**FPGA Testing**

**No Filtering:**

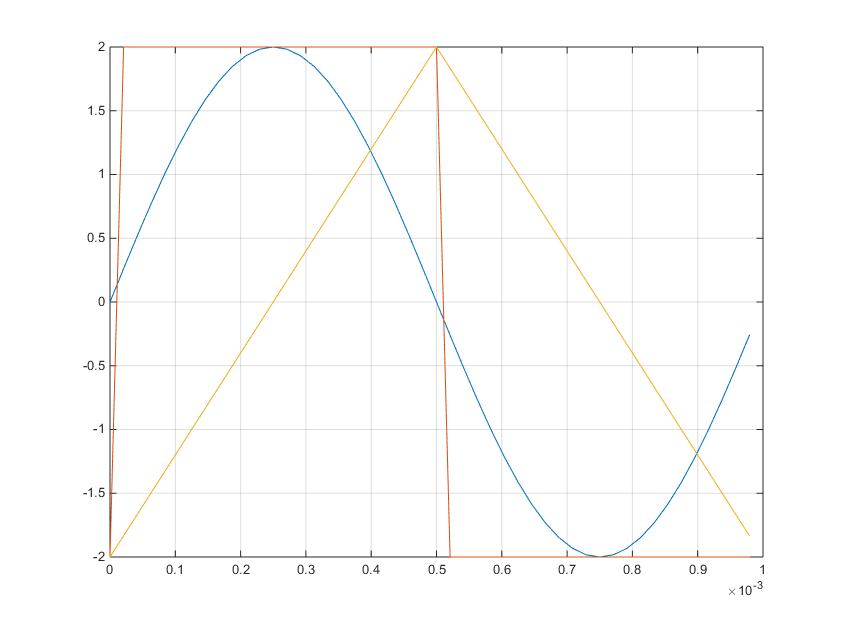


Figure 1 – Test Waveforms

Table 1- Sine Wave Input versus Output Data

|  |  |
| --- | --- |
| Input Data (Sine Wave) | Output Data |
| 0x0 | 0x2C00 |
| 0x10B5 | 0x0010 |
| 0x2121 | 0x2121 |
| 0x30FB | 0x30FB |
| 0x3FFF | 0x3FFF |
| 0x4DEB | 0x4DEB |
| 0x5A82 | 0x5A82 |
| 0x658C | 0x658C |
| 0x6ED9 | 0x6ED9 |
| 0x7641 | 0x7641 |
| 0x7BA2 | 0x7BA2 |
| 0x7EE7 | 0x7EE7 |
| 0x7FFF | 0x7FFF |
| 0x7EE7 | 0x7EE7 |
| 0x7BA2 | 0x7BA2 |
| 0x7641 | 0x7641 |
| 0x6ED9 | 0x6ED9 |
| 0x658C | 0x658C |
| 0x5A82 | 0x5A82 |
| 0x4DEB | 0x4DEB |
| 0x4000 | 0x4000 |
| 0x30FB | 0x30FB |
| 0x2121 | 0x2121 |
| 0x10B5 | 0x10B5 |
| 0x0 | 0x0 |
| 0xEF4B | 0xEF4B |
| 0xDEDF | 0xDEDF |
| 0xCF04 | 0xCF04 |
| 0xC000 | 0xC000 |
| 0xB214 | 0xB214 |
| 0xA57E | 0xA57E |
| 0x9A73 | 0x9A73 |
| 0x9126 | 0x9126 |
| 0x89BE | 0x89BE |
| 0x845D | 0x845D |
| 0x8118 | 0x8118 |
| 0x845D | 0x845D |
| 0x89BE | 0x89BE |
| 0x9126 | 0x9126 |
| 0x9A73 | 0x9A73 |
| 0xA57E | 0xA57E |
| 0xB214 | 0xB214 |
| 0xC000 | 0xC000 |
| 0xCF04 | 0xCF04 |
| 0xDEDF | 0xDEDF |
| 0xEF4B | 0xEF4B |

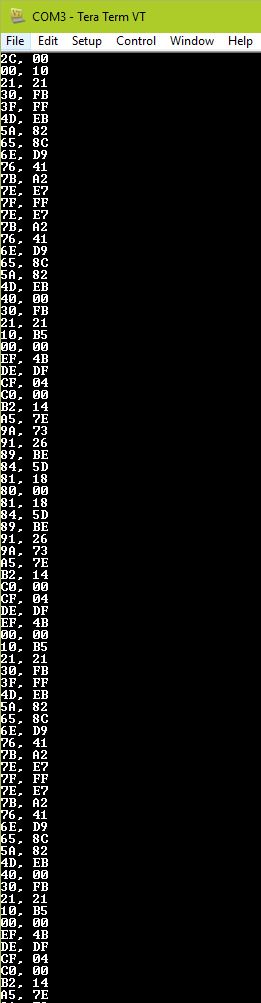
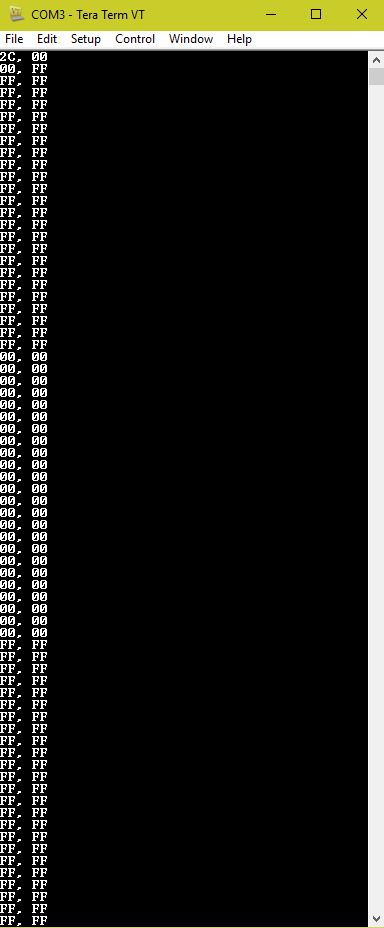


Table 2- Square Wave Input versus Output Data

|  |  |
| --- | --- |
| Input Data (Square Wave) | Output Data |
| 0x8000 | 0x2C00 |
| 0x7FFF | 0x00FF |
| 0x7FFF | 0x7FFF |
| 0x7FFF | 0x7FFF |
| 0x7FFF | 0x7FFF |
| 0x7FFF | 0x7FFF |
| 0x7FFF | 0x7FFF |
| 0x7FFF | 0x7FFF |
| 0x7FFF | 0x7FFF |
| 0x7FFF | 0x7FFF |
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| 0x7FFF | 0x7FFF |
| 0x7FFF | 0x7FFF |
| 0x7FFF | 0x7FFF |
| 0x7FFF | 0x7FFF |
| 0x8000 | 0x8000 |
| 0x8000 | 0x8000 |
| 0x8000 | 0x8000 |
| 0x8000 | 0x8000 |
| 0x8000 | 0x8000 |
| 0x8000 | 0x8000 |
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| 0x8000 | 0x8000 |
| 0x8000 | 0x8000 |
| 0x8000 | 0x8000 |
| 0x8000 | 0x8000 |



|  |  |
| --- | --- |
| Input Data (Triangular Wave) | Output Data |
| 0x8000 | 0x2C00 |
| 0x8AAB | 0x808A |
| 0x9555 | 0x9555 |
| 0xA000 | 0xA000 |
| 0xAAAB | 0xAAAB |
| 0xB555 | 0xB555 |
| 0xC000 | 0xC000 |
| 0xCAAB | 0xCAAB |
| 0xD555 | 0xD555 |
| 0xE000 | 0xE000 |
| 0xEAAB | 0xEAAB |
| 0xF555 | 0xF555 |
| 0x0000 | 0x0**000** |
| 0xAAB | 0xAAB |
| 0x1555 | 0x1555 |
| 0x2000 | 0x2000 |
| 0x2AAA | 0x2AAA |
| 0x3555 | 0x3555 |
| 0x4000 | 0x4000 |
| 0x4AAA | 0x4AAA |
| 0x5555 | 0x5555 |
| 0x5FFF | 0x5FFF |
| 0x6AAA | 0x6AAA |
| 0x7554 | 0x7554 |
| 0x7FFF | 0x7FFF |
| 0x7554 | 0x7554 |
| 0x6AAA | 0x6AAA |
| 0x5FFF | 0x5FFF |
| 0x5555 | 0x5555 |
| 0x4AAA | 0x4AAA |
| 0x4000 | 0x4000 |
| 0x3555 | 0x3555 |
| 0x2AAA | 0x2AAA |
| 0x2000 | 0x2000 |
| 0x1555 | 0x1555 |
| 0x0AAB | 0x**0**AAB |
| 0x0000 | 0x0**000** |
| 0xF555 | 0xF555 |
| 0xEAAB | 0xEAAB |
| 0xE000 | 0xE000 |
| 0xD555 | 0xD555 |
| 0xCAAB | 0xCAAB |
| 0xC000 | 0xC000 |
| 0xB555 | 0xB555 |
| 0xAAAB | 0xAAAB |
| 0xA000 | 0xA000 |
| 0x9555 | 0x9555 |
| 0x8AAB | 0x8AAB |

