

INTELLIGENT INTERACTIVE SYNTHESIZER

SURFACE MOUNT MODEL: FSW1125-10

WIDE BANDWIDTH

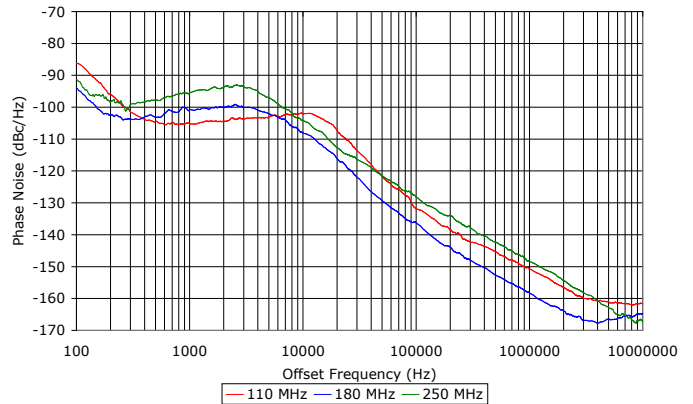
110 - 250 MHz

FEATURES:

- ▶ Exceptionally Low Phase Noise
- ▶ Interactive Communication
- ▶ Standard Programming Interface
- ▶ Ultra Wide Tuning Range
- ▶ Lead Free - RoHS Compliant
- ▶ Patent Pending REL-PRO® Technology
- ▶ Small Size, Surface Mount
- ▶ Buffered Output



Phase Noise

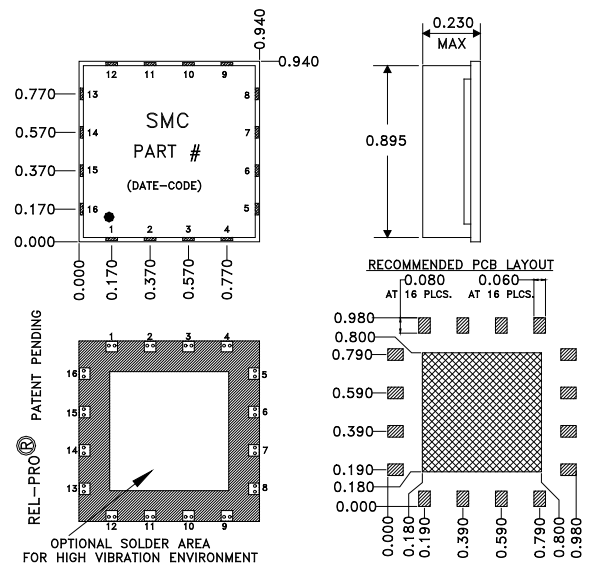


SPECIFICATIONS (Rev. B 03/26/08)

Frequency	110 - 250 MHz		
Step Size	100 kHz		
Reference Input Frequency	10 MHz *		
Reference Input Voltage	1 V p-p to 3.3 V p-p		
Bias Voltage	Vcc	V (Vdc)	I (mA Max.)
	Digital	+5	15
	VCO	+5	40
	Tune	+15	5
Output Power	+5 dBm (Min.)		
Spurious Suppression	75 dB (Typ.)		
Harmonic Suppression	10 dB (Typ.)		
Settling Time	10 mSec (Max.) **		
Output Impedance	50 Ohms (Nom.)		
Typical Phase Noise	Offset	Phase Noise	
	@ 1 kHz	-95 dbc/Hz	
	@ 10 kHz	-104 dbc/Hz	
	@ 100 kHz	-132 dbc/Hz	
Operating Temperature Range	-40 to +85 °C		
Programming	See Application Note: AN7100		

* Reference input frequency is programmable in multiples of the step size, 10 MHz is the default setting. 150 MHz (Max.)
 ** From the rising edge of LE to stable lock detect

Package # 273LF



PACKAGE MOUNTING: SEE APPLICATION NOTE AN7200

Pin-Out

Pin 1 - Reset **	Pin 7 - Vcc (Digital)	Pin 15 - Data In
Pin 2,3 - NC	Pin 8 - Vcc (Tune)	Pin 16 - Clock In
Pin 4 - Error flag	Pin 9 - Vcc (VCO)	All Others - Ground
Pin 5 - Latch Enable In	Pin 13 - RF Out	
Pin 6 - Ref. In	Pin 14 - Lock Detect Out *	NC - No Connection

* High when locked (source/sink 500 uA)

** A low on this input will reset the internal controller. Leave unconnected for normal operation.

Absolute Maximum Ratings

Storage Temp. Range	-55 to +125 °C
Bias Voltage (Digital)	+5.25 V
Bias Voltage (Tune)	+17 V
Bias Voltage (VCO)	+5.5 V
DC Voltage Applied to RF Out	±25 V

This product is manufactured under one or more of the following patents: Approved: 5,180,810; 5,122,621; 5,390,346; 5,416,446; 5,630,754; 5,805,431; 6,325,623; 6,806,573; 7,088,189; 7,180,381; 7,185,591; 7,262,670; 7,263,642; 7,292,113
 Pending: 66,498,307; 60,501,371 & 65,561,756; 60,527,937 & 65,536,675; 60,263,481; 60,564,173; 60,580,083; 60,661,822; 60,605,979; EV3126A034; 11,258,768; 60,622,485 & 66,710,112; 10,607,325; 60,736,901; 60,732,787

Copyright © 2006 Synergy Microwave Corporation
 201 McLean Boulevard • Paterson, New Jersey 07504 • Tel: (973) 881-8800 • Fax: (973) 881-8361
 E-Mail: sales@synergymw.com • World Wide Web: http://www.synergymw.com



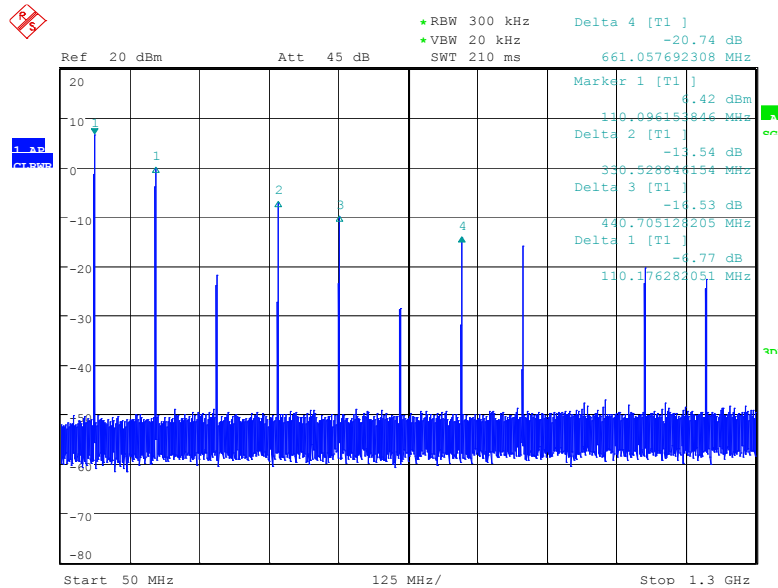
INTELLIGENT INTERACTIVE SYNTHESIZER

SURFACE MOUNT MODEL: FSW1125-10

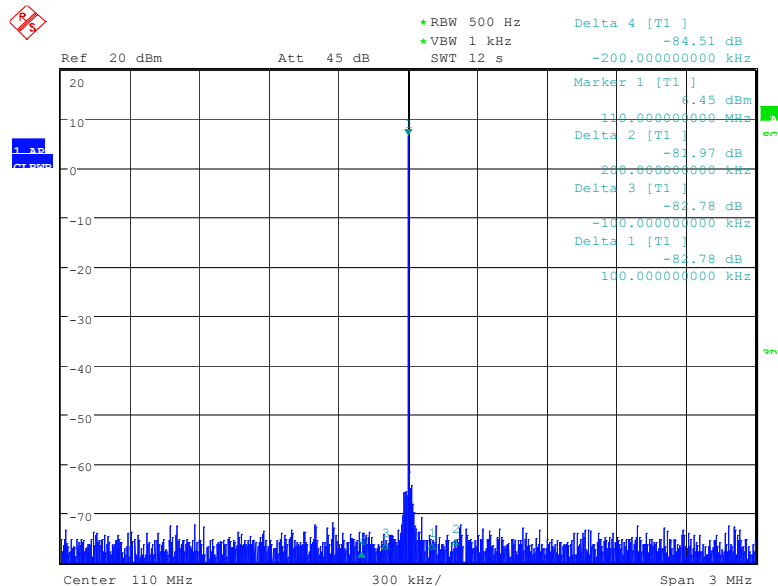
WIDE BANDWIDTH

110 - 250 MHz

HARMONIC SUPPRESSION



REFERENCE SIDEBAND SUPPRESSION



PERFORMANCE PLOTS

This product is manufactured under one or more of the following patents: Approved: 5,183,810; 5,122,621; 5,390,346; 5,416,446; 5,630,754; 5,805,431; 6,325,623; 6,856,573; 7,088,189; 7,180,381; 7,185,591; 7,262,670; 7,263,642; 7,292,113
Pending: 6648307; 66501371 & 66501796; 66527937 & 66532676; 66563481; 66564173; 66580083; 66601822; 66605791; EV31268034;
RU258768; 66622485 & 66710319; RU60732560/736901; 66732787

Copyright © 2006 Synergy Microwave Corporation
201 McLean Boulevard • Paterson, New Jersey 07504 • Tel: (973) 881-8800 • Fax: (973) 881-8361
E-Mail: sales@synergymw.com • World Wide Web: <http://www.synergymw.com>



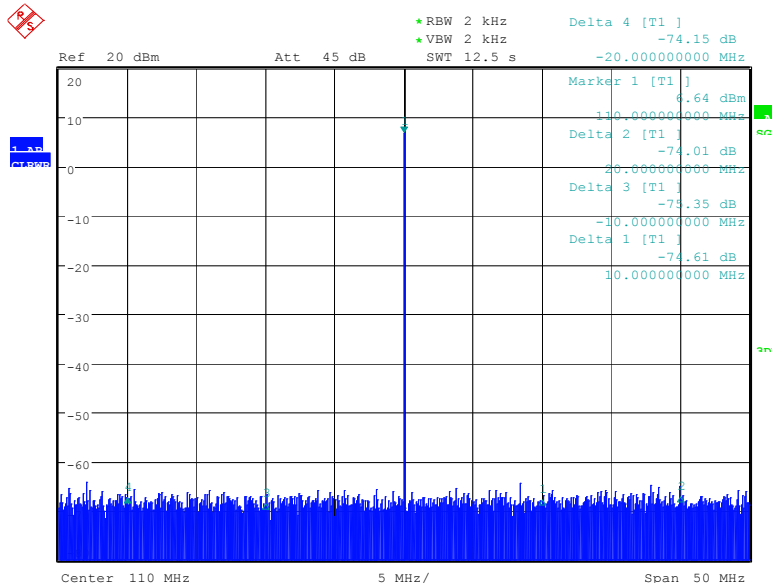
INTELLIGENT INTERACTIVE SYNTHESIZER

SURFACE MOUNT MODEL: FSW1125-10

WIDE BANDWIDTH

110 - 250 MHz

REFERENCE SIDEBAND SUPPRESSION



PERFORMANCE PLOTS

This product is manufactured under one or more of the following patents: Approved: 5,180,810; 5,122,621; 5,330,346; 5,416,446; 5,630,754; 5,805,431; 6,325,623; 6,856,573; 7,088,189; 7,180,381; 7,185,591; 7,262,670; 7,265,642; 7,292,113
 Pending: 6,648,307; 6,650,137; 6,656,179; 6,657,957; 6,658,675; 6,663,481; 6,656,173; 6,658,083; 6,661,822; 6,660,579; EV31268034;
 RU258768; 60622485 & 66710212; RU60732560736901; 60732737

Copyright © 2006 Synergy Microwave Corporation
 201 McLean Boulevard • Paterson, New Jersey 07504 • Tel: (973) 881-8800 • Fax: (973) 881-8361
 E-Mail: sales@synergymw.com • World Wide Web: <http://www.synergymw.com>



INTELLIGENT INTERACTIVE SYNTHESIZER

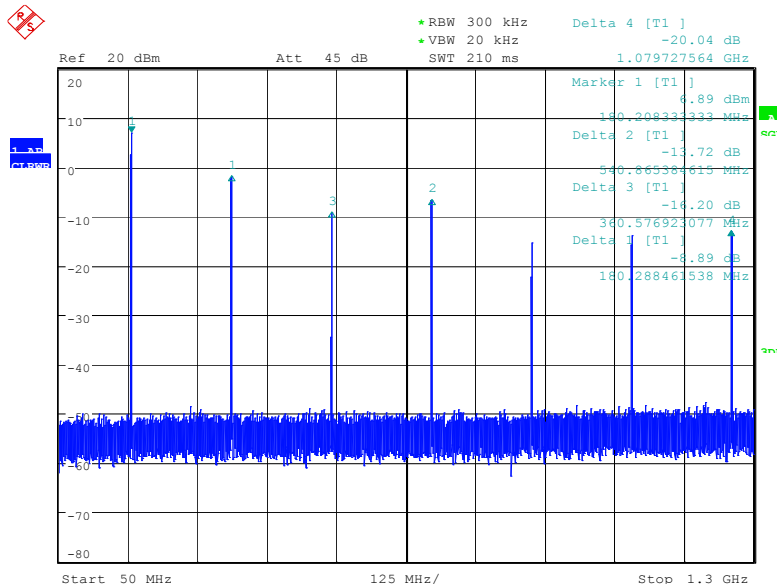
SURFACE MOUNT MODEL: FSW1125-10

WIDE BANDWIDTH

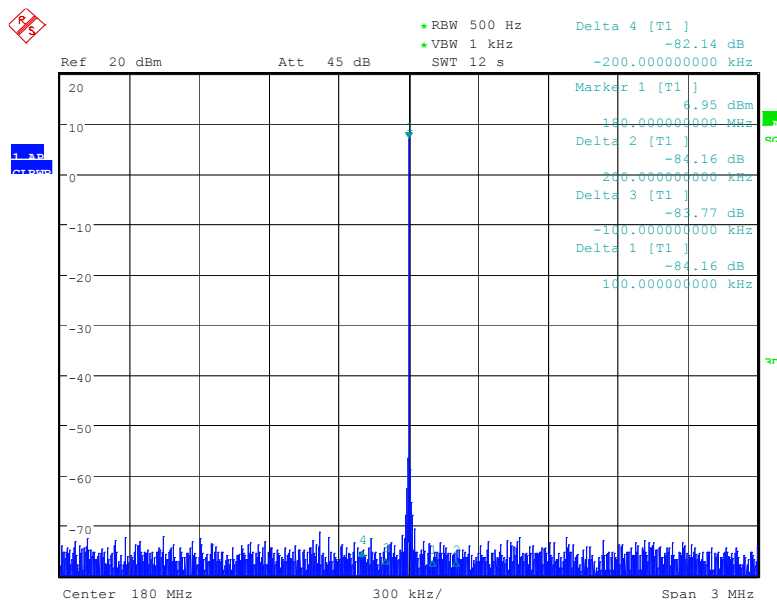
110 - 250 MHz

PERFORMANCE PLOTS

HARMONIC SUPPRESSION



REFERENCE SIDEBAND SUPPRESSION



This product is manufactured under one or more of the following patents: Approved: 5,180,810; 5,122,621; 5,390,346; 5,416,446; 5,630,754; 5,805,431; 6,325,623; 6,856,573; 7,088,189; 7,180,381; 7,185,591; 7,262,670; 7,263,642; 7,292,113
Pending: 6648307; 66501371 & 66501796; 66527937 & 66532675; 66563481; 66564173; 66580083; 66601822; 66605791; EV31268034;
RU258768; 66622485 & 66710319; RU60732560736901; 66732787

Copyright © 2006 Synergy Microwave Corporation
201 McLean Boulevard • Paterson, New Jersey 07504 • Tel: (973) 881-8800 • Fax: (973) 881-8361
E-Mail: sales@synergymw.com • World Wide Web: <http://www.synergymw.com>



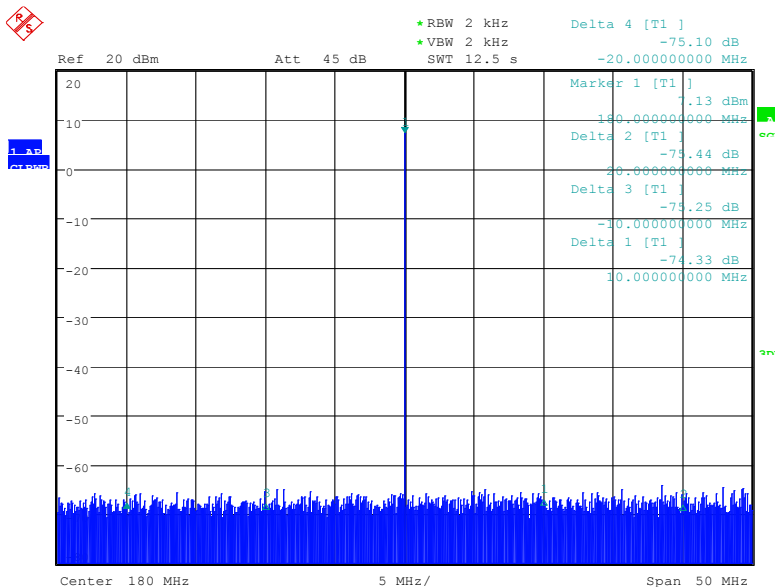
INTELLIGENT INTERACTIVE SYNTHESIZER

SURFACE MOUNT MODEL: FSW1125-10

WIDE BANDWIDTH

110 - 250 MHz

REFERENCE SIDEBAND SUPPRESSION



PERFORMANCE PLOTS

This product is manufactured under one or more of the following patents: Approved: 5,180,810; 5,122,621; 5,390,346; 5,416,446; 5,630,754; 5,805,431; 6,325,623; 6,856,573; 7,088,189; 7,180,381; 7,185,591; 7,262,670; 7,265,642; 7,292,113
 Pending: 6649,3075; 60501371 & 66561796; 60507957 & 66533676; 60563481; 60564173; 60580083; 60661822; 60605791; EV31268034;
 RU258768; 60622485 & 66710212; RU60732560736901; 60732737

Copyright © 2006 Synergy Microwave Corporation
 201 McLean Boulevard • Paterson, New Jersey 07504 • Tel: (973) 881-8800 • Fax: (973) 881-8361
 E-Mail: sales@synergymw.com • World Wide Web: <http://www.synergymw.com>



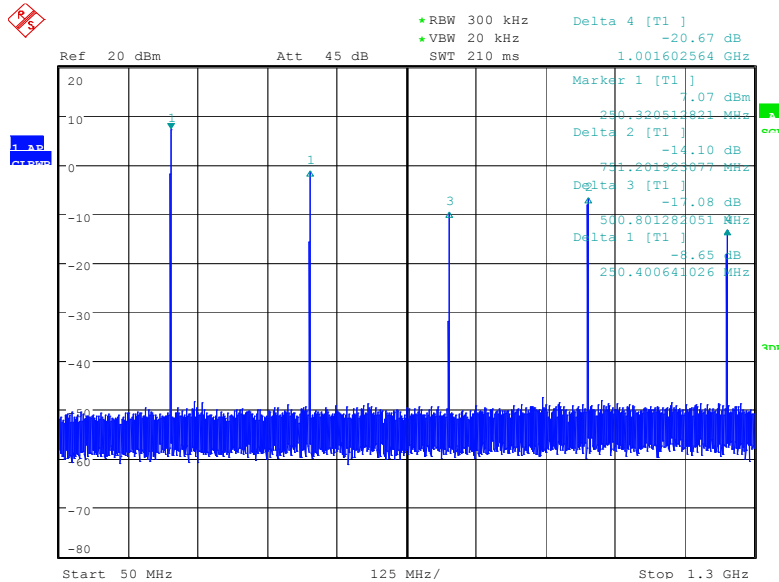
INTELLIGENT INTERACTIVE SYNTHESIZER

SURFACE MOUNT MODEL: FSW1125-10

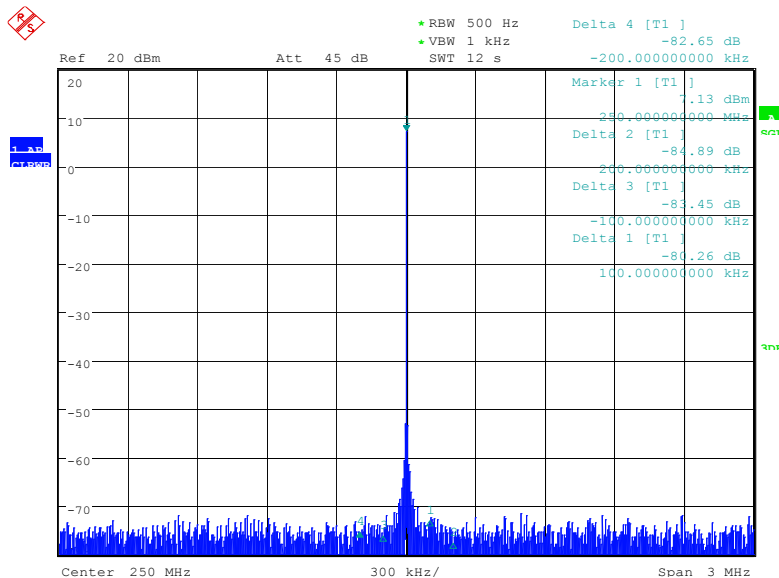
WIDE BANDWIDTH

110 - 250 MHz

HARMONIC SUPPRESSION



REFERENCE SIDEBAND SUPPRESSION



PERFORMANCE PLOTS

This product is manufactured under one or more of the following patents: Approved: 5,183,810; 5,122,621; 5,390,346; 5,416,446; 5,630,754; 5,805,431; 6,325,623; 6,856,573; 7,088,189; 7,180,381; 7,185,591; 7,262,670; 7,263,642; 7,292,113
Pending: 6,648,307; 6,650,137; 6,656,179; 6,657,937; 6,658,675; 6,659,348; 6,659,417; 6,658,083; 6,661,822; 6,660,579; EV31268034;
RU258768; 6,662,485 & 6,671,031; RU60732560736901; 6,673,078

Copyright © 2006 Synergy Microwave Corporation
201 McLean Boulevard • Paterson, New Jersey 07504 • Tel: (973) 881-8800 • Fax: (973) 881-6361
E-Mail: sales@synergymw.com • World Wide Web: <http://www.synergymw.com>



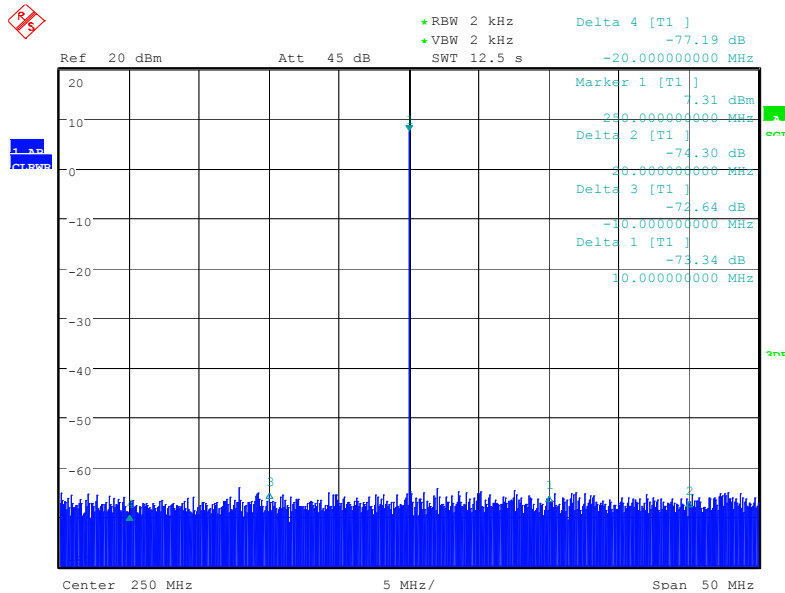
INTELLIGENT INTERACTIVE SYNTHESIZER

SURFACE MOUNT MODEL: FSW1125-10

WIDE BANDWIDTH

110 - 250 MHz

REFERENCE SIDEBAND SUPPRESSION



PERFORMANCE PLOTS

This product is manufactured under one or more of the following patents: Approved: 5,180,810; 5,122,621; 5,390,346; 5,416,446; 5,630,754; 5,805,431; 6,325,623; 6,856,573; 7,088,189; 7,180,381; 7,185,591; 7,262,670; 7,265,642; 7,292,113
 Pending: 6648307; 60501371 & 66561796; 60507957 & 66533676; 60263481; 60564173; 60580083; 60661822; 60605791; EV31268034;
 RU258768; 60622485 & 66710216; RU60732560/736901; 60732787

Copyright © 2006 Synergy Microwave Corporation
 201 McLean Boulevard • Paterson, New Jersey 07504 • Tel: (973) 881-8800 • Fax: (973) 881-8361
 E-Mail: sales@synergymw.com • World Wide Web: <http://www.synergymw.com>

