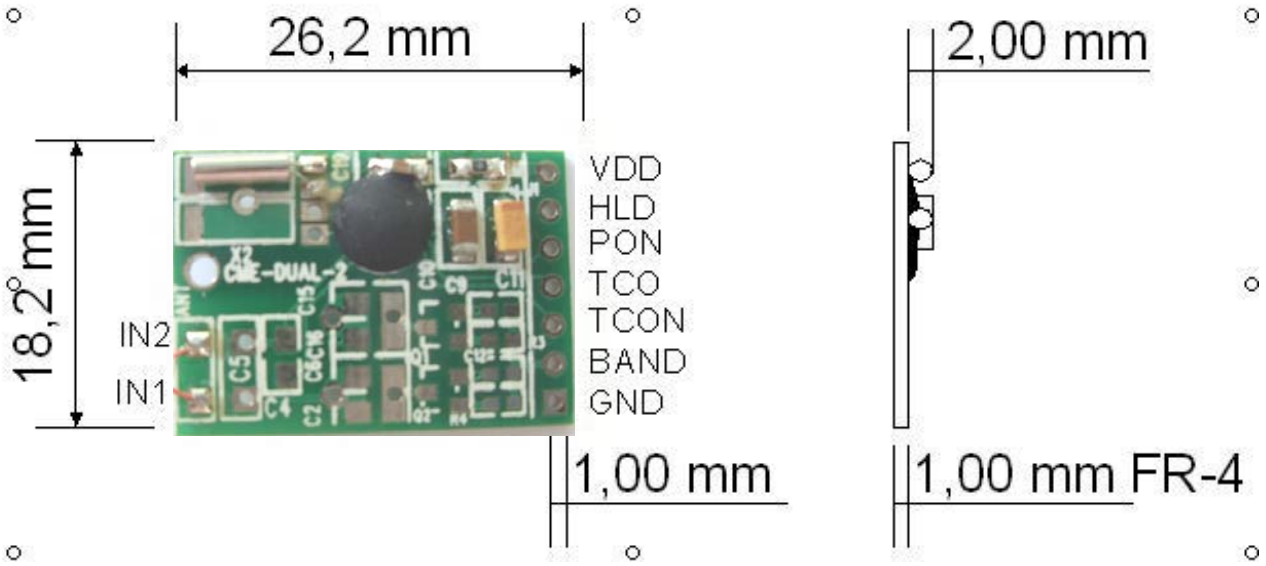
CMMR-6 RC Receiver module

DESCRIPTION

Together with the ferrite antenna, the receiver module CMM6 forms a complete receiver unit for radio controlled signals of single or dual frequencies 40kHz, 60kHz and 77.5kHz. For individual part numbers please refer to technical data below.

1. SINGLE FREQUENCY

Single frequency - dimension



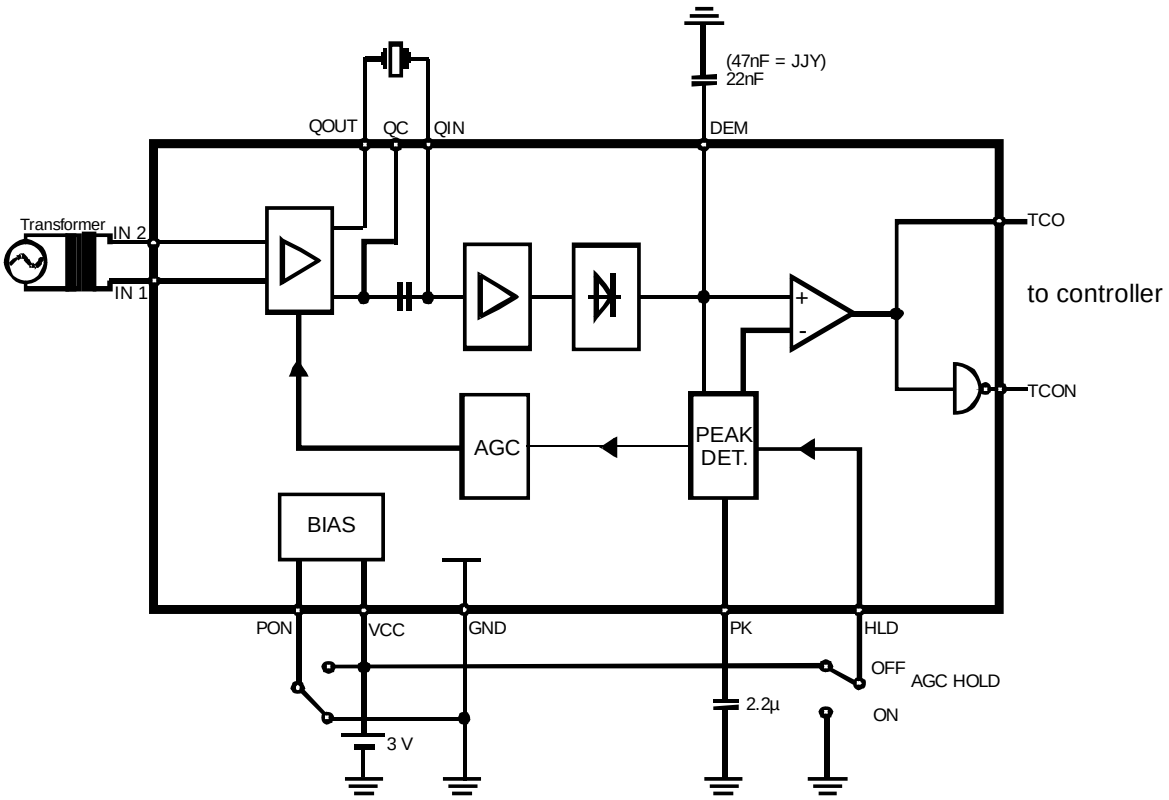
1.1 Single frequency - pinning

Pin connection to CME6005	Remarks
GND	Ground of the module
BAND	Not Connected for single band
TCON	Inverted output signal
TCO	Positive output signal
PON	Power on, must be connected to GND externally to switch on module
HLD	AGC HLD control pin, must be connected to VCC externally if not connected to MCU.
VDD	Power supply to module (1.2 ~ 5.5V)
IN2	Antenna input 2
IN1	Antenna input 1

1.2 Single frequency – technical data

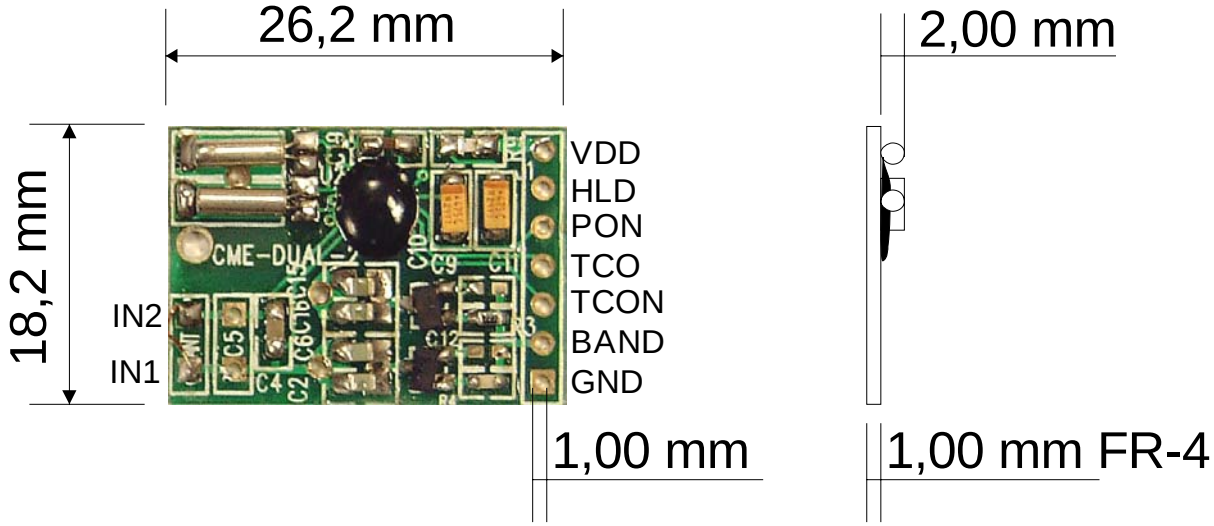
Part Number	CMMR-6D-40	CMMR-6D-60	CMMR-6D-77
Receiver Carrier Frequency	40 kHz	60 kHz	77.5 kHz
Operating Voltage	1.2 V – 5.5 V	1.2 V – 5.5 V	1.2 V – 5.5 V
Current consumption at 3.0 V	< 100 uA	< 100 uA	< 100 uA
Quiescent current in standby mode	0.5 uA	0.5 uA	0.5 uA
Operating temperature range	-10 to 60 °C	-10 to 60 °C	-10 to 60 °C
Start up time	<3.5 s	<3.5 s	<3.5 s
Receiver sensitivity			
- direct feed in via IN1 & IN2	< 0.6 uV	< 0.6 uV	< 0.6 uV
- via 60mm antenna* connected at IN1 & IN2	< 30 uV/m	< 30 uV/m	< 30 uV/m
* antenna inductance with wire ∅0.23	2.33 mH	1.5 mH	1.92 mH
Output pulse widths tolerance	< ± 35 ms	< ± 35 ms	< ± 35 ms

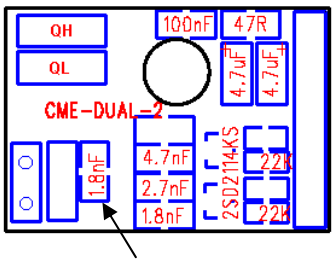
1.3 Single frequency – circuit diagram



2. DUAL FREQUENCY

2.1 Dual frequency - dimension



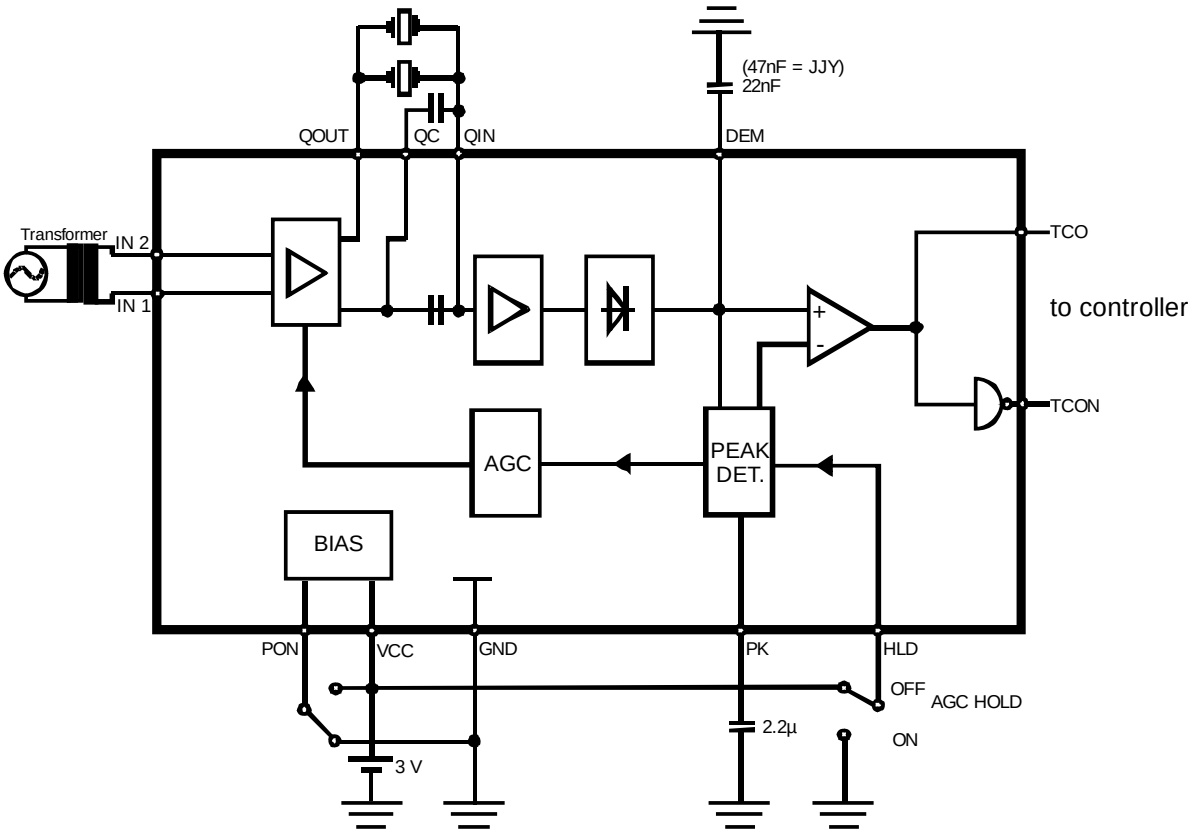


- 1.8nF needs to be fine tuned for different frequencies

2.2 Dual frequency - pinning

Pin connection to CME6005	Remarks
GND	Ground of the module
BAND	GND = Higher frequency : 60k for JJY, 77.5k for EU VDD = Lower frequency : 40k for JJY, 60k for EU
TCON	Inverted output signal
TCO	Positive output signal
PON	Power on, must be connected to GND externally to switch on module
HLD	AGC HLD control pin, must be connected to VCC externally if not connected to MCU.
VDD	Power supply to module (> 2.7V)
IN2	Antenna input 2
IN1	Antenna input 1

2.3 Dual frequency – circuit diagram

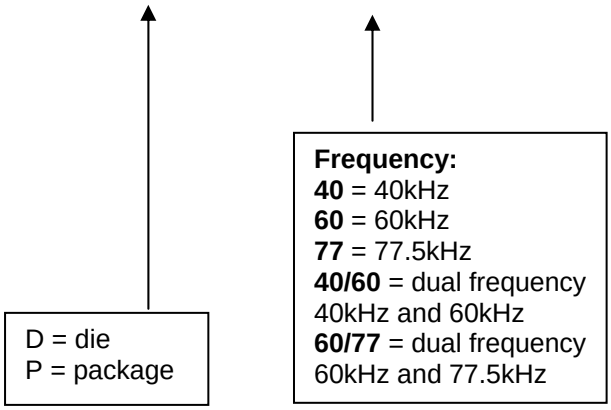


2.3 Dual frequency – technical data

Part Number	**CMMR-6D-4060**	**CMMR-6D-7760**
Receiver Carrier Frequency	40 / 60 kHz	60 / 77.5 kHz
Operating Voltage	1.3 V – 5.5 V	1.3 V – 5.5 V
Current consumption at 3.0 V	Typ. 150 uA	Typ. 150 uA
Quiescent current in standby mode	0.5 uA	0.5 uA
Operating temperature range	-10 to 60 °C	-10 to 60 °C
Start up time	<3.5 s	<3.5 s
Receiver sensitivity		
- direct feed in via IN1 & IN2	< 0.6 uV	< 0.6 uV
- via 60mm antenna* connected at IN1 & IN2	< 30 uV/m	< 30 uV/m
* antenna inductance with wire ∅0.23	3.9 mH	3.9 mH
Output pulse widths tolerance	< ± 30 ms	< ± 30 ms

3. Ordering information

CMMR – 6D - 40



Note: **Please indicate IC version (d = die, p = package) and frequency as shown above.**

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