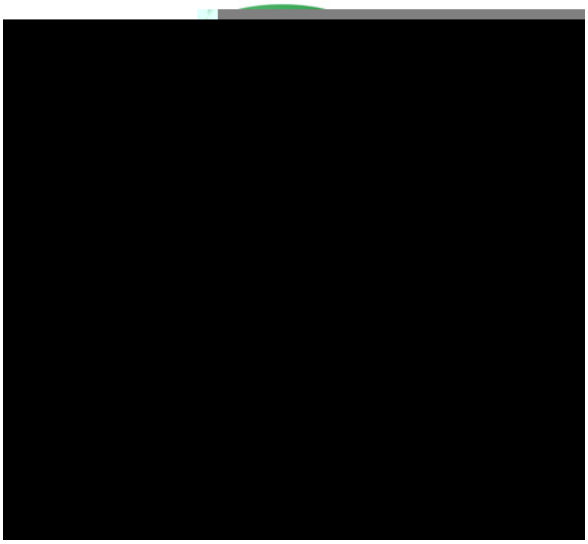
## Is Now Part of



## To learn more about ON Semiconductor, please visit our website at
## www.onsemi.com

Please note: As part of the Fairchild Semiconductor integration, some of the Fairchild orderable part numbers will need to change in order to meet ON Semiconductor's system requirements. Since the ON Semiconductor product management systems do not have the ability to manage part nomenclature that utilizes an underscore (_), the underscore (_) in the Fairchild part numbers will be changed to a dash (-). This document may contain device numbers with an underscore (_). Please check the ON Semiconductor website to verify the updated device numbers. The most current and up-to-date ordering information can be found at www.onsemi.com. Please email any questions regarding the system integration to Fairchild_questions@onsemi.com.

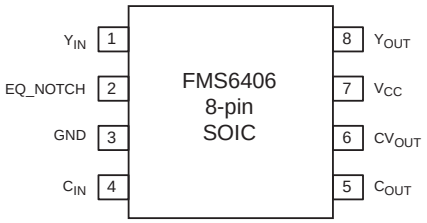
---

EMIC NDUCT R

August 2006

# FMS6406 Precision S-Video Filter with Summed Composite Output, Sound Trap, and Group Delay Compensation

## FMS6406 Pin Conýguration




## Pin Assignments

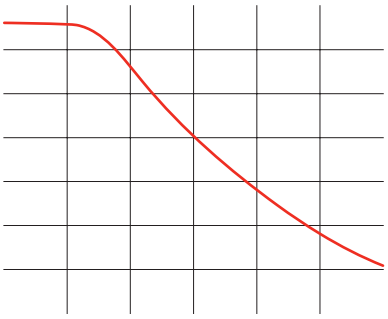
| | | | |
|---|---|---|---|
| | | | |

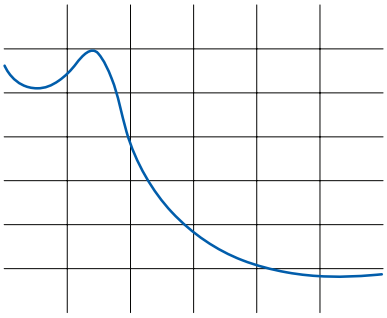
## Electrical Characteristics

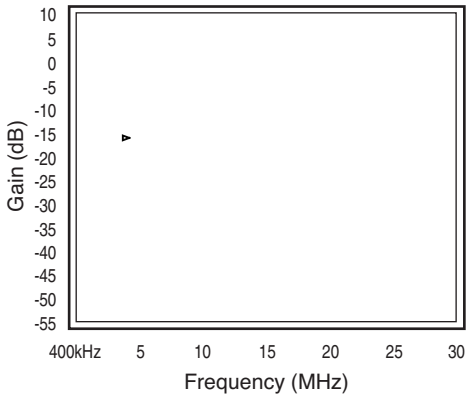
$T_c$ = 25°C, $V_i$ = 1$V_{pp}$, $V_{CC}$ = 5V, all inputs AC-coupled with 0.1µF, all outputs are AC-coupled with 220µF into 150Ω, referenced to 400kHz; unless otherwise noted.

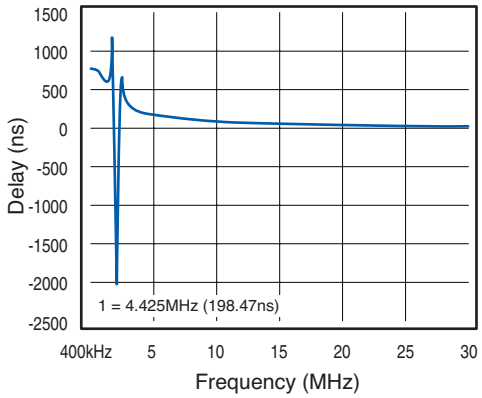
## Typical Performance Characteristics

$T_c$ = 25°C, $V_i$ = 1$V_{pp}$, $V_{CC}$ = 5V, all inputs AC-coupled with 0.1µF, all outputs are AC-coupled with 220µF into 150Ω, referenced to 400kHz; unless otherwise noted.






10
5
0
-5
-10
-15
-20
-25
-30
-35
-40
-45
-50
-55
Gain (dB)
400kHz
5
10
15
20
25
30
Frequency (MHz)


1500
1000
500
0
-500
-1000
-1500
-2000
-2500
Delay (ns)
1 = 4.425MHz (198.47ns)
400kHz
5
10
15
20
25
30
Frequency (MHz)

## Typical Performance Characteristics

$T_c$ = 25°C, $V_i$ = 1$V_{pp}$, $V_{CC}$ = 5V, HD/N_SD = 0, $R_{SOURCE}$ = 37.5Ω, all inputs AC-coupled with 0.1µF, all outputs are AC-coupled with 220µF into 150Ω, referenced to 400kHz; unless otherwise noted.

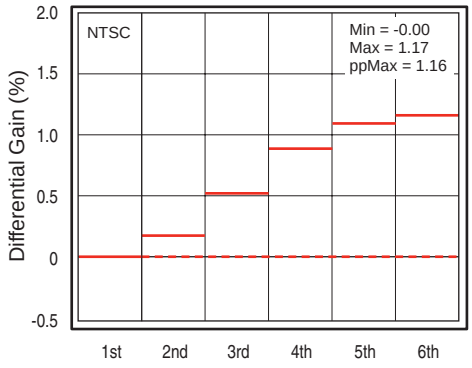



**Figure 13. Differential Gain, $V_{OUT}$**

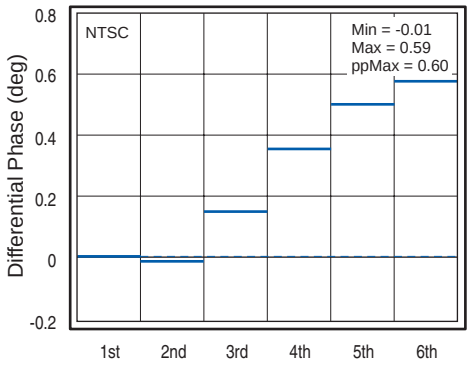



**Figure 14. Differential Phase, $V_{OUT}$**

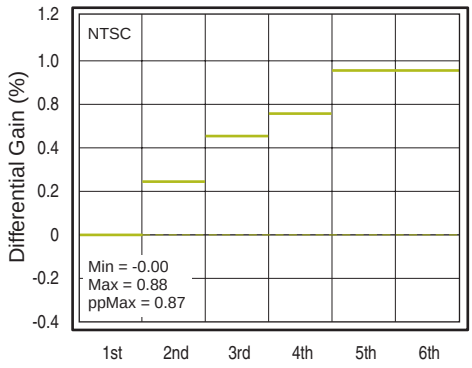



**Figure 15. Differential Gain, $C_{OUT}$**

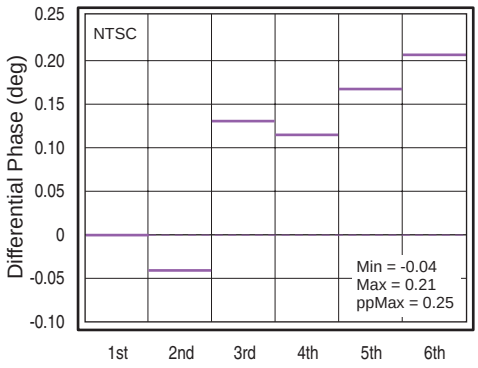



**Figure 16. Differential Phase, $C_{OUT}$**

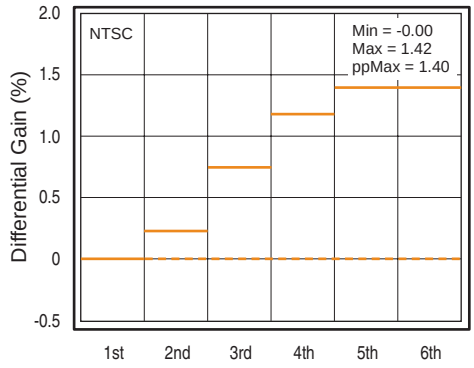



**Figure 17. Differential Gain, $CV_{OUT}$**

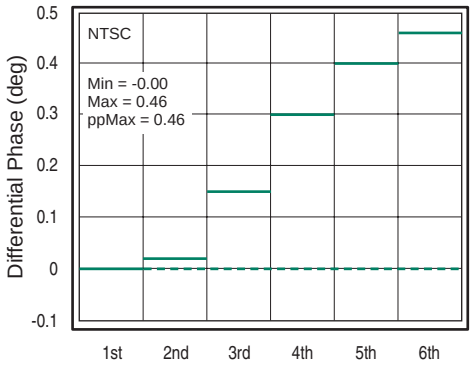



**Figure 18. Differential Phase, $CV_{OUT}$**

## Typical Application Diagrams

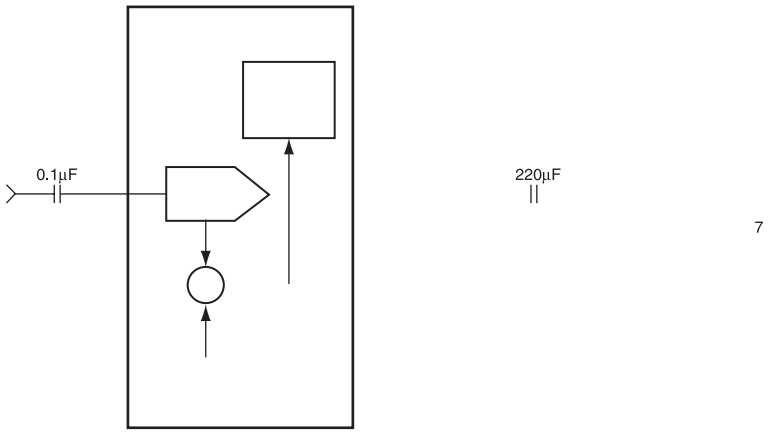
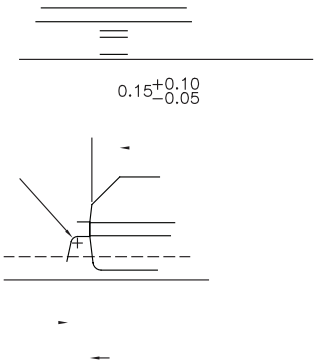



**Figure 22. AC-Coupled Application Diagram**

**Figure 23. DC-Coupled Application Diagram**

## Mechanical Dimensions

### 8-Lead Outline Package (SOIC)



## TRADEMARKS

The following are registered and unregistered trademarks Fairchild Semiconductor owns or is authorized to use and is not intended to be an exhaustive list of all such trademarks.

## DISCLAIMER

FAIRCHILD SEMICONDUCTOR RESERVES THE RIGHT TO MAKE CHANGES WITHOUT FURTHER NOTICE TO ANY PRODUCTS HEREIN TO IMPROVE RELIABILITY, FUNCTION OR DESIGN. FAIRCHILD DOES NOT ASSUME ANY LIABILITY ARISING OUT OF THE APPLICATION OR USE OF ANY PRODUCT OR CIRCUIT DESCRIBED HEREIN; NEITHER DOES IT CONVEY ANY LICENSE UN[redacted]ENT RIGHTS, NO