

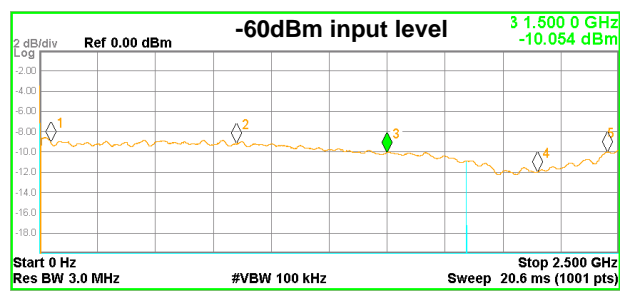
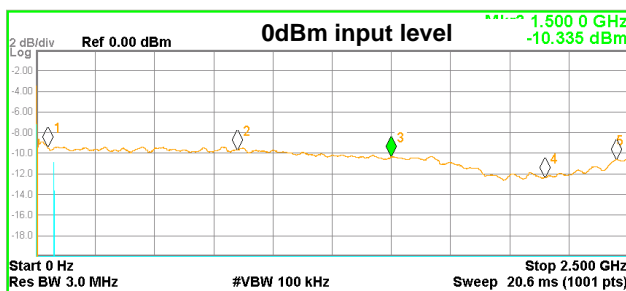
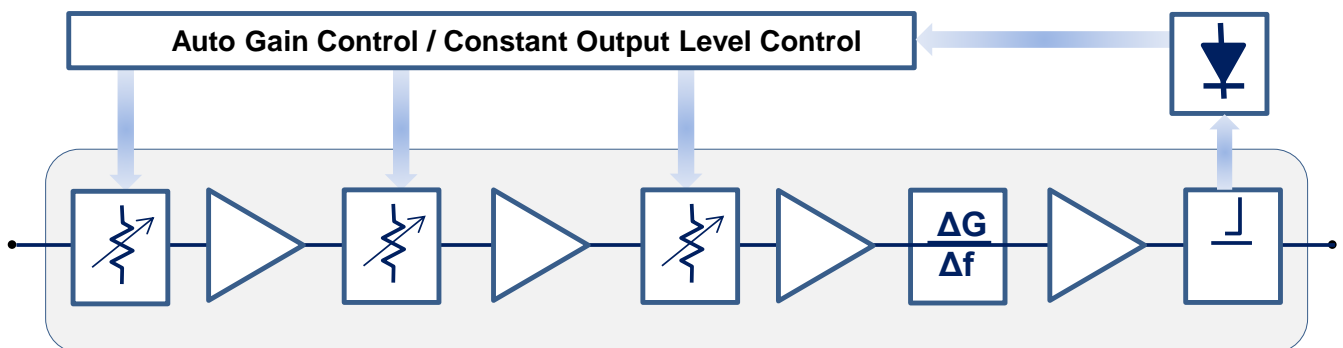
AGC Amplifier



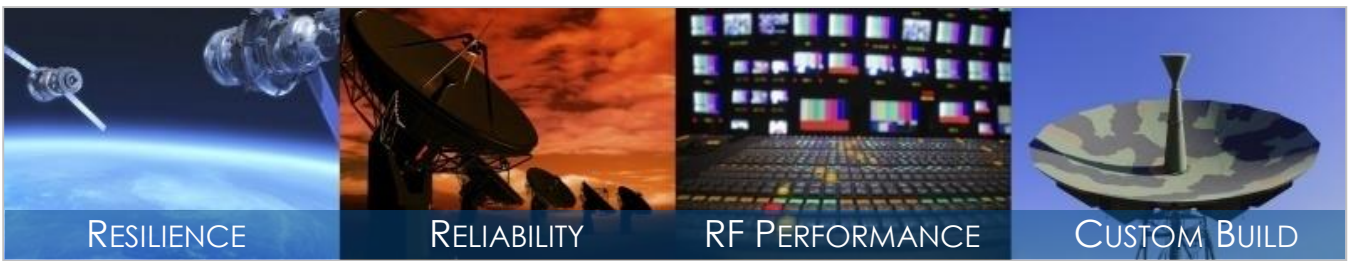
The A-AGCB3-3503 to 3507 range offers 60dB dynamic range AGC (constant output level) amplifiers operating over 50MHz to 2500MHz with optional output levels including 0dBm, -5dBm, -10dBm, -15dBm and -20dBm. The amplifiers are factory preset to the required output levels and require external DC supply within the range of 9 to 24V. Customised variants are also available.

These components are commonly available in 50 ohm SMA and N-types RF connectors. 75 ohm impedance versions are also available as customised variants.

Functional Block Diagram



Gain Block
 Variable Attenuator
 Gain Slope Compensation
 RF level detection
 Coupler



A-AGCB3-3503 to A-AGCB3-3507

Broadband, 50MHz to 2500 MHz Automatic Gain Control Amplifier



Typical performance over L-band operation, 50MHz to 2500MHz

Model Number	Output Level (dBm)	Input Level (dBm)		Input return loss (dB)		Output return loss (dB)	
	Typical	Min..	Max.	Typ.	Min.	Typ.	Max.

Model 3503

A-AGCB3-3503-S5S5	0±2	-50	+5	20	15	20	12
A-AGCB3-3503-N5N5	0±2	-50	+5	18	14	18	12
A-AGCB3-3503-F7F7	0±2	-50	+5	14	8	14	8

Model 3504

A-AGCB3-3504-S5S5	-5±2	-55	0	20	15	20	12
A-AGCB3-3504-N5N5	-5±2	-55	0	18	14	18	12
A-AGCB3-3504-F7F7	-5±2						

Model 3505

A-AGCB3-3505-S5S5	-10±2	-60	0	20	15	20	12
A-AGCB3-3505-N5N5	-10±2	-60	0	18	14	18	12
A-AGCB3-3505-F7F7	-10±2						

Model 3506

A-AGCB3-3506-S5S5	-15±2	-60	0	20	15	20	12
A-AGCB3-3506-N5N5	-15±2	-60	0	18	14	18	12
A-AGCB3-3506-F7F7	-15±2						

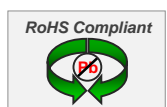
Model 3507

A-AGCB3-3507-S5S5	-20±2	-60	0	20	15	20	12
A-AGCB3-3507-N5N5	-20±2	-60	0	18	14	18	12
A-AGCB3-3507-F7F7	-20±2						



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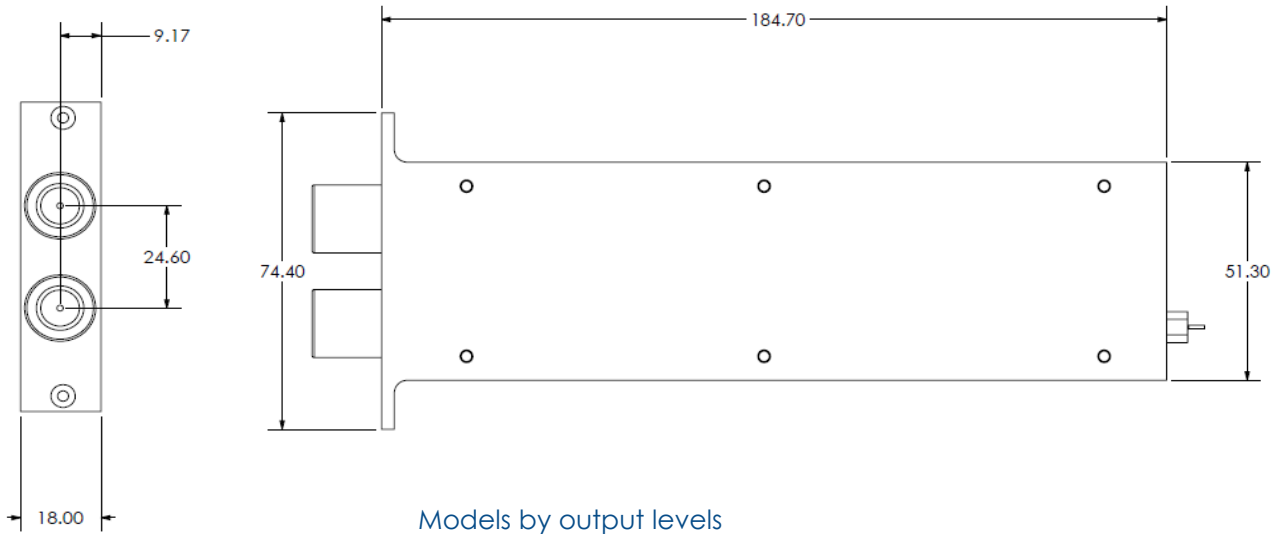
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A-AGCB3-3503 to A-AGCB3-3507

Broadband, 50MHz to 2500 MHz Automatic Gain Control Amplifier



Preliminary Physical dimensions



Models by output levels

Model Numbers	Gain Levels
A-AGCB3-3503	Output level set to 0 dBm Constant Output power .
A-AGCB3-3504	Output level set to -5dBm Constant Output power .
A-AGCB3-3505	Output level set to -10dBm Constant Output power.
A-AGCB3-3506	Output level set to -15 dBm Constant Output power .
A-AGCB3-3507	Output level set to -20 dBm Constant Output power .

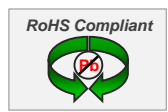
Maximum acceptable operating parameters for reliable and safe operation

Parameter	Value	Comment
Input RF power	+16 dBm (40mW)	Max total RF power
Max voltage: RF ports	24 V	All RF ports are DC blocked
Max voltage: DC bias points	28V	Nominal operational range is 9 to 24V
Current	300mA Max	
	200mA Nominal	
Operating temperature	0 to 45°C	Indoor use only
Storage Temperature	-20°C to +75°C	
Humidity	85%	Non-condensing
Altitude	3000m AMSL	Operation beyond these limits may cause instantaneous and permanent damage.



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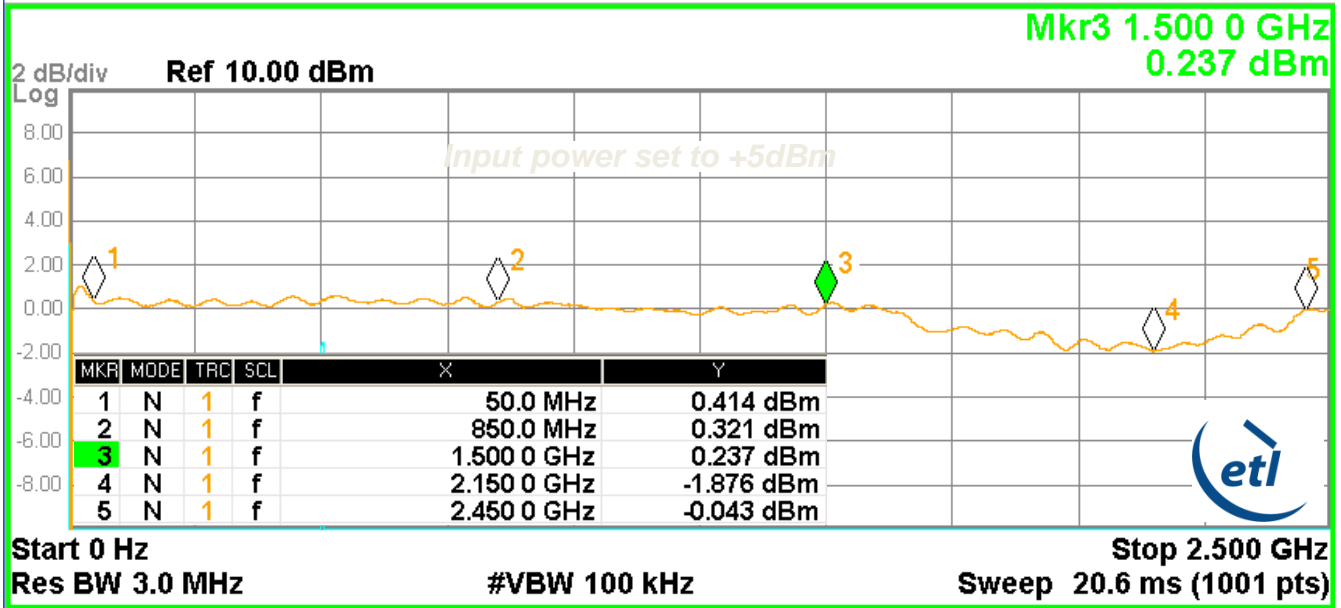
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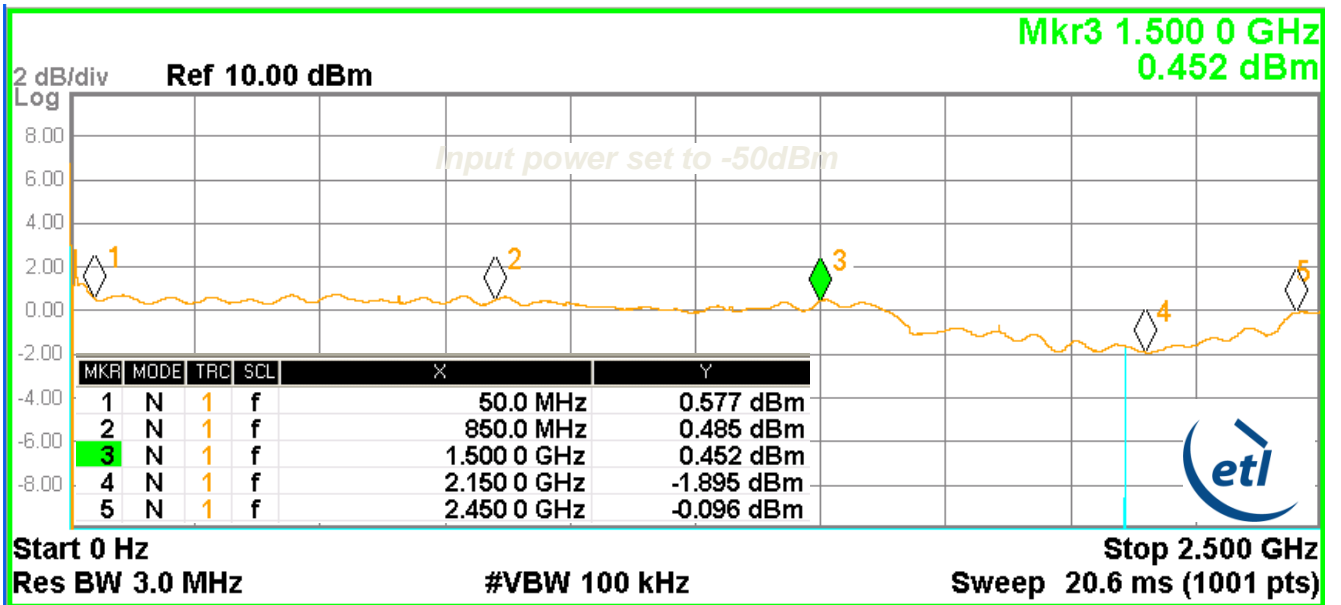
Broadband, 50MHz to 2500 MHz Automatic Gain Control Amplifier



Measured Data: Typical characteristics of 3503



0dBm OUTPUT POWER SETTING

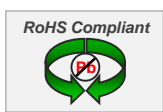


**AGC output power levelling over +5 to -50dBm input power
with output set to 0dBm constant level**



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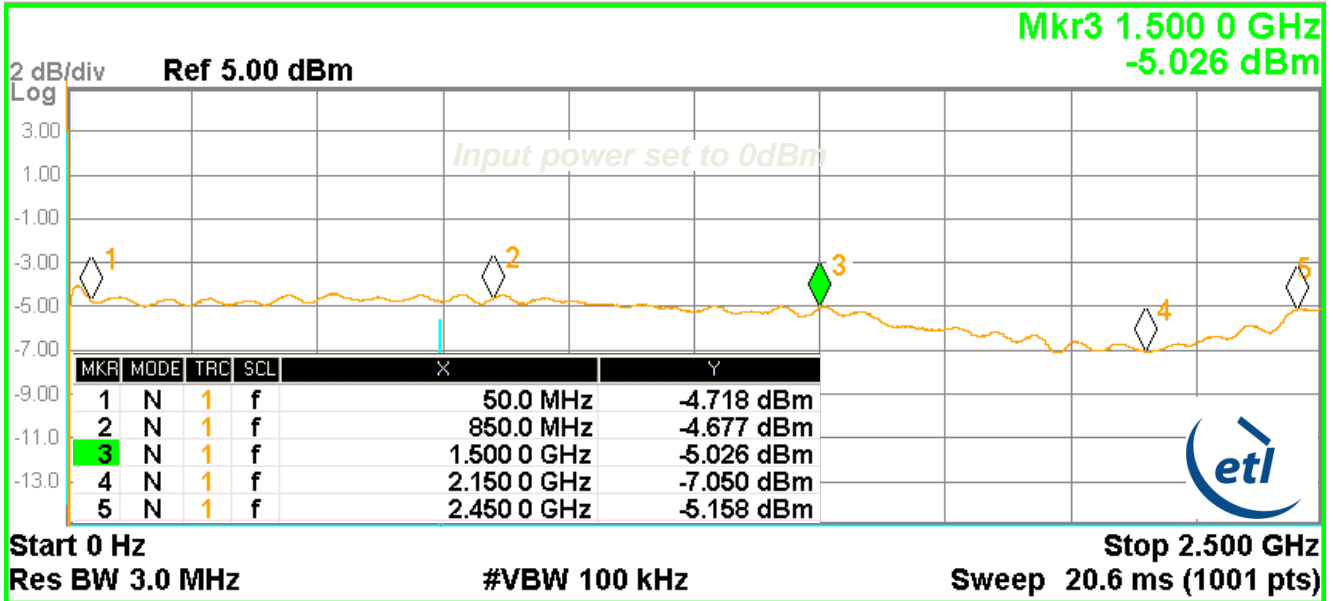
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A-AGCB3-3503 to A-AGCB3-3507

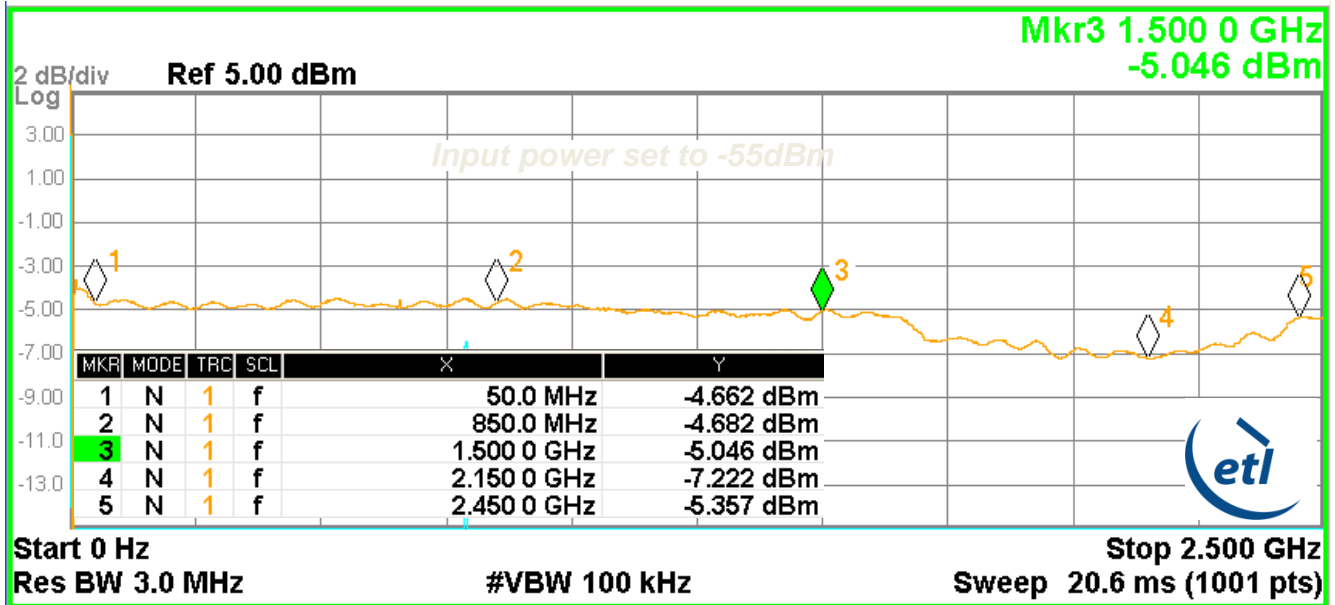
Broadband, 50MHz to 2500 MHz Automatic Gain Control Amplifier



Measured Data: Typical characteristics of 3504



-5dBm OUTPUT POWER SETTING



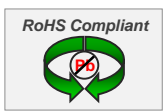
AGC output power levelling over 0 to -55dBm input power

AGC output with output set to -5dBm constant level input power
with output set to -5dBm constant level



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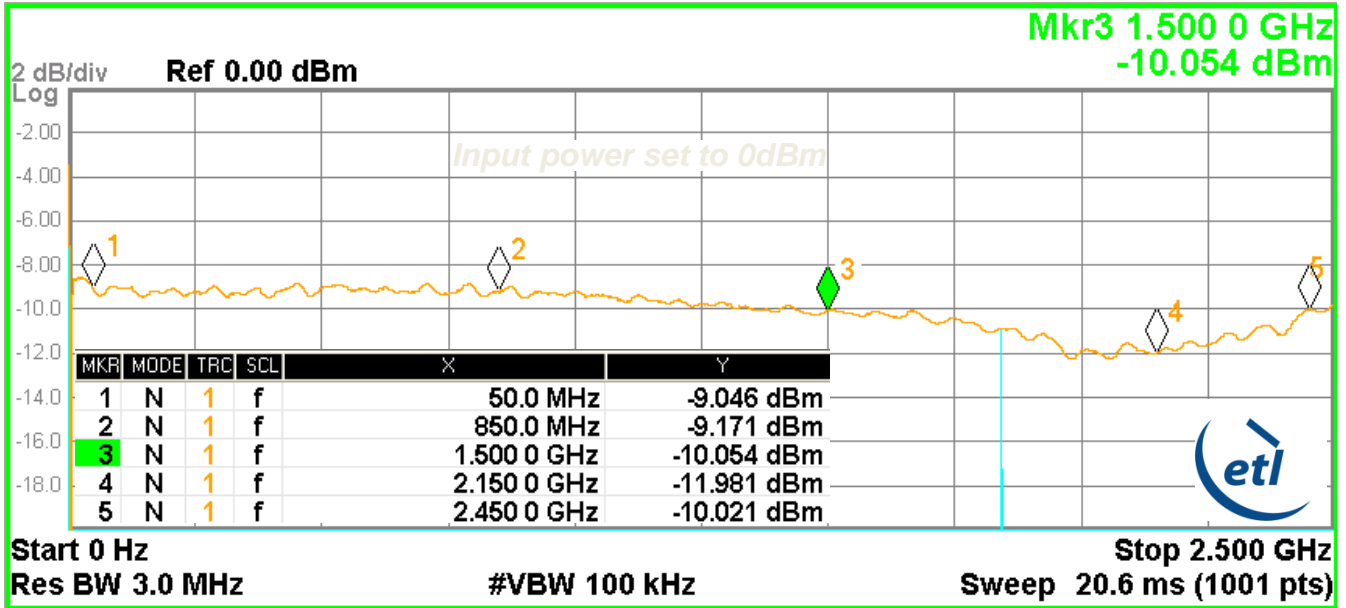
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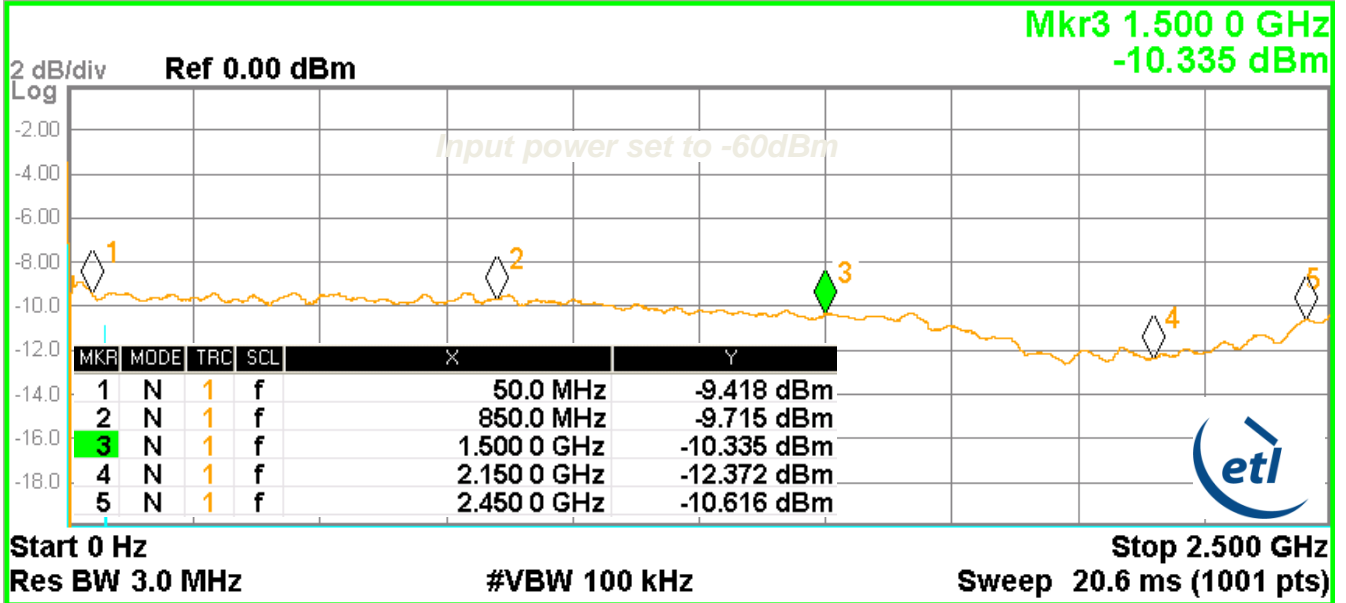
Broadband, 50MHz to 2500 MHz Automatic Gain Control Amplifier



Measured Data: Typical characteristics of 3505



-10dBm OUTPUT POWER SETTING

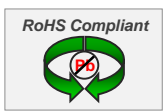


**AGC output power levelling over 0 to -60dBm input power
with output level set to -10dBm constant level**



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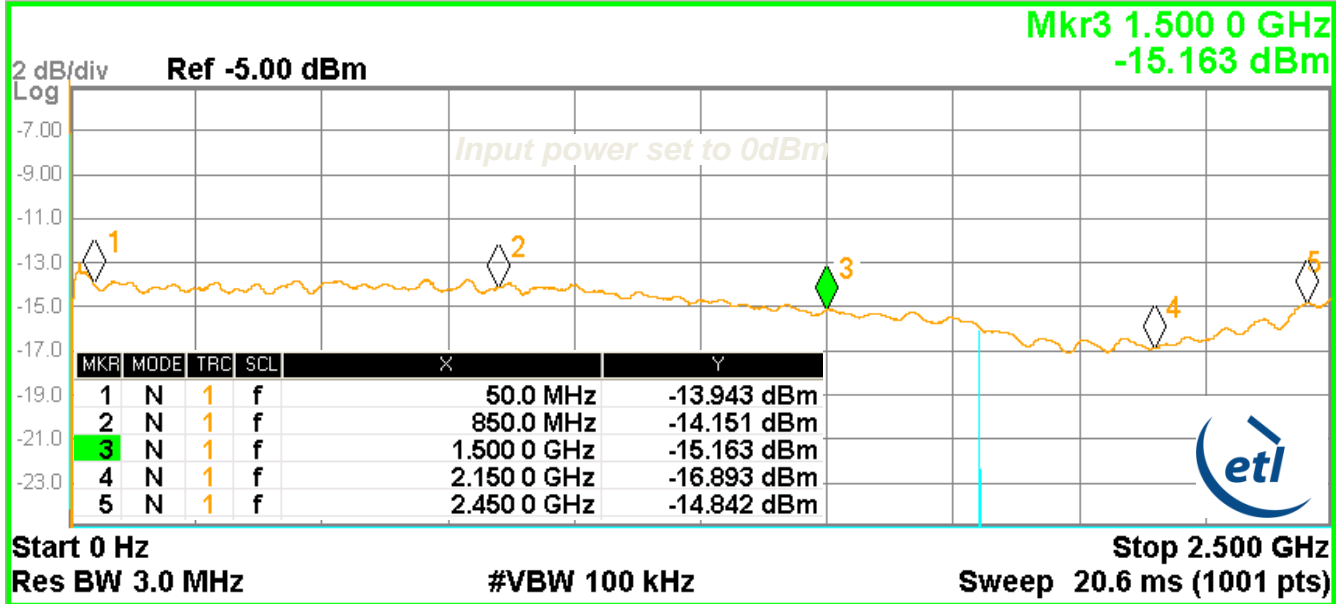
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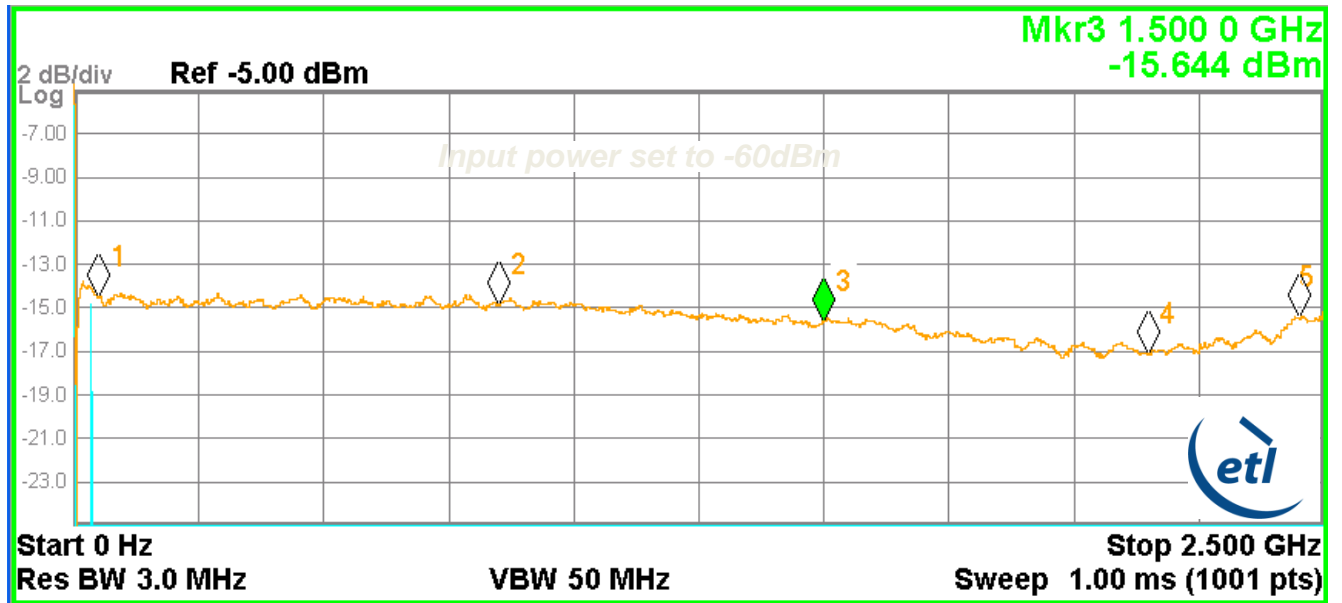
Broadband, 50MHz to 2500 MHz Automatic Gain Control Amplifier



Measured Data: Typical characteristics of 3506



-15dBm OUTPUT POWER SETTING

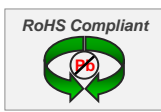


**AGC output power levelling over 0 to -60dBm input power
with output level set to -15dBm constant level**



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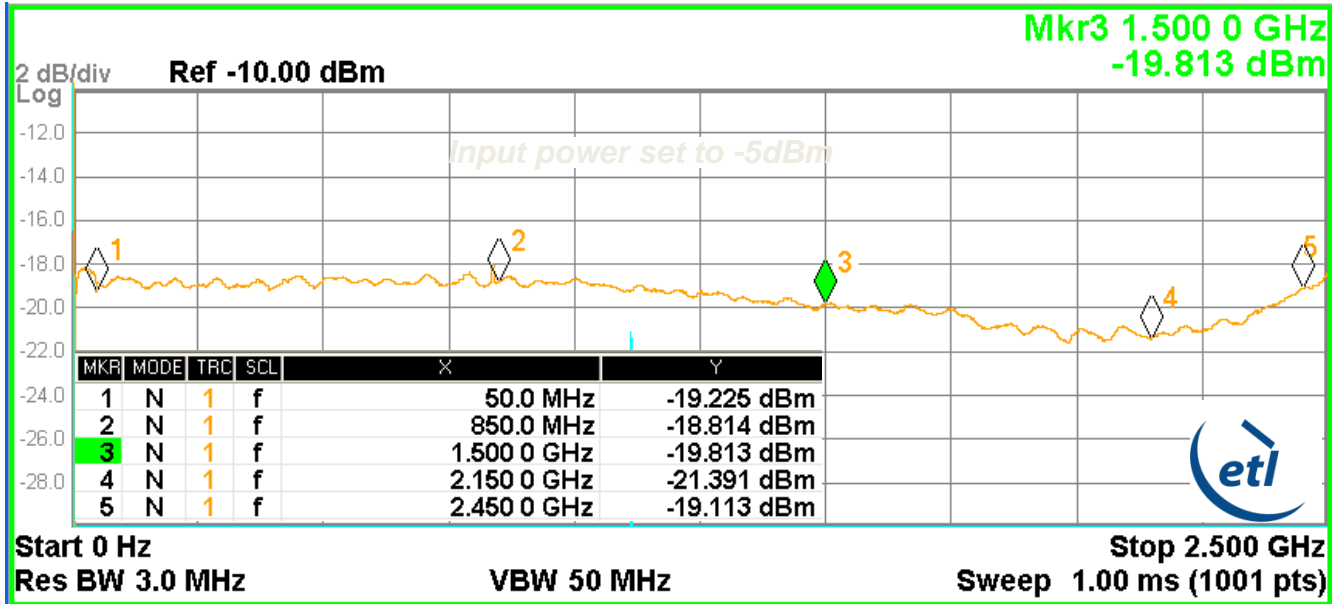
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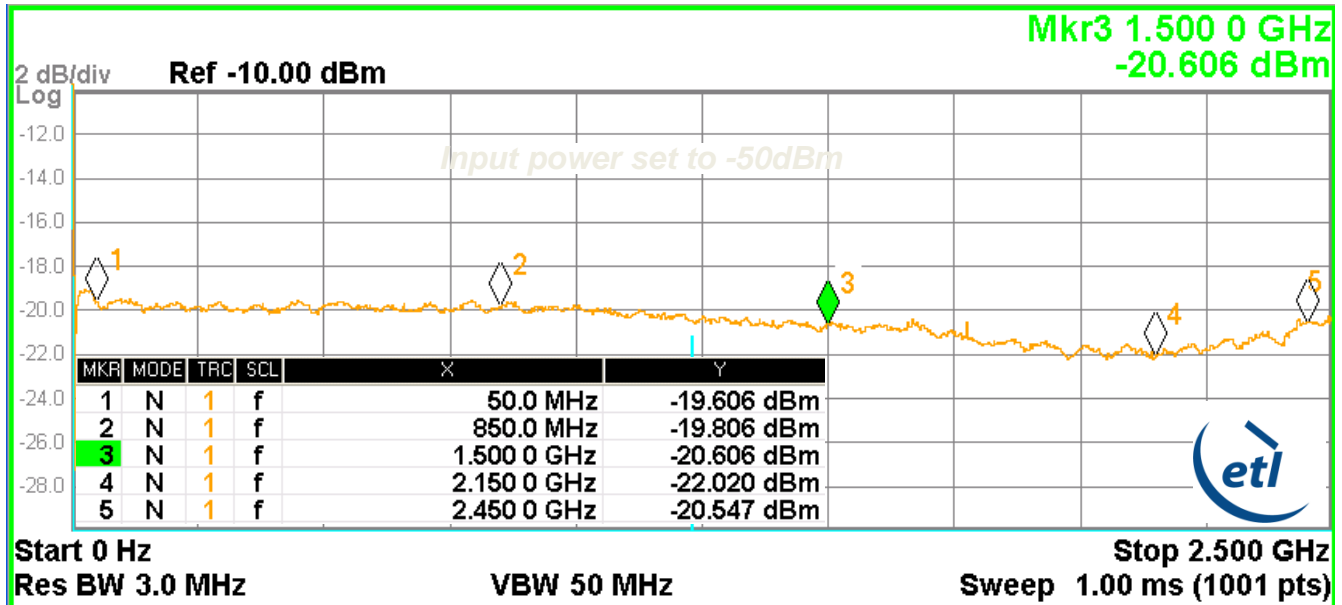
Broadband, 50MHz to 2500 MHz Automatic Gain Control Amplifier



Measured Data: Typical characteristics of 3507



-20dBm OUTPUT POWER SETTING



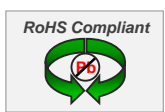
AGC output power levelling over 0 to -60dBm input power

with output level set to -20dBm constant level



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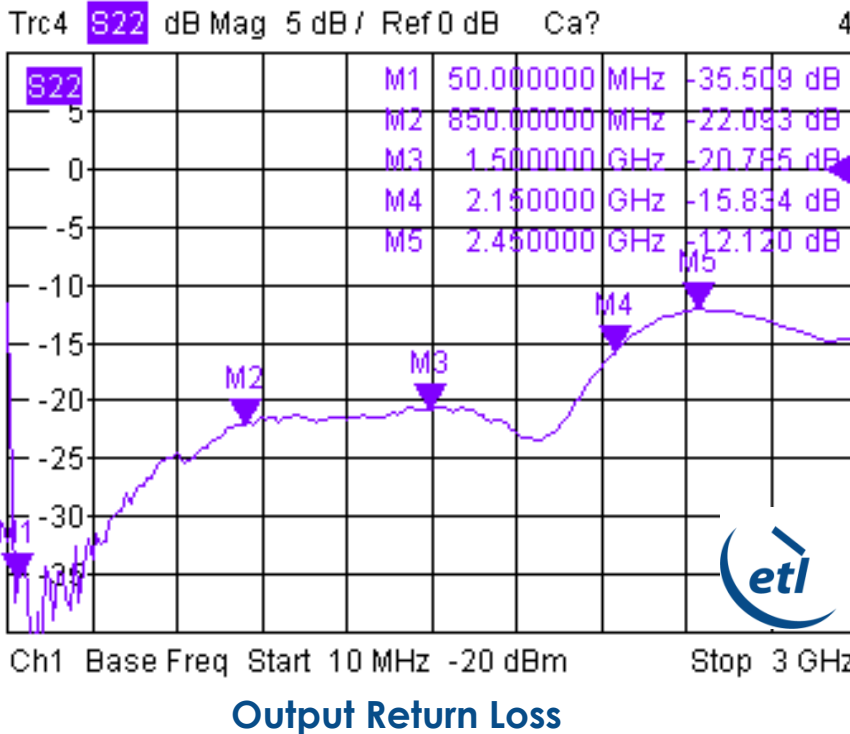
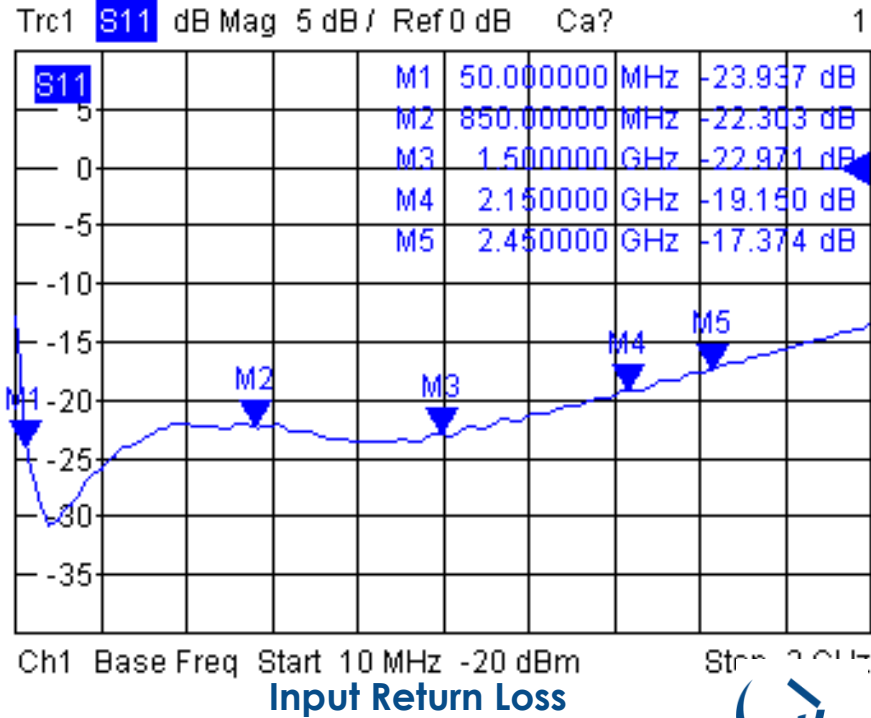
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A-AGCB3-3503 to A-AGCB3-3507

Broadband, 50MHz to 2500 MHz Automatic Gain Control Amplifier

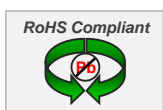


Measured Data: Typical return loss characteristics of the range.



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