

HTT2802

Active-CMF for Vehicle-network

Wide-Band Active Common-mode Canceller for Flex-Ray

General Description

HTT2802 using 0.35 μ m CMOS process is active common mode cancellation IC with 5.0V power supply, which is compatible with automotive LANs, such as Flex-Ray . This IC will be able to ensure more than 30dB CMRR of the up to 100M Hz from DC by built-in broadband common-mode canceller. It is possible to reduce the in-phase component at all frequencies, which conventional passive CMF cannot achieve it. And so, this IC can cancel imbalance of the differential data signal and a phase error as well. That will eliminate the errors by connection of equipment or by subtle difference of length of the transmission line on the substrate. This will lead to the simplification of the design of EMC and provision of equalizer function to raise the purity of the signal. The active CMF is can be used at lower frequencies and it can contribute to the miniaturization and low-profile of components.

For this IC, a cascade architecture is suitable. So, if it is A[dB] in CMRR per one IC, you can get 2*A[dB] in CMRR by the cascade of the 2 steps.

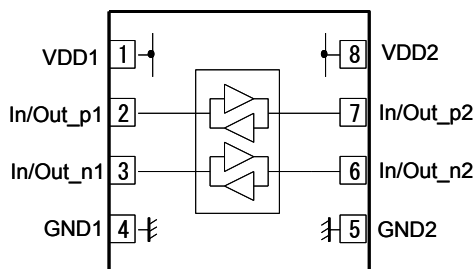
Bidirectional driver is built in this IC and it is free for drive-impedance. So, this IC is prepared for 50 Ω , 60 Ω and other impedance.

Achieved: HBM > 6000V

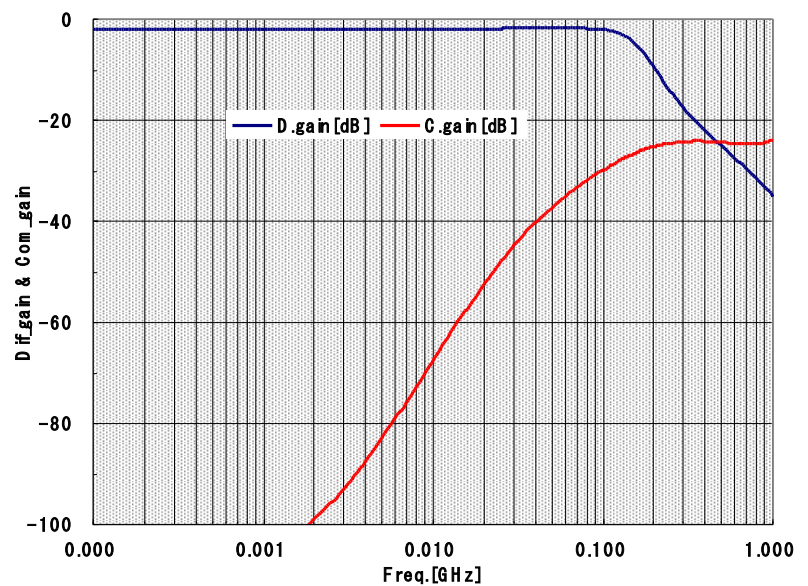
Features

- power consumption 275mW (TYP.) ($V_{DD}=5.0V$, $I_{DD}=55.0mA$, @No signal, @ $T_a=50^{\circ}C$)
- Operating temperature range : $-40^{\circ}C \sim +125^{\circ}C$, Storage temperature range : $-55^{\circ}C \sim +125^{\circ}C$
- Output & Input impedance : free
- input & output return loss : >20dB (@ 50MHz)
- 3dB point : 150MHz
- CMRR : > 30 dB (0 ~ 100 MHz)
- Output level : > 1.8Vpp (@ $R_{in}=R_{out}=50\Omega$, @ $V_{DD}=5.0V$)
- HBM : > 6000V
- PKG : SOP08

Pin & name



Frequency characteristics



Application Note

