泰莱微波
Talent Microwave

Suzhou Talent Microwave,Inc
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Low Noise Amplifier

5-700MHz/1.5dB NF/24dB Gain/23dBm P1dB Model: TLLA5M700M-24-15

TLLA5M700M-24-15 is a low noise amplifier with a minimum small signal gain of 24 dB and a nominal noise figure of 1.5 dB across the frequency range of 5 to 700 MHz. The DC power requirement for the amplifier is +12V DC/150 mA. The input and output port configuration offers coax adapter structure with SMA female.

Features:

- Frequency range: 5-700MHz
- Gain: 24dB Min
- Noise Figure: 1.5dB Typ
- Good Power and Gain Flatness
- 50 Ohm Matched Input / Output

Applications:

- Communication systems

Electrical Characteristics:

Parameter		Min	Typ	Max	Units
Frequency range		5		700	MHz
Small Signal Gain	@5MHz	24	26.7		dB
	@25MHz		26.8		
	@100MHz		26.9		
	@300MHz		27		
	@500MHz		27		
	@700MHz		26.9		
Gain Flatness			±0.25	±0.5	dB
Noise Figure			1.5	1.8	dB
Output P1dB@350MHz		21	23		dBm
Output IP3@350MHz		30	38		dBm
Input VSWR				1.2	:1
Output VSWR				1.4	:1
DC Voltage		+11	12	+30	V DC
DC Supply Current			150	180	mA
Impedance		50			Ohms

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Mechanical Specifications:

Parameter	Value	Units
Input /Output Connector	SMA Female/SMA Female	
DC Bias	Solder Pin	
Size	31.75*31.75*14.29	mm

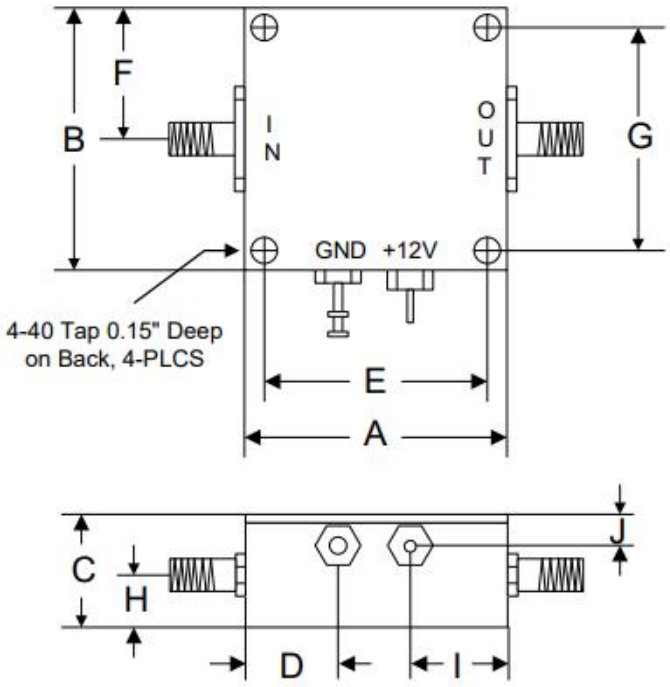
Absolute Maximum Ratings:

Parameter	Value
Supply Bias Voltage	+35 V
RF Input Power	+15 dBm
ESD sensitivity (HBm)	Class 0, passed 150V

Simple 220V System
Available SAC option

Outline Drawing:

Unit:mm



A	31.75mm
B	31.75mm
C	14.29mm
D	11.43mm
E	25.4mm
F	15.88mm
G	25.4mm
H	6.35mm
I	12.7mm
J	4.76mm

***Heat Sink Required During Operation

ESD Protection: Strictly adhere to ESD precautions to prevent electrostatic damage.

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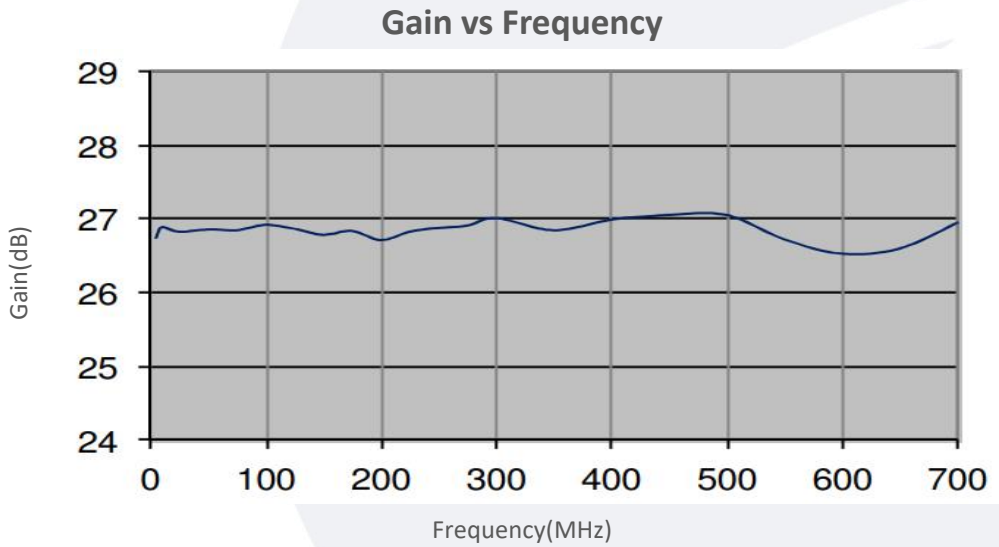
Environmental Conditions:

Parameter	Min	Typ	Max	Units
Operating Temperature	-40		+85	℃
Non-operating Temperature	-55		+125	℃
Relative humidity		95		%
Altitude	50,000			feet
Shock / Vibration(MIL-STD-810F)	25g rms (15 degree 2KHz) endurance, 1 hour per axis			
Shock(non operating)	20G for 11msc half sin wave,3 axis both directions			

Ordering Information:

Base Number	Description	Revision
TLLA5M700M-24-15	Low Noise Amplifier, 5-700MHz, Noise Figure:1.5dB, Gain:24 dB,P1dB:23dBm,+12V DC,Without Heatsink	Rev.1.1
TLLA5M700M-24-15-HS	Low Noise Amplifier, 5-700MHz, Noise Figure:1.5dB, Gain:24 dB,P1dB:23dBm,+12V DC,With Heatsink	Rev.1.1

Typical Performance Data:



Note: Above data is for ref only, actual data may vary from unit to unit depending on operating environment and other factors like material lots etc.

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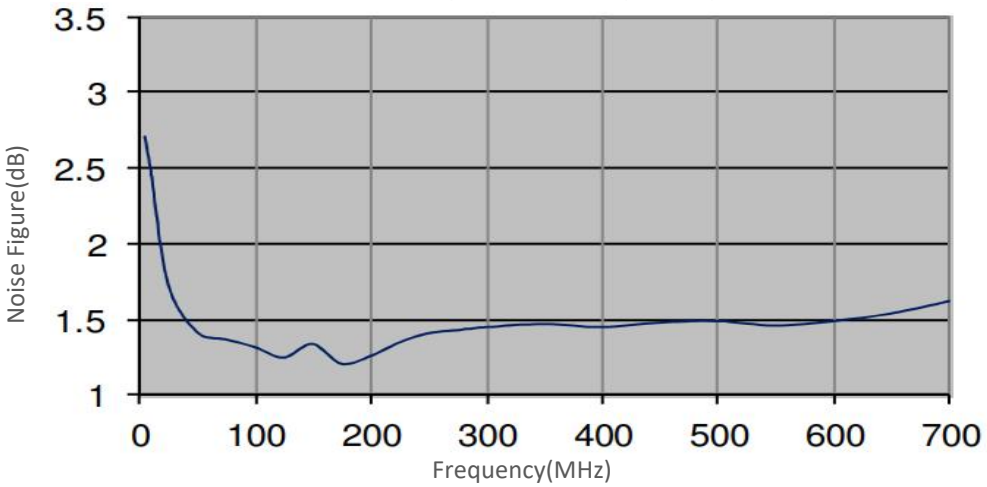
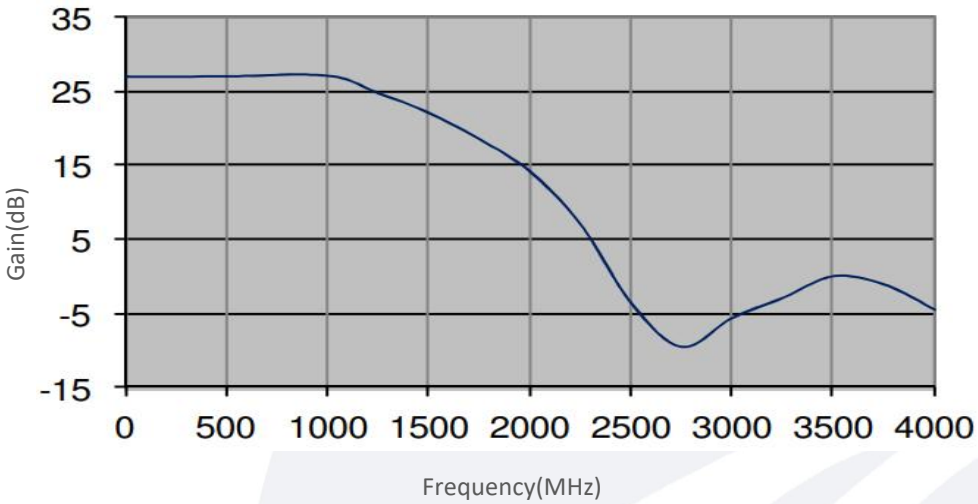
Typical Performance Data:

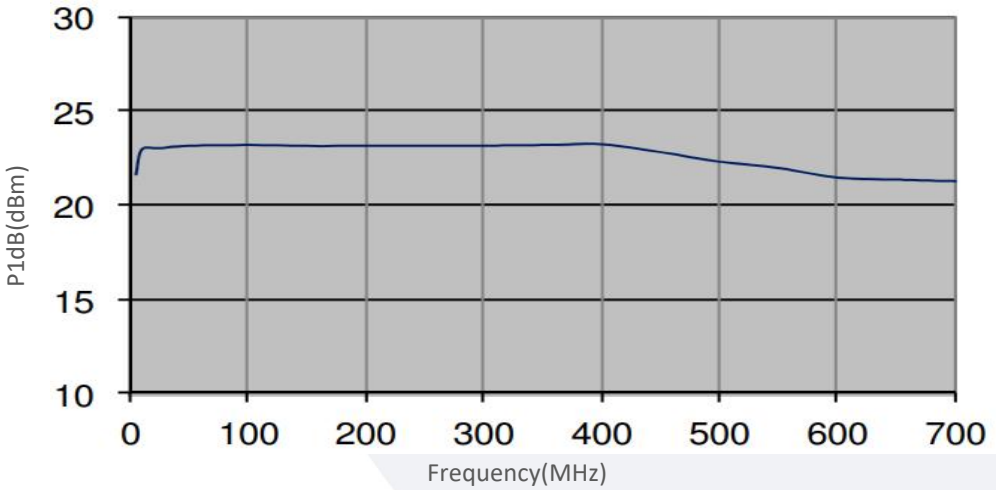
Noise Figure vs Frequency



Broadband Gain vs Frequency



P1dB vs Frequency



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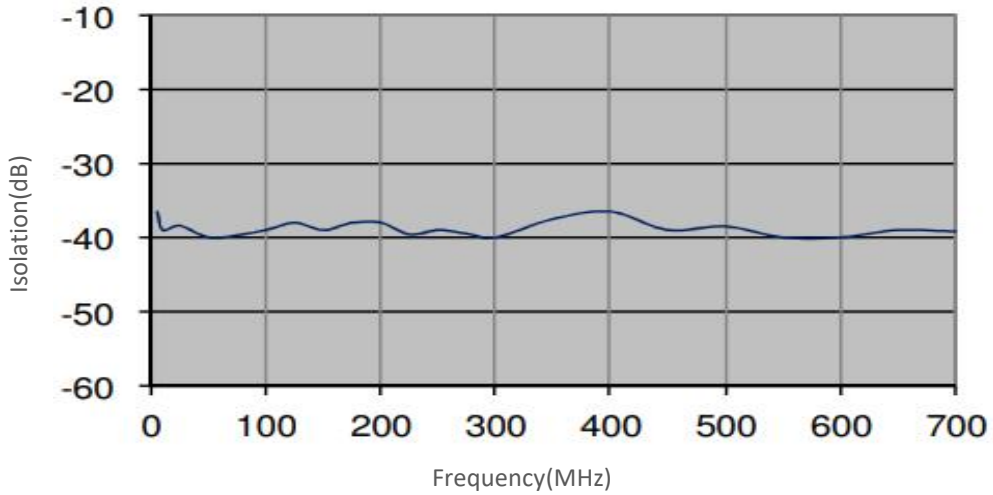
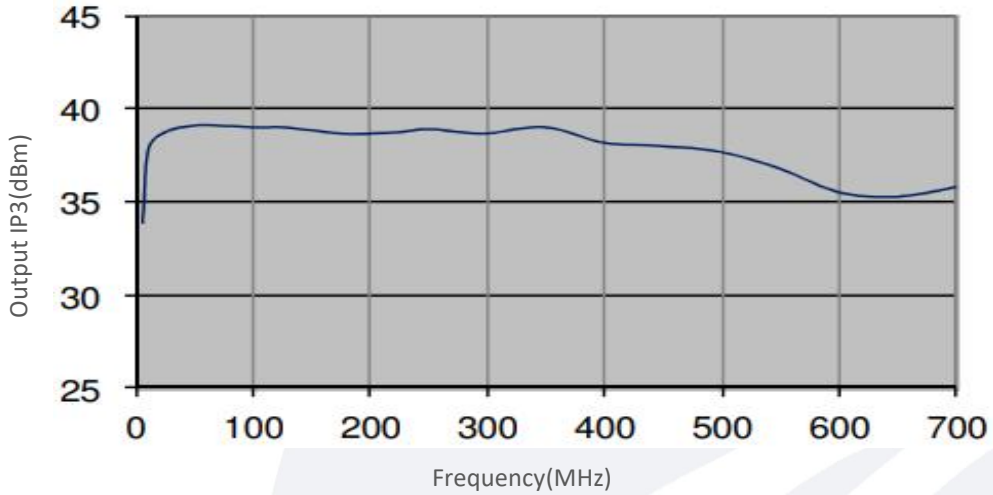
Typical Performance Data:

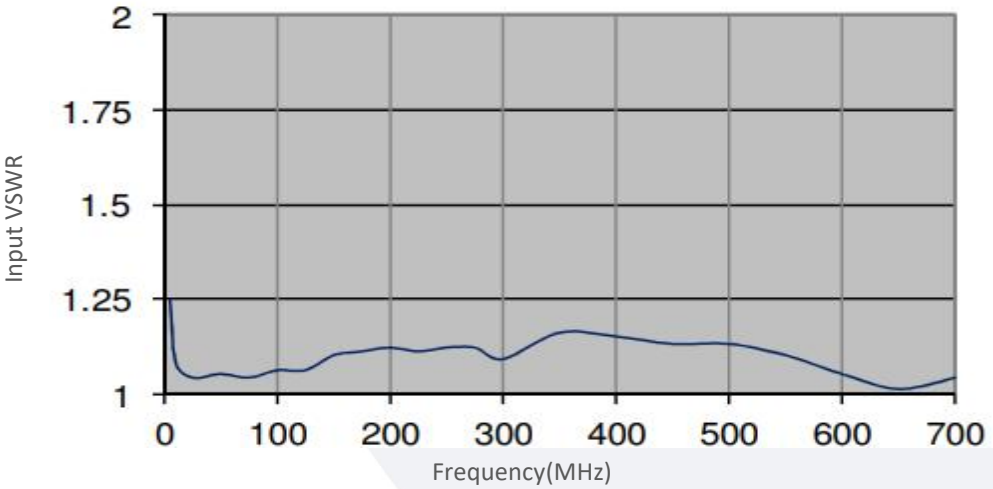
Isolation vs Frequency



Output IP3 vs Frequency



Input VSWR vs Frequency



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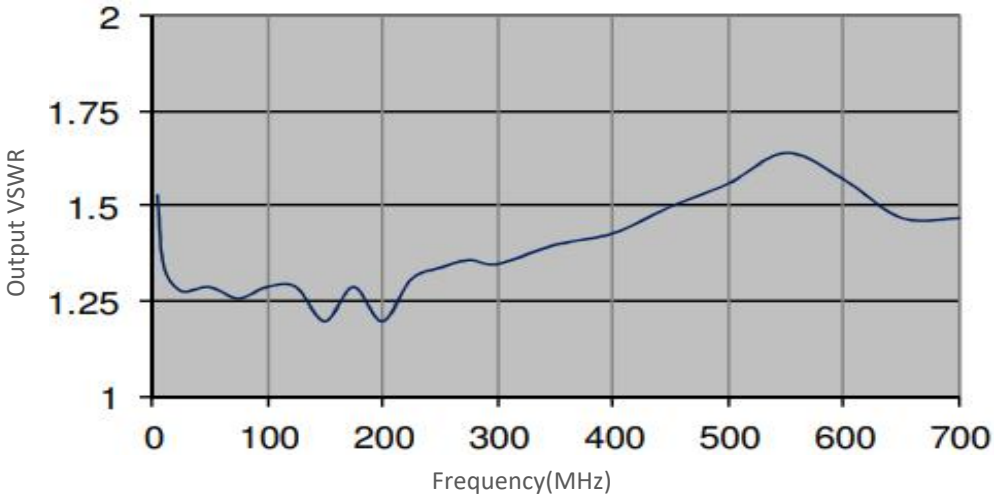
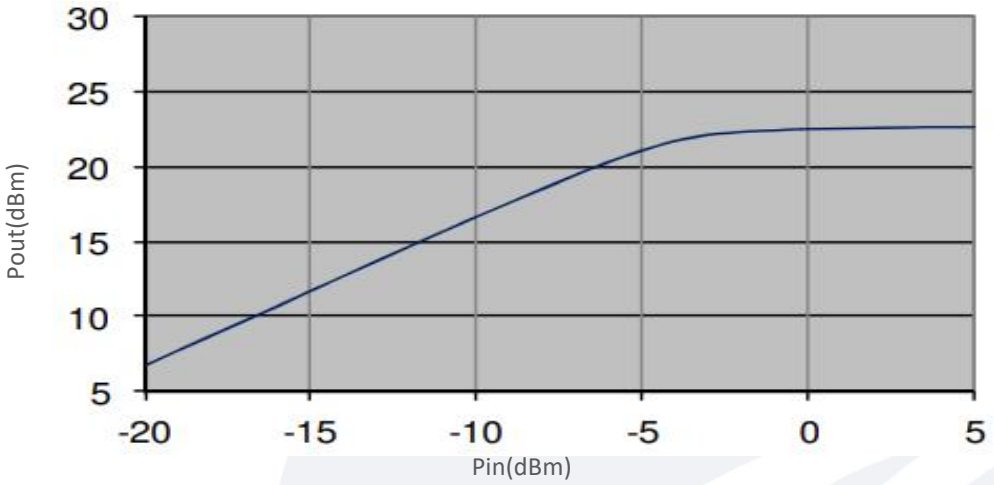
Typical Performance Data:

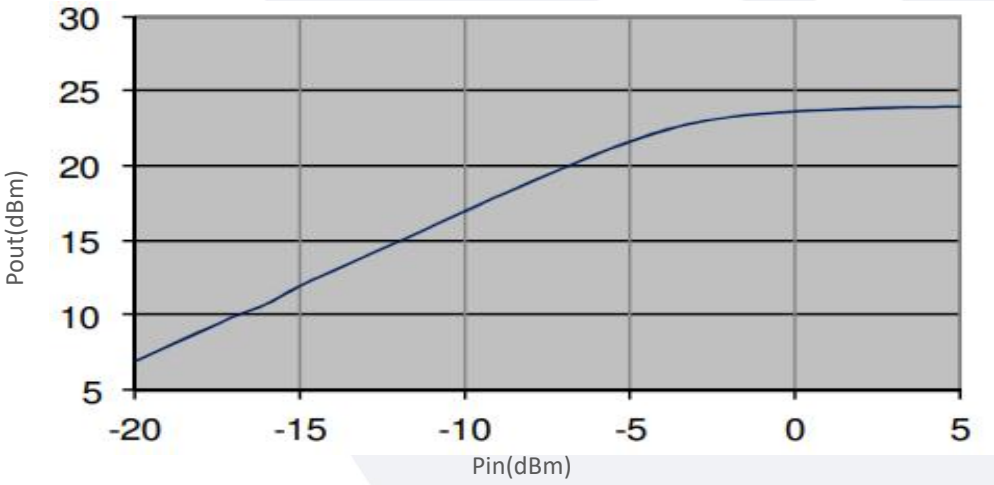
Output VSWR vs Frequency



Pout vs Pin@5MHz



Pout vs Pin@10MHz



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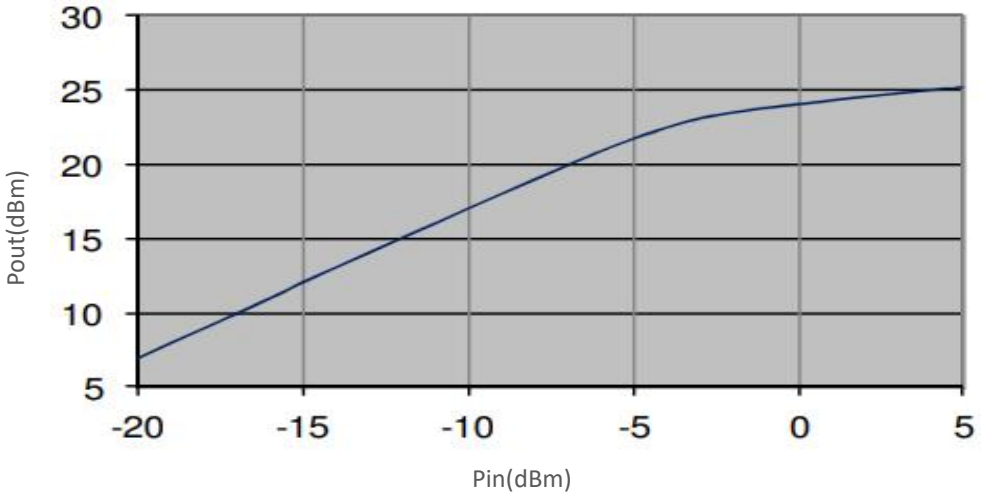
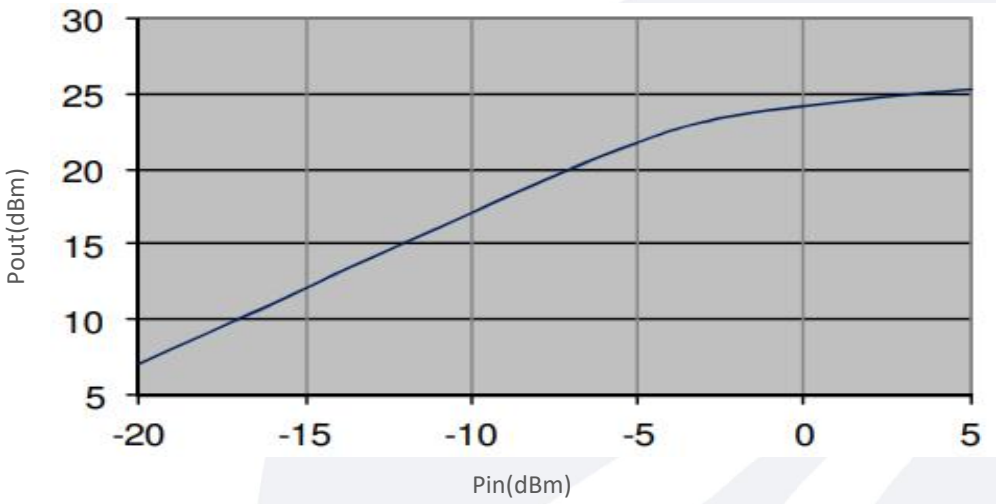
Typical Performance Data:

Pout vs Pin@50MHz



Pout vs Pin@100MHz



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