

# MPF3010/3020/3040/3060



MPF3060A



MPF3060B

## Features

- Using Direct Digital Synthesis(DDS) technology
- 2mV Output Amplitude for Small Signal
- 40  $\mu$  Hz~60MHz frequency range for main waveforms
- 100MHz equal-accuracy frequency counter(optional)
- 32 kinds of output waveform
- 3.5" TFT colour LCD display for B series
- Optional LCD display for A series
- Pulse duty cycle resolution up to 1%
- Burst mode with a continuous phase adjustment function
- 0%~120% amplitude modulation
- RS232 interface (optional), USB interface (optional)

| Technical Data                      |                         | MPF3010/3020/3040/3060                                                                                               |
|-------------------------------------|-------------------------|----------------------------------------------------------------------------------------------------------------------|
| Main output                         | Output frequency        | 40 $\mu$ Hz ~ 10MHz(MPF3010) 40 $\mu$ Hz~20MHz (MPF3020)<br>40 $\mu$ Hz ~ 40MHz(MPF3040) 40 $\mu$ Hz~60MHz (MPF3060) |
|                                     | Output amplitude        | 2mVp-p~20Vp-p (1M $\Omega$ )                                                                                         |
|                                     | Output wave             | sine, square, pulse, DC and etc.                                                                                     |
|                                     | Output modulation       | single frequency, sweep frequency, AM, FM, FSK, PSK, Brust                                                           |
|                                     | Wave length             | 4~16000 points                                                                                                       |
|                                     | Wave accuracy           | 10bits                                                                                                               |
|                                     | Sampling rate           | 180Msa/s                                                                                                             |
|                                     | Frequency resolution    | 40 $\mu$ Hz(40 $\mu$ Hz~2kHz)<br>40mHz(>2kHz)                                                                        |
|                                     | Frequency accuracy      | $\leq \pm(0.00005\%+40\text{mHz})$                                                                                   |
|                                     | Amplitude resolution    | 20mVp-p(>2V); 2mVp-p(<2V)                                                                                            |
|                                     | Amplitude accuracy      | $\leq \pm(1\%+2\text{mVrms})$ (1M $\Omega$ , 1kHz)                                                                   |
|                                     | Amplitude flatness      | $\pm 5\%$ (f<1MHz); $\pm 10\%$ (1Mz<f<10MHz); $\pm 20\%$ (10Mz<f<60MHz)                                              |
|                                     | Offset range            | $\pm 10\text{V}$                                                                                                     |
|                                     | Offset resolution       | 20mV                                                                                                                 |
|                                     | Offset error            | $< \pm(1\%+20\text{mV})$                                                                                             |
| Sine wave                           | AM modulation depth     | 0% ~ 120% adjustable                                                                                                 |
|                                     | FM modulation deviation | Max.20%                                                                                                              |
| Square wave                         | PM modulation range     | 0~ 360.0°                                                                                                            |
|                                     | Phase resolution        | 11.25°                                                                                                               |
| Sine wave                           | Harmonic distortion     | -50dBC(<1MHz)<br>-40dBC(1MHz~20MHz)<br>-30dBC(20MHz~40MHz)                                                           |
|                                     | Distortion factor       | $\leq 0.5\%$                                                                                                         |
| Square wave                         | Rise time               | $\leq 20\text{ns}$                                                                                                   |
|                                     | SYMM.                   | 0.1% ~ 99.9% adjustable                                                                                              |
| TTL output                          | Rise or fall time       | $\leq 20\text{ns}$                                                                                                   |
|                                     | Low level               | $< 0.3\text{V}$                                                                                                      |
| Sweep                               | Sweep mode              | $> 4\text{V}$                                                                                                        |
|                                     | Sweep mode              | Lin./log. Up and down                                                                                                |
| Sweep                               | Sweep time              | 100ms~900s                                                                                                           |
|                                     | Output frequency        | 10mHz~1MHz                                                                                                           |
| CHB output                          | Impedance               | 50 $\Omega$                                                                                                          |
|                                     | Output amplitude        | 50mVp-p~20Vp-p                                                                                                       |
|                                     | Output waveform         | sine, square, triangle, ramp, ladder and etc.32waveforms                                                             |
|                                     | Frequency resolution    | 10mHz                                                                                                                |
|                                     | Frequency accuracy      | $\leq \pm(0.00001\%+10\text{mHz})$                                                                                   |
|                                     | Amplitude resolution    | 20mVp-p                                                                                                              |
|                                     | Wave length             | 1024 points                                                                                                          |
|                                     | Wave accuracy           | 8bits                                                                                                                |
|                                     | Frequency range         | 1Hz ~ 100MHz                                                                                                         |
|                                     | Input amplitude         | 100mVp-p~20Vp-p                                                                                                      |
| Counter (Optional)                  | Max. power              | 7W (8 $\Omega$ ), 1W (50 $\Omega$ )                                                                                  |
|                                     | Max. voltage            | 22Vp-p                                                                                                               |
| Power output (Optional)             |                         | 1Hz~200kHz                                                                                                           |
|                                     |                         |                                                                                                                      |
| Power supply                        |                         | 110 ~ 127VAC $\pm 10\%$ /220 ~ 240VAC $\pm 10\%$ , 50Hz $\pm 2\text{Hz}$ /60Hz $\pm 2\text{Hz}$                      |
| Dimensions(W $\times$ H $\times$ D) |                         | 260 $\times$ 110 $\times$ 385mm                                                                                      |
| Weight                              |                         | 3.5kg                                                                                                                |

