

Features

- Removable SMA connectors
- High LO carrier and harmonic suppression
- Perfect phase/amplitude balance
- Wide dynamic range
- Tunable zero and amplitude balance
- 50 Ω Impedance Low VSWR
- Operating temperature range: -40°C ~ +85°C



Absolute Maximum Ratings

- Input Power: +7dBm
- Storage temperature: +125°C

Notes

1. Specified LO frequency within 5~2000MHz available, up to octave operating bandwidth
2. The general supply voltage is 12V, specified requirement ($\pm 5V \sim \pm 15V$) is available
3. Optional LO level +7dBm, +10dBm, +17dBm available

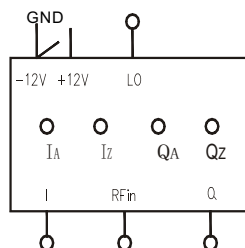
Specifications (measured in a 50 Ω system $T_A=25^\circ C$)

Parameter	Symbol	Unit	Guaranteed	Typical
RF frequency	F_R	MHz	$f_o \pm 5\%$	$f_o \pm 5\%$
LO frequency	F_L	MHz	f_o	----
LO power	P_{LO}	dBm	+10	----
output amplitude of 1dB compression	----	V	----	$\pm 2.5 (V_{p-p})$
Phase unbalance ²⁾	ΔP	deg	$\pm 2(\text{Max})$	± 1
Amplitude unbalance	ΔM	dB	0.5(Max)	0.20
I/Q Bandwidth ³⁾	VBW	MHz	10% of f_o	15% of f_o
Zero-drift	----	mv	$\pm 3(\text{Max})$	± 1.5
Dynamic range	----	dB	55(Min)	65
RF input power at 1dB Comp Point	P_{-1}	dBm	+2dBm	+4dBm
VSWR of RF/LO	VSWR	----	1.5:1(Max)	1.3:1

1. Custom output amplitude is available
2. When I/Q bandwidth < 5MHz and output amplitude $< \pm 2.5V (p-p)$, then $|\Delta P| \leq 0.8^\circ$
3. The widest I/Q bandwidth $\leq 20\text{MHz}$

Application Notes

1. I&Q two outputs
2. Removable SMA connectors, can be mounted directly on the PCB
3. Power supply: $\pm 12V$ LO power range: $10 \pm 0.5\text{dBm}$
4. $LO < RF: Q = -90^\circ$ $LO > RF: Q = +90^\circ$



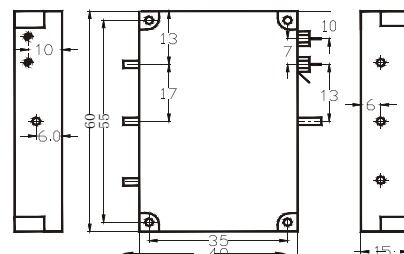
Pin Connection

1. RF in
2. Lo input
3. I. Q
4. Power: 12V
5. I_A. Q_A Amplitude fine tuning
I_Z. Q_Z Zero point tuning

IVM2 ordering information

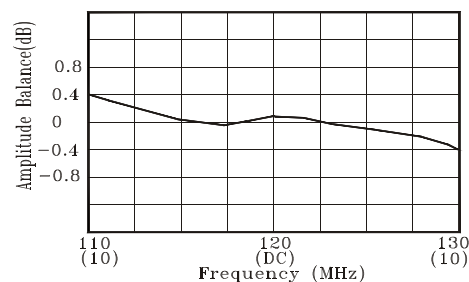
P/N	LO Frequency	I/Q Bandwidth
● IVM2-30	30MHz	5MHz
● IVM2-36	36MHz	5MHz
● IVM2-60	60MHz	6MHz
● IVM2-70	70MHz	6MHz
● IVM2-120	120MHz	12MHz
● IVM2-140	140MHz	6MHz
● IVM2-240	240MHz	6MHz
● IVM2-800	800MHz	-20MHz
● IVM2-xxx	5~1000MHz	$\leq 20\text{MHz}$

IVM2



IVM2-120 Typical Performance

Amplitude balance vs. Frequency



Phase balance vs. Frequency

