



## MODEL DFE SERIES DUAL FREQUENCY SOURCE

### DESCRIPTION

The DFE Dual Frequency Source series are two-channel frequency generators capable of delivering up to four watts of RF power from each channel into a 50 ohm load. The DFE is used in applications where a very stable, small frequency difference is required. The fixed frequency and variable frequency channels are both synthesized using DDS technology and a temperature compensated crystal oscillator (TCXO) reference source. The variable frequency is set via front panel thumbwheel switches with a setting resolution of 10 kHz<sup>1</sup>. Additional variable frequency control is available with optional RS-232 computer interface. Software is provided with the computer interface although instrument control software such as LabVIEW can be used. CW RF output is obtained by adjusting the front panel Carrier Level control with no input. Amplitude modulation is electronically controlled with a 0 to 1 volt signal applied to the Video Input. A fixed +10 dBm, RF reference output is also provided from each channel.



### SPECIFICATIONS

Variable Frequency Setting Resolution <sup>1</sup>	10 kHz
Frequency Stability (0 to 50°C)	1 ppm (TCXO stability)
CW RF Output Power Capability	0-specified RF output for level control 0-maximum
Amplitude Modulation <sup>2</sup>	Analog (0-specified RF output for 0-1 volt input)
Harmonics at maximum RF output	-20 dBc
Extinction Ratio (on/off)	40 dB
RF Reference Output	+10 dBm
Input / Output Impedance	50 ohms
Connectors	BNC
Line Power	115/230 Vac, 50-60 Hz
Size	5.5 H x 13.5 D x 17.0 W inches 14.0 H x 34.3 D x 43.2 W cm

MODEL	<u>DFE-404B4</u>	<u>DFE-604B4</u>	<u>DFE-754B4</u>	<u>DFE-1202B4</u>	<u>DFE-2002B4</u>
Fixed Frequency <sup>3</sup>	40 MHz	60 MHz	75 MHz	120 MHz	200 MHz
Variable Frequency	30-50 MHz	40-80 MHz	50-100 MHz	80-160 MHz	150-250 MHz
RF output capability	4 watts	4 watts	4 watts	2 watts	2 watts

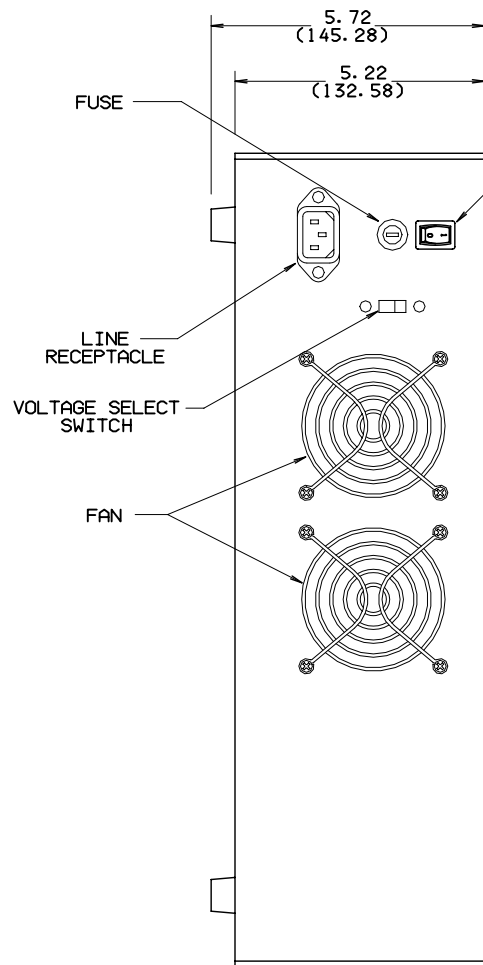
<sup>1</sup> Variable frequency setting resolution of 1 KHz also available

<sup>2</sup> Optional digital modulation capability is also available. Input impedance is 50 ohms.

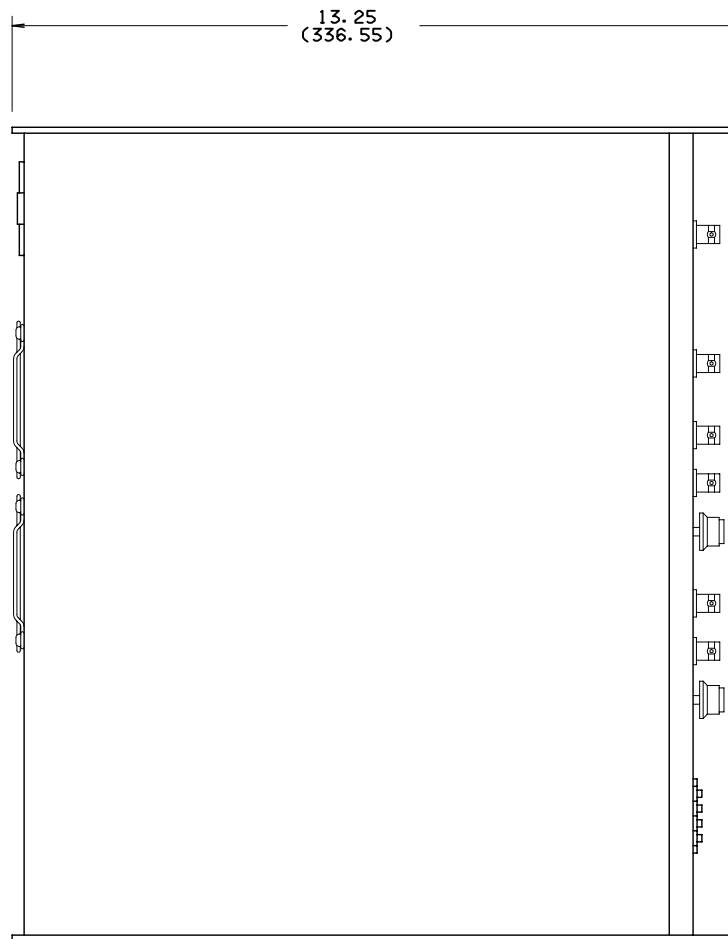
<sup>3</sup> The fixed frequency can be specified as any fixed frequency within the variable frequency range.

REVISIONS		
ISSUE	DESCRIPTION	APPD/DATE
ORIGINAL	RM 05-21-99	

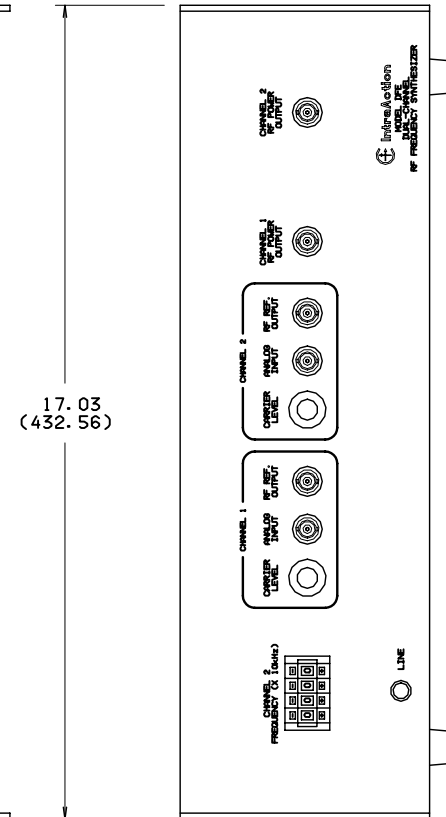
ALL REVISIONS TO THIS DRAWING MUST BE MADE ON THE CAD SYSTEM



REAR VIEW




TOP VIEW



LINE VOLTAGE:

STANDARD: 115/230 VAC, 50-60 Hz.  
 OPTION J: 100 VAC, 50-60 Hz.

UNLESS OTHERWISE SPECIFIED TOLERANCES AND DIMENSIONS ARE IN INCHES LINEAR : / / ANGULAR ± / DIAMETERS ± LIMITS APPLY BEFORE FINISHING DO NOT SCALE THIS PRINT	APPROVED DATE	 <b>IntraAction Corp.</b> 3719 WARREN AVE. BELLWOOD, IL 60104 PHONE (708) 547-6644
	CHECKED DATE	
MATERIAL	DRAWN DATE	<b>DFE SERIES          DUAL FREQUENCY          SOURCE</b>
	FINISH	
MFG. INSTR.	SCALE	FSCM NO.
Q.C. INSTR.	UNIT WEIGHT	DWG. NO. <b>C</b> SIZE <b>DFE OUTLINE</b>
		ISSUE
		SHEET 1 OF 1

DWG NO DFE-OUTLINE SH 1 ENG3108