

## F-2031 EM-Clamp (Electromagnetic Clamp)

## **Datasheet**



## Introduction

Radio Frequency electromagnetic fields can degrade the electrical equipment by producing common-mode current on interconnection cables. Through injection common-mode current to the cable of equipment under test, the effect of electrical equipment on E field and H field can be simulated. IEC 61000-4-6/ GB/T 17626.6 has defined the immunity test method of electrical equipment to conductive common-mode current in the range of 150 kHz-230 MHz. In Standard IEC 61000-4-6, it also specifies that EM-Clamp (Electronic clamp) can be used where CDN with direct or capacitive coupling technique are not suitable. Electromagnetic clamp is an efficient bandwidth clamping injection device used for testing the immunity of electronic products. It often used for testing unshielded multiple cables.

Indices		F-2031-231 mm	F-2031-32 mm
Inner Diameter		23 mm	32 mm
Input	10 KHZ-100 MHZ:	100 W continuous wave,	125 W continuous wave, 30 min
Rated	100 MHZ-230 MHz:	15 min	100 W continuous wave, 30 min
Power	230 MHZ-1 GHZ	100 W continuous wave,	50 W continuous wave, 15 min
		10 min;	
		50 W continuous wave,	
		10 min	
Impulse Mode:		Couple transient of 3 ns impulse width with rising edge of	
		/100ns.	
		Signals reached to cables up to 5 kV.	
Directivity:		>10dB, more than 20MHz	



## Typical Test Setup by Using Electromagnetic Clamp and Ferrite Cube Decoupling Network

Two model numbers of electromagnetic clamp can be selected: F-2031-23 mm and F-2031-32 mm, they have outstanding performance:

Widely frequency range: available frequency ranges up to 10 kHz- 1 GHz

High efficient coupling factor: coupling factor is less than 3 dB in the range of 150 kHz-500 MHz.

F-2031-32 mm is an ideal equipment for testing multiple cables with its diameter up to 32 mm.

All the testing accessories for electromagnetic testing are supplied, including clamping current probe, calibration device and ferrite tube decoupling networks with diameters of 23 mm and 32 mm.

Because F-2031 electromagnetic clamp has particular highly efficient decoupling factor, the power for continuous wave power amplifier in testing system can save 100%.

The product can produce 10 V of open-circuit electrical level required in IEC61000-4-6. The power for F-2031 series electromagnetic clamp is less than 10 W, if attached ferrite decoupling tube or ferrite tube is used, the power needed is less than 36 W.