



PASSIVE MULTIPLIERS

[FT-12-0001- 60-90GHz](#)

[FT-10-0001 - 75-110GHz](#)

[FT-06-0001 - 110-170GHz](#)

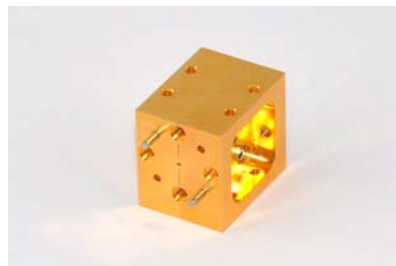
[FT-05-0003 - 140-220GHz](#)

[FT-03-0002- 220-325GHz](#)

[FD-05-0001- 140-220Hz](#)

Datasheet**Description**

A high efficiency x3 passive multiplier series covering full WR-03 band (220-325 GHz).

**Features**

- High efficiency
- Full band frequency coverage
- Fixed tuned
- Unbiased planar diodes

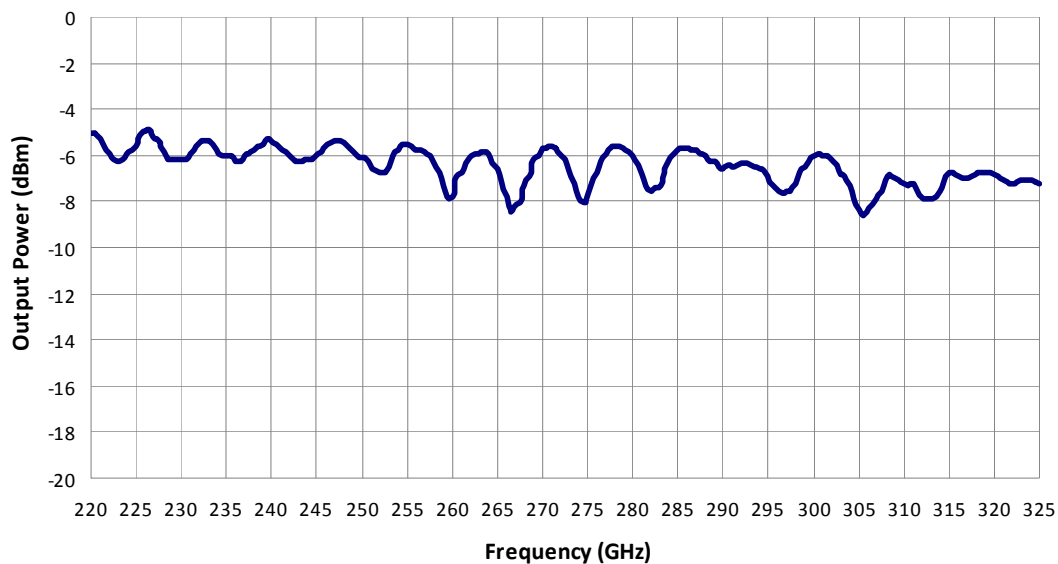
Applications

- Frequency multiplication
- Mm-Wave instrumentation
- Signal source frequency extension
- Test and measurement

Specification	Unit	Min	Typ	Max
Output Frequency Range	GHz	220		325
Frequency Band		-		
Waveguide Designation		WR-03		
Multiplication Factor		3		
Input Power Range	dBm	+5		+13
Output Power Range	dBm		-7	
Efficiency	%	2.5 typ.		
Input Flange		WR-10 UG387/U-M		
Output Flange		WR-03 UG387/U-M		
Bias Required		None		

Datasheet

Typical FT-03 Output Power



Notes:

Farran Technology reserves the right to change, without notice, the characteristic data and other specifications applied to this product. The product may be subject to Irish export restrictions.

Datasheet**Description**

A high efficiency x3 passive multiplier series covering full WR-05 band (140-220 GHz).

**Features**

- High efficiency
- Full band frequency coverage
- Fixed tuned
- Unbiased planar diodes

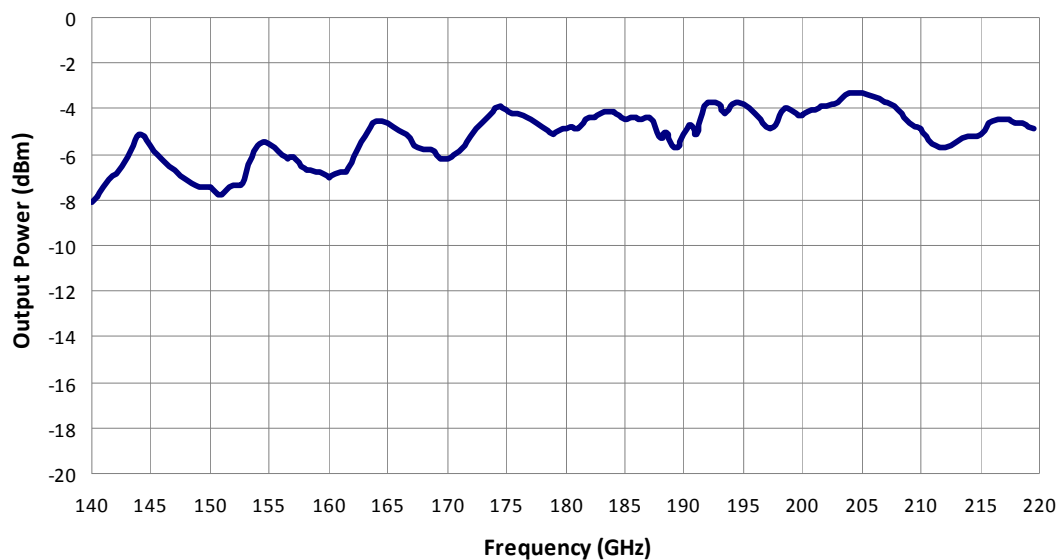
Applications

- Frequency multiplication
- Mm-Wave instrumentation
- Signal source frequency extension
- Test and measurement

Specification	Unit	Min	Typ	Max
Output Frequency Range	GHz	140		220
Frequency Band		G		
Waveguide Designation		WR-05		
Multiplication Factor		3		
Input Power Range	dBm	+5		+13
Output Power Range	dBm		-6	
Efficiency	%	3 typ.		
Input Flange		WR-15 UG385/U		
Output Flange		WR-05 UG387/U-M		
Bias Required		None		

Datasheet

Typical FT-05 Output Power

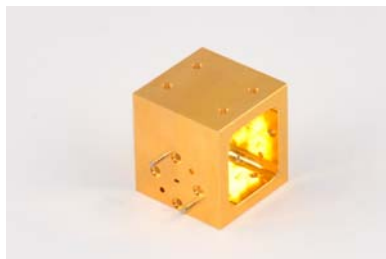


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Datasheet**Description**

A high efficiency x3 passive multiplier series covering full WR-06 band (110-170 GHz).

**Features**

- High efficiency
- Full band frequency coverage
- Fixed tuned
- Unbiased planar diodes

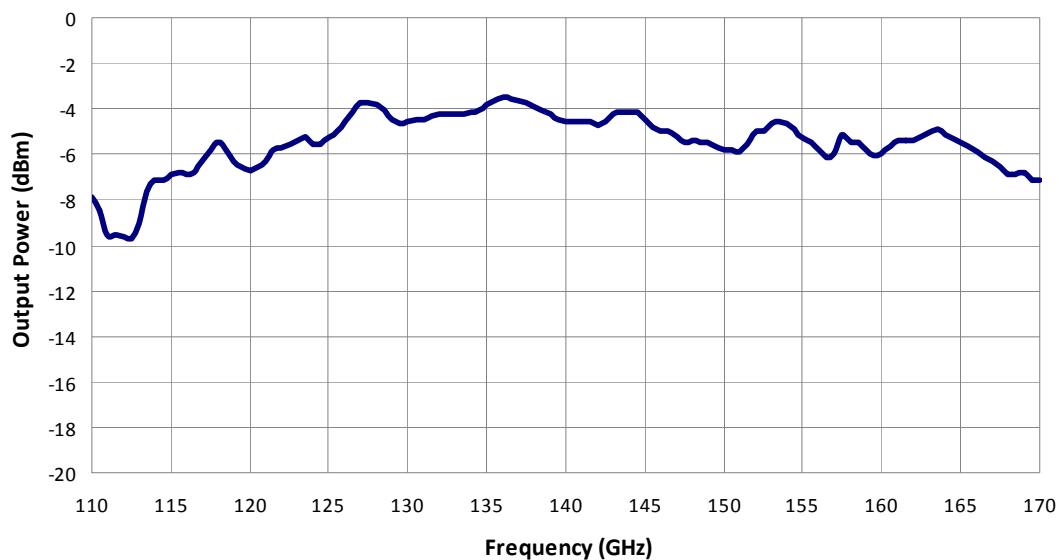
Applications

- Frequency multiplication
- Mm-Wave instrumentation
- Signal source frequency extension
- Test and measurement

Specification	Unit	Min	Typ	Max
Output Frequency Range	GHz	110		170
Frequency Band		D		
Waveguide Designation		WR-06		
Multiplication Factor		3		
Input Power Range	dBm	+5		+13
Output Power Range	dBm		-6	
Efficiency	%	3 typ.		
Input Flange		WR-19 UG383/U-M		
Output Flange		WR-06 UG387/U-M		
Bias Required		None		

Datasheet

Typical FT-06 Output Power



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Datasheet

Description

A high efficiency x3 passive multiplier series covering full WR-10 band (75-110 GHz).



Features

- High efficiency
- Full band frequency coverage
- Fixed tuned
- Unbiased planar diodes

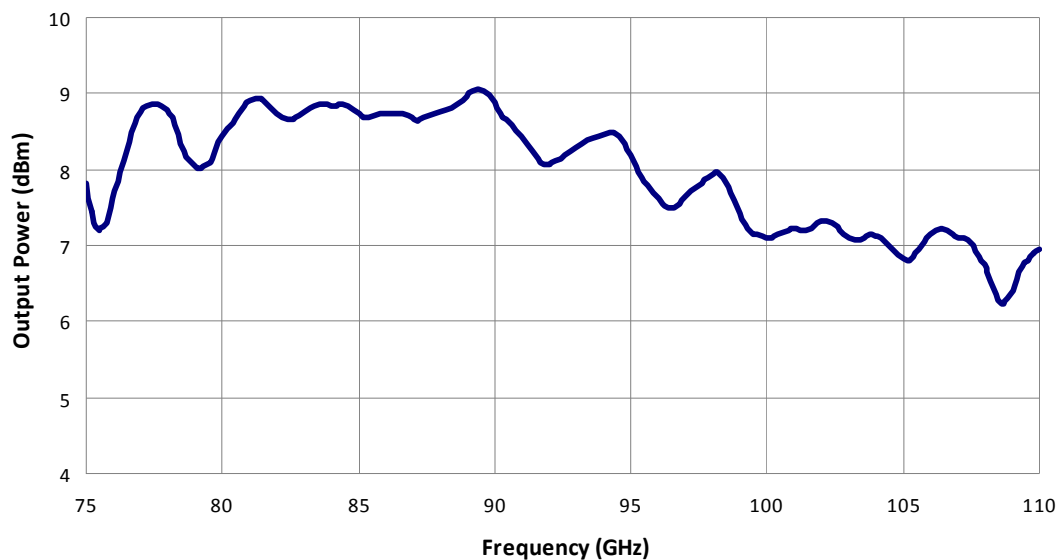
Applications

- Frequency multiplication
- Mm-Wave instrumentation
- Signal source frequency extension
- Test and measurement

Specification	Unit	Min	Typ	Max
Output Frequency Range	GHz	75		110
Frequency Band		W		
Waveguide Designation		WR-10		
Multiplication Factor		3		
Input Power Range	dBm			+23
Output Power Range	dBm		+7	
Efficiency	%	3 typ.		
Input Flange		WR-28 UG599/U		
Output Flange		WR-10 UG387/U-M		
Bias Required		None		

Datasheet

Typical FT-10 Output Power



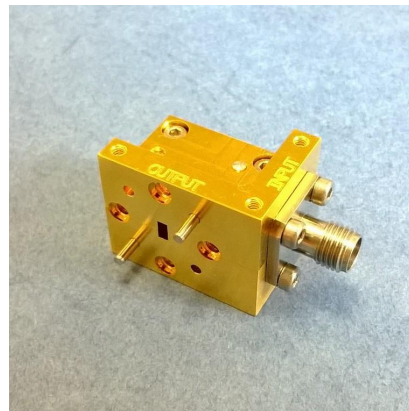
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Datasheet

Description

A high efficiency x3 passive multiplier series covering full WR-12 band (60-90 GHz).



Features

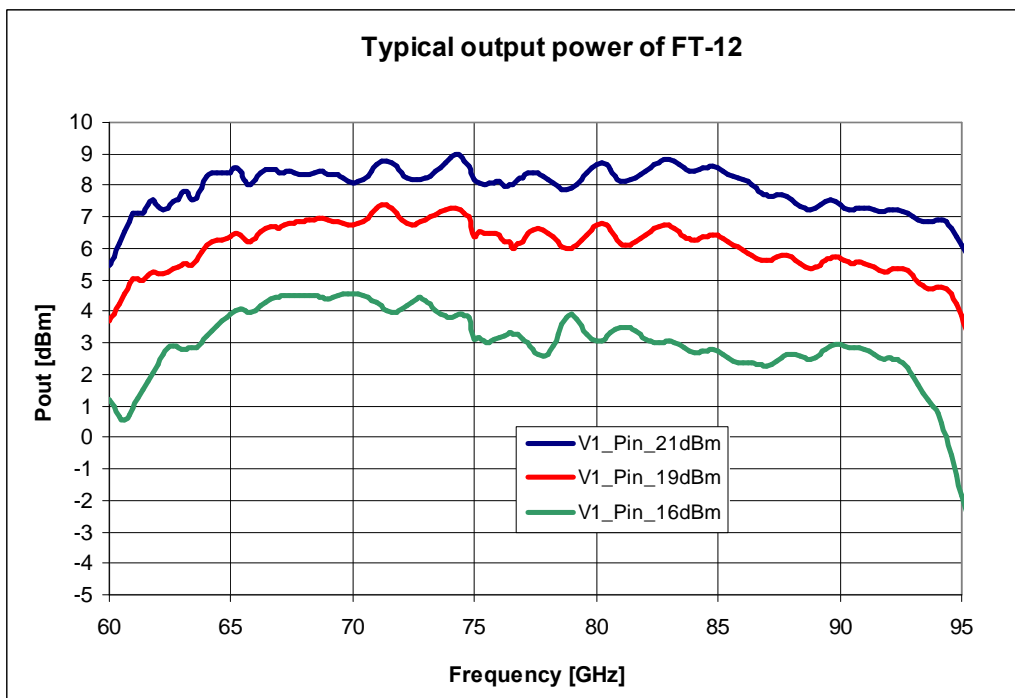
- ~ High efficiency
- ~ Full band frequency coverage
- ~ Fixed tuned
- ~ Unbiased planar diodes

Applications

- ~ Frequency multiplication
- ~ Mm-Wave instrumentation
- ~ Signal source frequency extension
- ~ Test and measurement

Specification	Unit	Min	Typ	Max
Output Frequency Range	GHz	60		90
Frequency Band		W		
Waveguide Designation		WR-12		
Multiplication Factor		3		
Input Power Range	dBm			+23
Output Power Range	dBm		+7	
Efficiency	%	3 typ.		
Input Connector		K-type Female		
Output Flange		WR-12 UG387/U-M		
Bias Required		None		

Datasheet



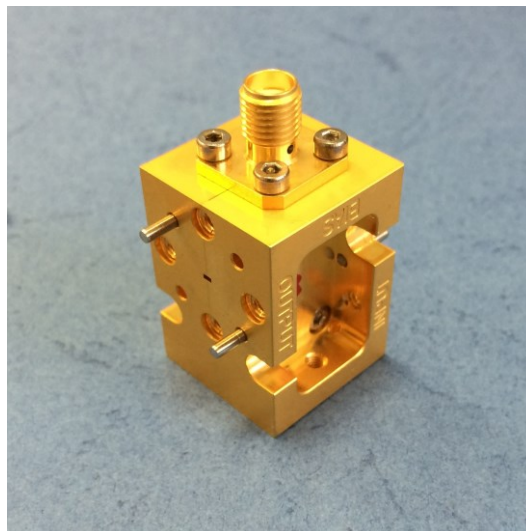
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Datasheet

Description

An ultra-high efficiency high power x2 passive multiplier series covering 175-200 GHz in WR-05 band (140-220 GHz).



Features

- Market leading ultra-high efficiency
- Very high output power
- Fixed tuned
- Bias required

Applications

- Frequency multiplication
- Mm-Wave instrumentation
- Signal source frequency extension
- Test and measurement
- LO drive chains

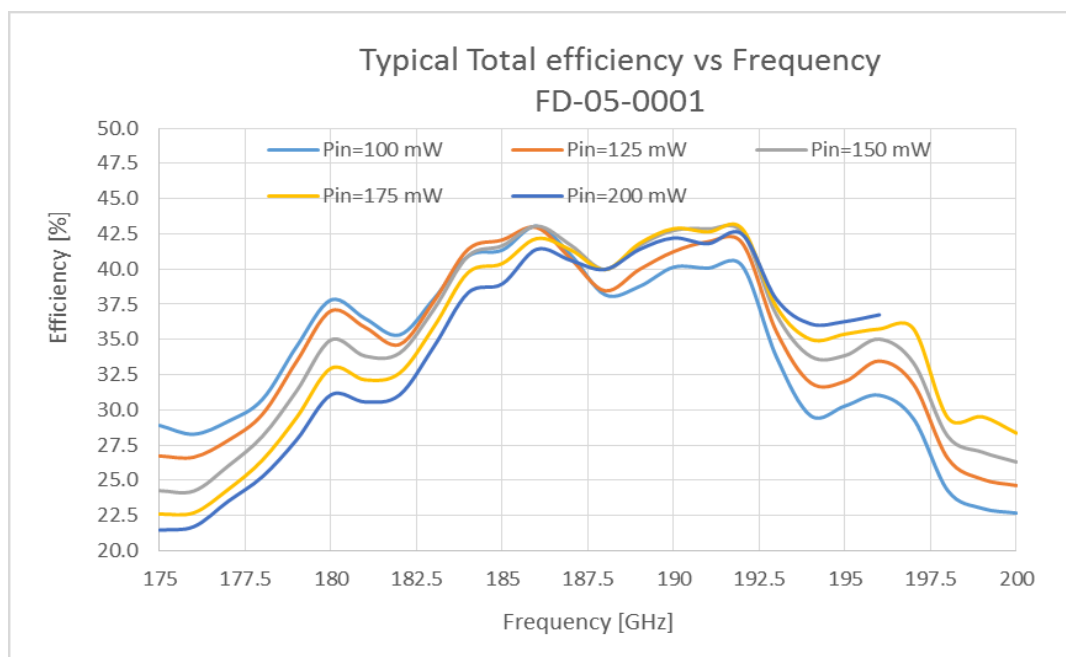
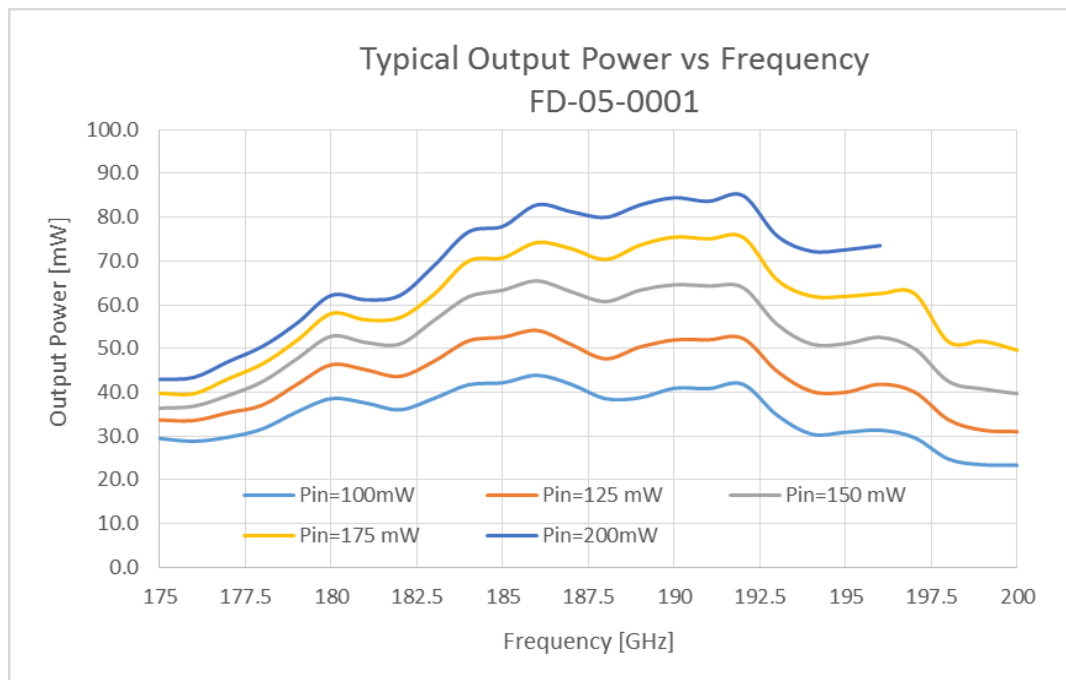
Specification	Unit	Min	Typ	Max
Output Frequency Range ⁽¹⁾	GHz	175		200
Waveguide Designation		WR-05		
Multiplication Factor		2		
Input Power Range ⁽¹⁾	mW	100		200
Output Power Range	mW	15		80
Efficiency	%	15		45
Input Flange		WR-10 UG387/U-M		
Output Flange		WR-05 UG387/U-M		
Negative Bias	[-V]	6		12

Notes:

(1) – Operation outside the specified bandwidth is possible with reduced total efficiency and output power.

- Doublers with other centre frequencies available. Contact factory for more information.
- Driving amplifier / multiplier chains available. Contact factory for more information.

Datasheet



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