HA11219

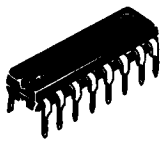
—PRELIMINARY—

NOISE SUPPRESSOR SYSTEM FOR FM RECEIVERS

Hitachi HA11219 is a monolithic integrated circuit specifically designed as a noise suppressor for FM receivers of automotive use, and is encapsulated a plastic dual-in-line 16 pin package.

This system is inserted between the recovered audio output of FM detector, either ratio or quadrature detector, and a multiplex decoder of PLL system (in a stereo system).

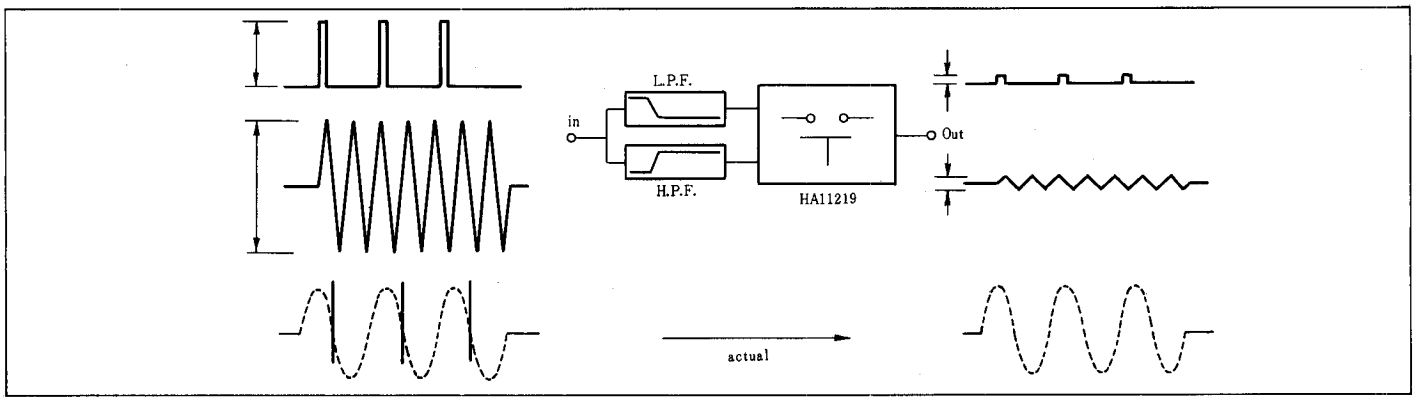
Impulsive noise such as ignition noise and wiper noise has generally wide frequency spectrum ranging over 100 kHz, and is suppressed by 40dB in a peak value.



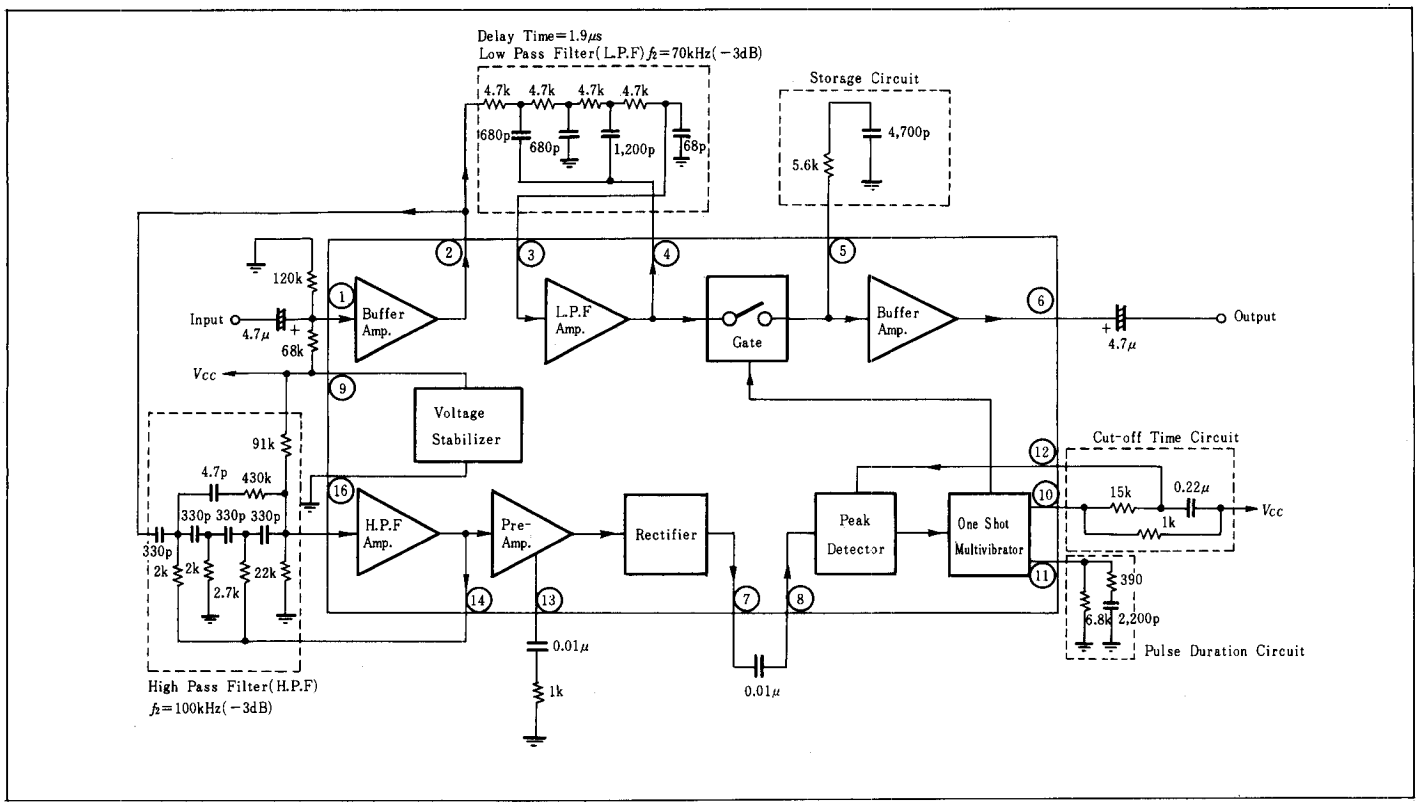
(DP-16)

■ FEATURES

- Less external components
- Low distortion and high signal to noise ratio
- Wide working supply voltage: 8 to 15 volts
- Wide working temperature range: –30 to 70°C



■ BLOCK DIAGRAM AND TYPICAL EXTERNAL PARTS



■ ABSOLUTE MAXIMUM RATINGS (Ta=25°C)

Item	Symbol	Rating	Unit
DC Supply Voltage	V_{CC}	16	V
Total Power Dissipation	P_T	420 (Ta=70°C)	mW
Operating Temperature	T_{opr}	−30 to +70	°C
Storage Temperature	T_{stg}	−55 to +125	°C

■ ELECTRICAL CHARACTERISTICS (Ta=25°C)

Item	Symbol	Test Condition	min	typ	max	Unit
Voltage Gain	G_V	① Pin Input: f=1kHz, V_{in}=120mV	—	0	—	dB
Total Harmonic Distortion	THD	① Pin Input: f=1kHz, V_{in}=120mV	—	0.035	—	%
Signal-to-noise Ratio	S/N	① Pin Input: f=1kHz, V_{in}=120mV→0dB R_g=4.7kΩ	—	80	—	dB
Output Voltage	V_O	① Pin Input: f=1kHz, Output $T.H.D$=2%	—	2.7	—	Vrms
Noise Suppression Ratio	NSR	① Pin Input: f=1kHz, V_{in}=120mV→0dB $H.P.F$ Input: f=100kHz, V_{in}=80mV	—	40	—	dB
Threshold Voltage	V_{th}	① Pin Input: f=1kHz, V_{in}=120mV $H.P.F$ Input: f=100kHz, V_{in}: Variable	—	46	—	mVrms
Pulse Duration of One Shot	T	$H.P.F$ Input: ⑩ Pin: Monitor	—	40	—	μs

Notes: 1. Unless otherwise noted supply voltage V_{CC}=12.4V
2. Cut-off Time Circuit is off condition (⑫ pin connected to ⑨ pin)