

INTELLIGENT INTERACTIVE SYNTHESIZER

SURFACE MOUNT MODEL: FSW511-50

WIDE BANDWIDTH

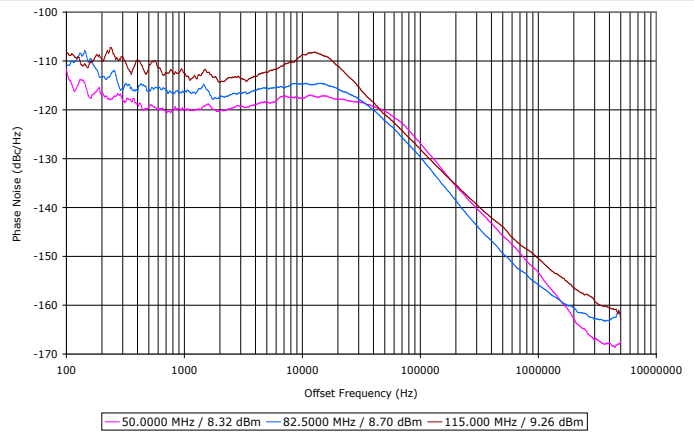
50 - 115 MHz

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 03/30/07)

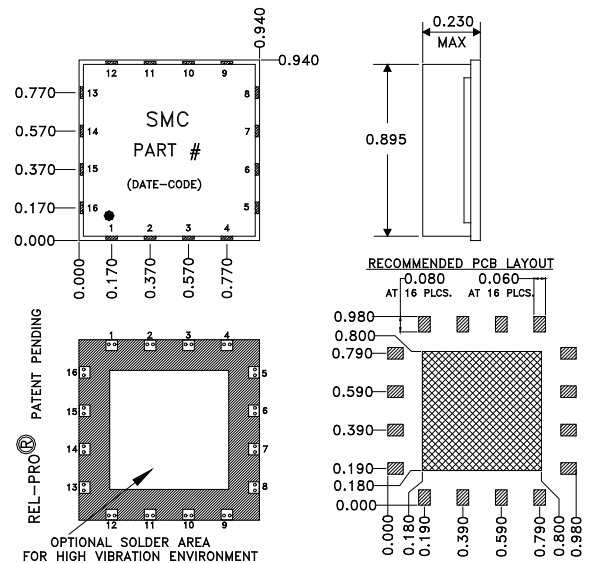
Frequency	50 - 115 MHz		
Step Size	500 kHz		
Reference Input Frequency	10 MHz *		
Reference Input Voltage	1.0 V p-p to 3.3 V p-p		
Bias Voltage	Vcc	V (Vdc)	I (mA Max.)
	Digital	+5	15
	VCO	+5	50
	Tune	+15	10
Output Power	+6 dBm (Min.)		
Spurious Suppression	70 dB (Typ.)		
Harmonic Suppression	12 dB (Typ.)		
Settling Time	10 mSec (Max.) **		
Output Impedance	50 Ohms (Nom.)		
Typical Phase Noise	Offset	Phase Noise	
	@ 1 kHz	-115 dbc/Hz	
	@ 10 kHz	-112 dbc/Hz	
	@ 100 kHz	-127 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

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

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

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

This product is manufactured under one or more of the following patents: Approved: 5,160,810; 5,122,621; 5,390,349; 5,416,449; 5,650,754; 5,805,431; 6,525,623; 6,850,575; 7,088,189; 7,180,381; 7,196,591; 7,262,670; 7,265,642; 7,292,113
 Pending: 60/493075; 60/501371 & 60/501790; 60/527957 & 60/528670; 60/563481; 60/564173; 60/589090; 60/601823; 60/605791; EV31369834; 11/259766; 60/622485 & 60/710310; 10/937525/60/736901; 60/732787



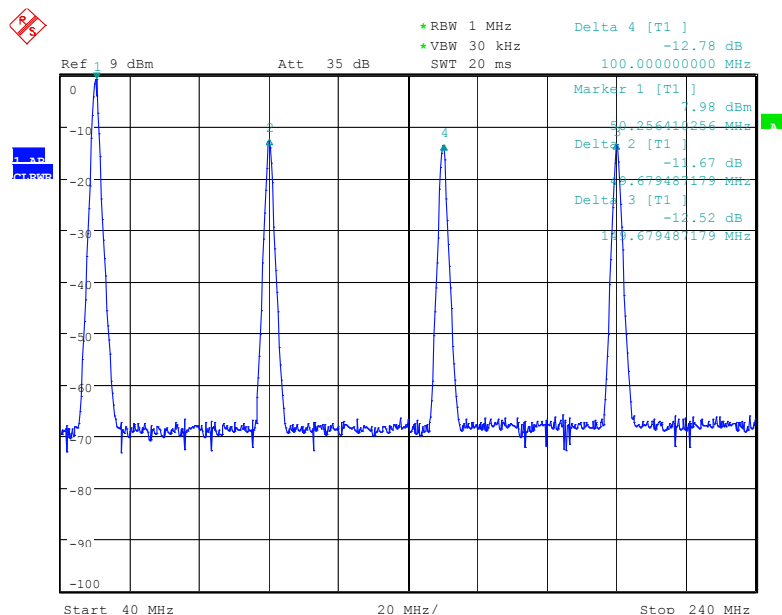
INTELLIGENT INTERACTIVE SYNTHESIZER

SURFACE MOUNT MODEL: FSW511-50

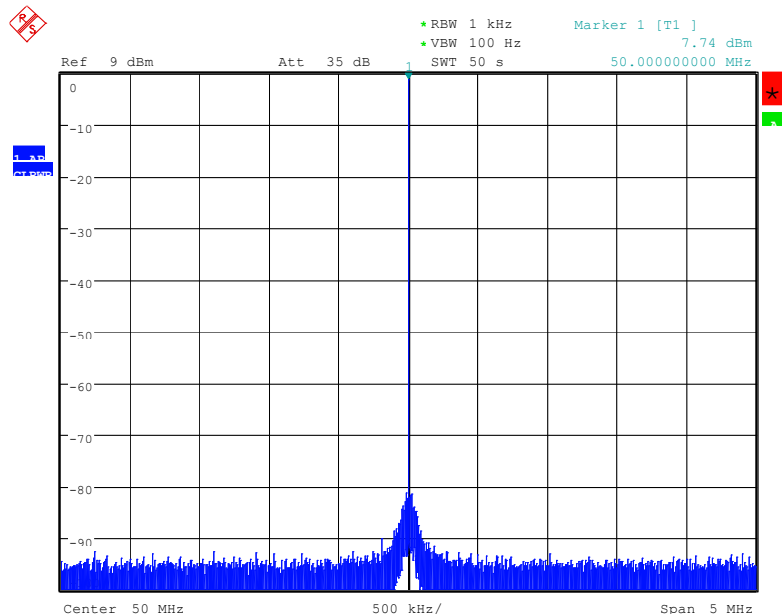
WIDE BANDWIDTH

50 - 115 MHz

HARMONIC SUPPRESSION



REFERENCE SIDEBAND SUPPRESSION



PERFORMANCE PLOTS

This product is manufactured under one or more of the following patents: Approved: 5,160,810; 5,122,621; 5,390,349; 5,416,449; 5,650,754; 5,805,431; 6,525,623; 6,850,575; 7,088,189; 7,180,381; 7,196,591; 7,262,670; 7,265,642; 7,292,113
Pending: 60/493075; 60/501371 & 60/501790; 60/527957 & 60/528670; 60/563481; 60/564173; 60/589090; 60/601823; 60/605791; EV31369834; 11/259766; 60/622485 & 60/710310; 10/937525/60/736901; 60/732787

Copyright © 2008 Synergy Microwave Corporation
201 McLean Boulevard • Paterson, New Jersey 07504 • Tel: (973) 881-8800 • Fax: (973) 881-8361
E-Mail: sales@synergymwave.com • World Wide Web: http://www.synergymwave.com



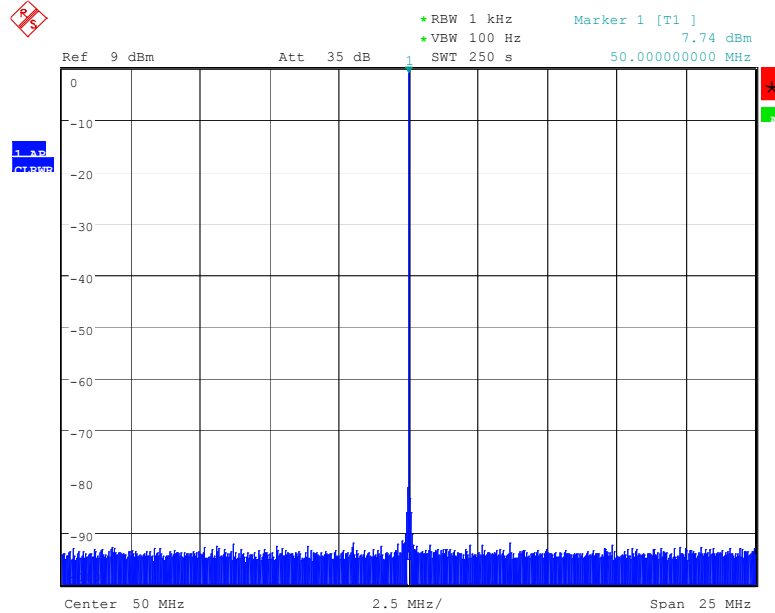
INTELLIGENT INTERACTIVE SYNTHESIZER

SURFACE MOUNT MODEL: FSW511-50

WIDE BANDWIDTH

50 - 115 MHz

REFERENCE SIDEBAND SUPPRESSION



PERFORMANCE PLOTS

This product is manufactured under one or more of the following patents: Approved: 5,160,810; 5,122,621; 5,390,349; 5,416,449; 5,650,754; 5,805,431; 6,525,623; 6,850,575; 7,088,189; 7,180,381; 7,196,591; 7,262,670; 7,265,642; 7,292,113
Pending: 60/493075; 60/501371 & 60/501790; 60/527957 & 60/528670; 60/563481; 60/564173; 60/589090; 60/601823; 60/605791; EV31369834; 11/259766; 60/622485 & 60/710310; 10/937525/60/736901; 60/732787

Copyright © 2008 Synergy Microwave Corporation
201 McLean Boulevard • Paterson, New Jersey 07504 • Tel: (973) 881-8800 • Fax: (973) 881-8361
E-Mail: sales@synergymwave.com • World Wide Web: <http://www.synergymwave.com>



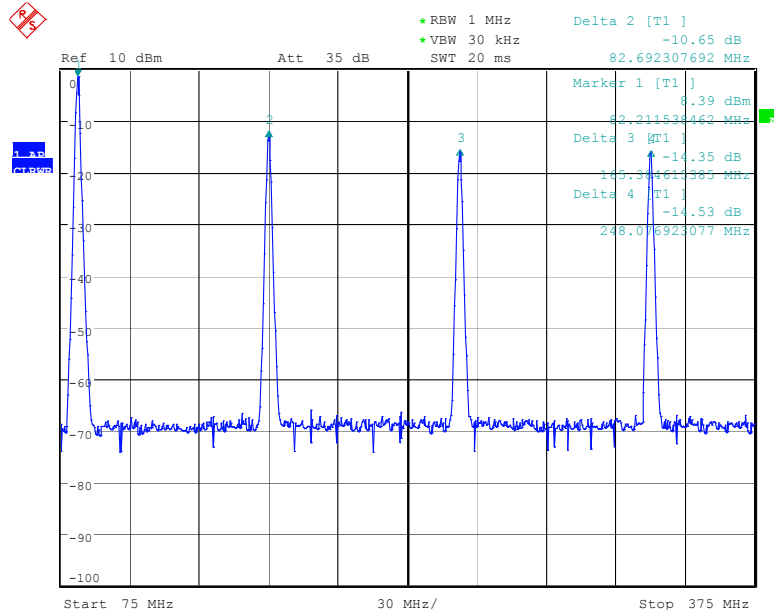
INTELLIGENT INTERACTIVE SYNTHESIZER

SURFACE MOUNT MODEL: FSW511-50

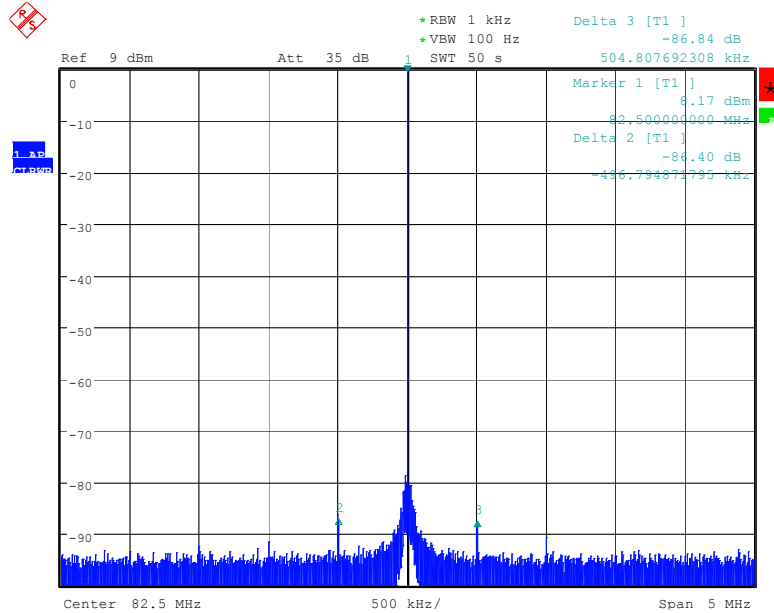
WIDE BANDWIDTH

50 - 115 MHz

HARMONIC SUPPRESSION



REFERENCE SIDEBAND SUPPRESSION



PERFORMANCE PLOTS

This product is manufactured under one or more of the following patents: Approved: 5,160,810; 5,122,621; 5,390,349; 5,416,449; 5,650,754; 5,805,431; 6,525,623; 6,850,575; 7,088,189; 7,180,381; 7,196,591; 7,262,670; 7,265,642; 7,292,113
Pending: 60/493075; 60/501371 & 60/501790; 60/527957 & 60/528670; 60/563481; 60/564173; 60/589090; 60/601823; 60/605791; EV31369834; 11/259766; 60/622485 & 60/710310; 10/937525/60/736901; 60/732787

Copyright © 2008 Synergy Microwave Corporation
201 McLean Boulevard • Paterson, New Jersey 07504 • Tel: (973) 881-8800 • Fax: (973) 881-8361
E-Mail: sales@synergymwave.com • World Wide Web: http://www.synergymwave.com



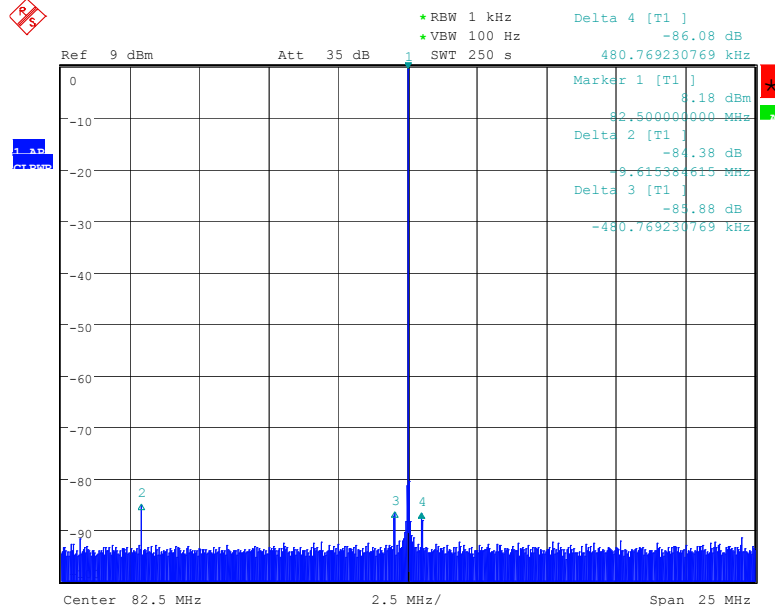
INTELLIGENT INTERACTIVE SYNTHESIZER

SURFACE MOUNT MODEL: FSW511-50

WIDE BANDWIDTH

50 - 115 MHz

REFERENCE SIDEBAND SUPPRESSION



PERFORMANCE PLOTS

This product is manufactured under one or more of the following patents: Approved: 5,160,810; 5,122,621; 5,390,349; 5,416,449; 5,650,754; 5,805,431; 6,525,623; 6,850,575; 7,088,189; 7,180,381; 7,196,591; 7,262,670; 7,265,642; 7,292,113
Pending: 60/493075; 60/501371 & 60/501790; 60/527957 & 60/528670; 60/563481; 60/564173; 60/589090; 60/601823; 60/605791; EV31369834; 11/259766; 60/622485 & 60/710310; 10/937525/60/736901; 60/732787

Copyright © 2008 Synergy Microwave Corporation
201 McLean Boulevard • Paterson, New Jersey 07504 • Tel: (973) 881-8800 • Fax: (973) 881-8361
E-Mail: sales@synergymwave.com • World Wide Web: http://www.synergymwave.com



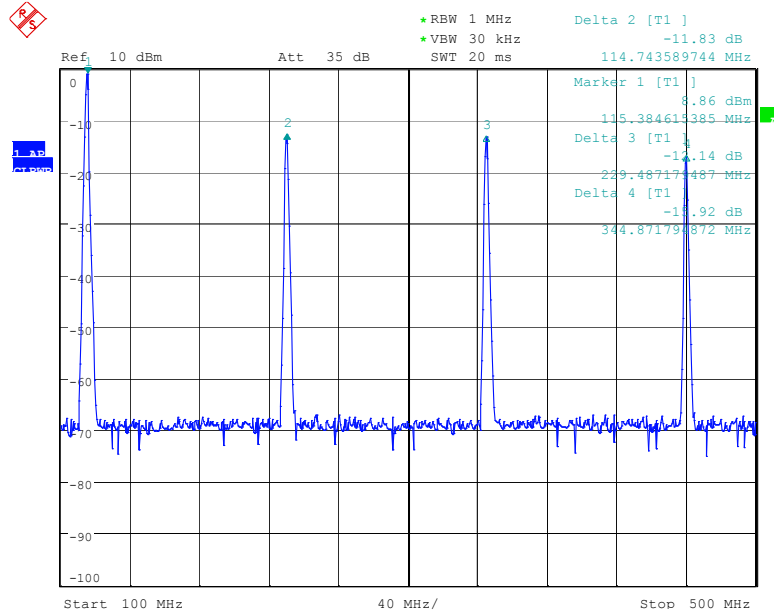
INTELLIGENT INTERACTIVE SYNTHESIZER

SURFACE MOUNT MODEL: FSW511-50

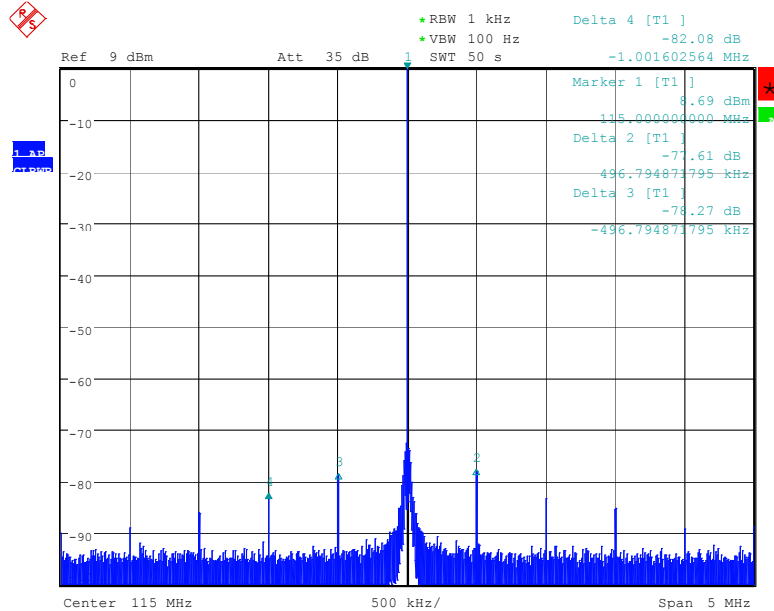
WIDE BANDWIDTH

50 - 115 MHz

HARMONIC SUPPRESSION



REFERENCE SIDEBAND SUPPRESSION



PERFORMANCE PLOTS

This product is manufactured under one or more of the following patents: Approved: 5,160,810; 5,122,621; 5,390,349; 5,416,449; 5,650,754; 5,805,431; 6,525,623; 6,850,575; 7,088,189; 7,180,381; 7,196,591; 7,262,670; 7,265,642; 7,292,113
Pending: 60/493075; 60/501371 & 60/501790; 60/527957 & 60/528670; 60/563481; 60/564173; 60/589090; 60/601823; 60/605791; EV31369834;
11/259766; 60/622485 & 60/710310; 10/937525/60/736901; 60/732787

Copyright © 2008 Synergy Microwave Corporation
201 McLean Boulevard • Paterson, New Jersey 07504 • Tel: (973) 881-8800 • Fax: (973) 881-8361
E-Mail: sales@synergymwave.com • World Wide Web: http://www.synergymwave.com



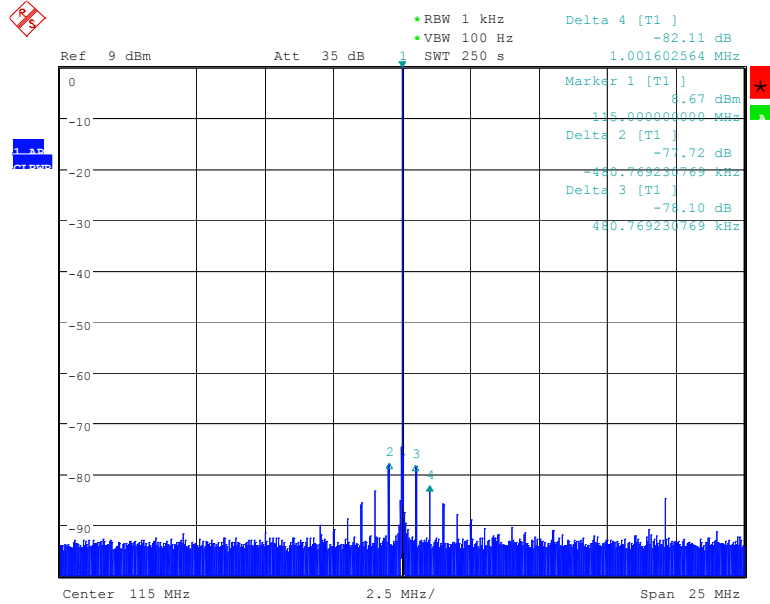
INTELLIGENT INTERACTIVE SYNTHESIZER

SURFACE MOUNT MODEL: FSW511-50

WIDE BANDWIDTH

50 - 115 MHz

REFERENCE SIDEBAND SUPPRESSION



PERFORMANCE PLOTS

This product is manufactured under one or more of the following patents: Approved: 5,160,810; 5,122,621; 5,390,349; 5,416,449; 5,650,754; 5,805,431; 6,525,623; 6,850,575; 7,088,189; 7,180,381; 7,196,591; 7,262,670; 7,265,642; 7,292,113
 Pending: 60/493075; 60/501371 & 60/501790; 60/527957 & 60/528670; 60/563481; 60/564173; 60/589090; 60/601823; 60/605791; EV31369834; 11/259766; 60/622485 & 60/710310; 10/937525/60/736901; 60/732787

Copyright © 2008 Synergy Microwave Corporation
 201 McLean Boulevard • Paterson, New Jersey 07504 • Tel: (973) 881-8800 • Fax: (973) 881-8361
 E-Mail: sales@synergymwave.com • World Wide Web: http://www.synergymwave.com

