



**THE DATASHEET OF
SF2089C**



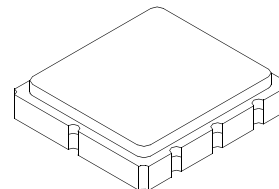
- **Low Insertion Loss**
- **5.0 X 5.0 mm Surface-mount Case**
- **Single-ended Input and Output**
- **Complies with Directive 2002/95/EC (RoHS)**
- **Moisture Sensitivity Level: 1**

Absolute Maximum Ratings

Rating	Value	Units
Maximum Incident Power in Passband	+13	dBm
Maximum DC Voltage on any Non-ground Terminal	30	VDC
Storage Temperature Range in Tape and Reel	-40 to +85	°C
Suitable for Lead-free Soldering - Maximum Soldering Temperature	260 °C for 30 s	

SF2089C

**327.5 MHz
SAW Filter**



SM5050-8

Electrical Characteristics

Characteristic	Sym	Notes	Min	Typ	Max	Units
Center Frequency	f_c			327.5		MHz
Insertion Loss					12	dB
1.5 dB Bandwidth	$BW_{1.5}$		35			MHz
Amplitude Ripple, $f_c \pm 17.5$ MHz, within adjacent 5 MHz windows					1	dB _{p-p}
Group Delay Deviation, $f_c \pm 17.5$ MHz, within adjacent 5 MHz windows					50	nSp-p
Group Delay Deviation, $f_c \pm 17.5$ MHz, full bandwidth				50	100	nSp-p
VSWR at f_c					2.5:1	
40 dB Rejection Bandwidth					65	MHz
Operating Temperature Range			-40		85	°C
Case Style			SM5050-8 5 x 5 mm Nominal Footprint			
Lid Symbolization (Y=year, WW=week, S=shift)			591, YWWS			

Electrical Connections

Connection		Terminals
Port 1	Input	1
Port 2	Output	5
	Ground	All others
Dot indicates Pin 1		



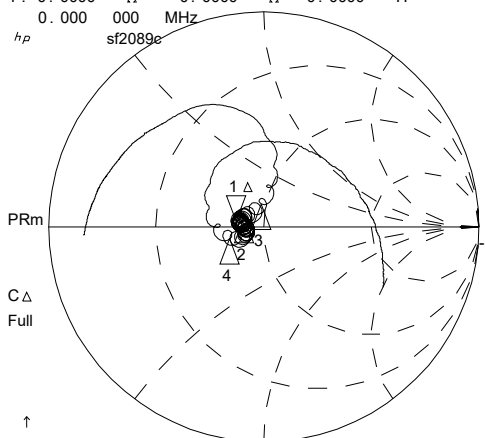
CAUTION: Electrostatic Sensitive Device. Observe precautions for handling.

NOTES:

1. The design, manufacturing process, and specifications of this device are subject to change.
2. US or International patents may apply.
3. RoHS compliant from the first date of manufacture.

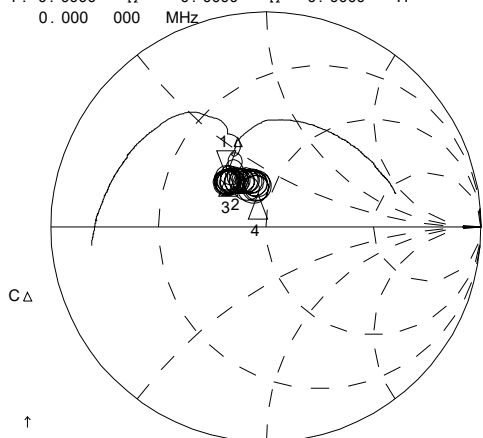
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CH1 S11 1 UFS
 1: 0.0000 Ω 0.0000 Ω 0.0000 H
 0.000 000 MHz



CH1 Markers
 Δ REF=1
 2: 3.0195 Ω
 1.6621 Ω
 282.553 kHz
 3: 9.3320 Ω
 8.3770 Ω
 -19.5794 MHz
 4: -2.2051 Ω
 -6.1328 Ω
 20.1445 MHz

CH3 S22 1 UFS
 1: 0.0000 Ω 0.0000 Ω 0.0000 H
 0.000 000 MHz

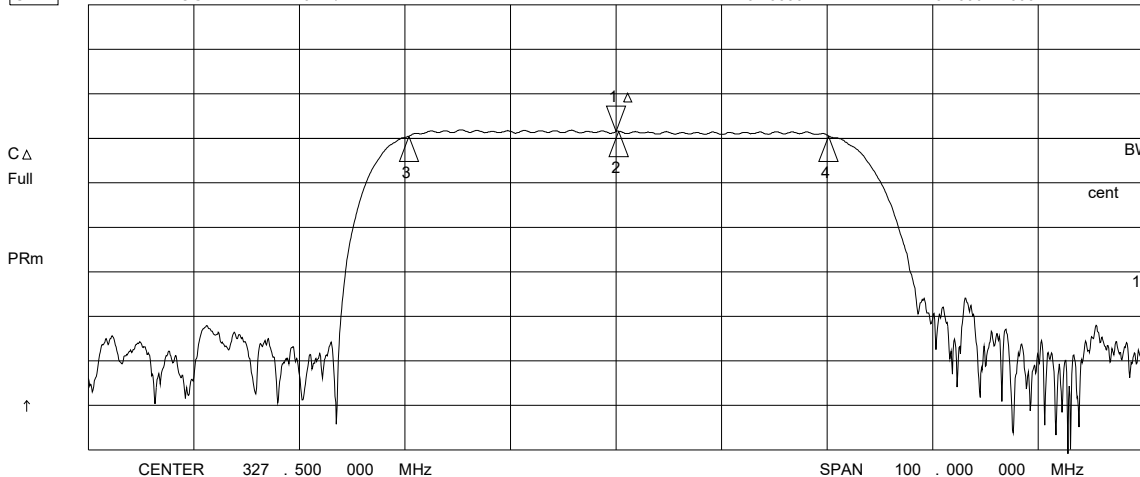


CH3 Markers
 Δ REF=1
 2: 2.5342 Ω
 4.0986 Ω
 282.553 kHz
 3: 70.313 mΩ
 1.7891 Ω
 -19.5794 MHz
 4: 13.325 Ω
 -2.1670 Ω
 20.1445 MHz

↑
 CENTR 327.500 MHz SPAN 100.000 MHz

↑
 CENTR 327.500 MHz SPAN 100.000 MHz

CH2 S21 LOG 10 dB/ REF -12 dB 1: 0.0000 dB 0.000 000 MHz

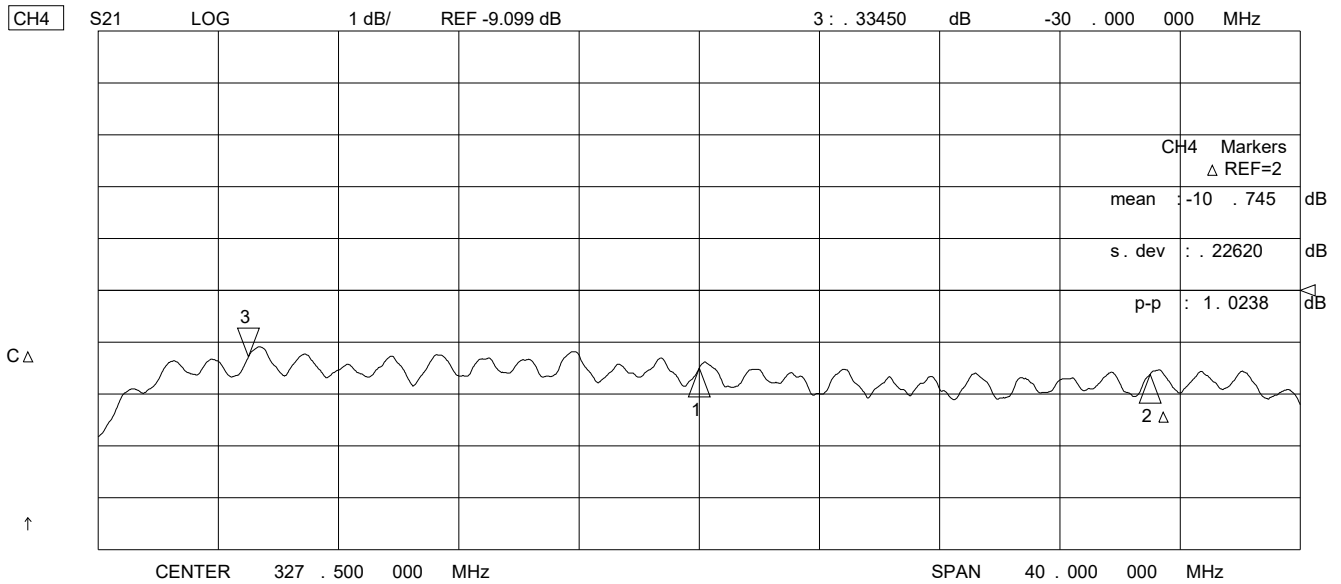
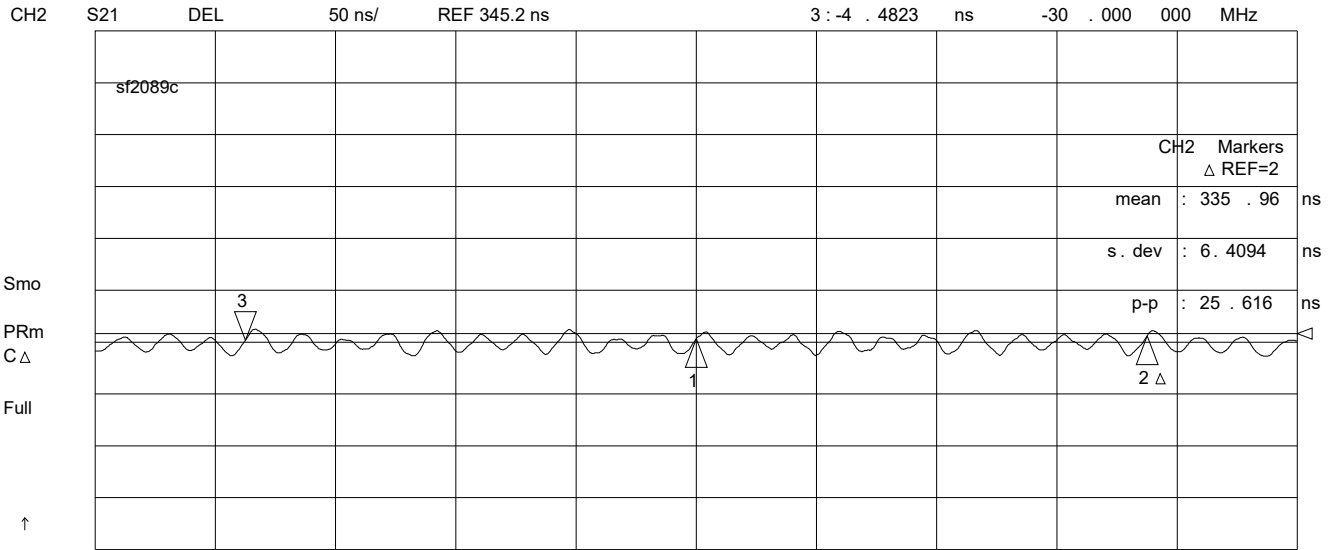


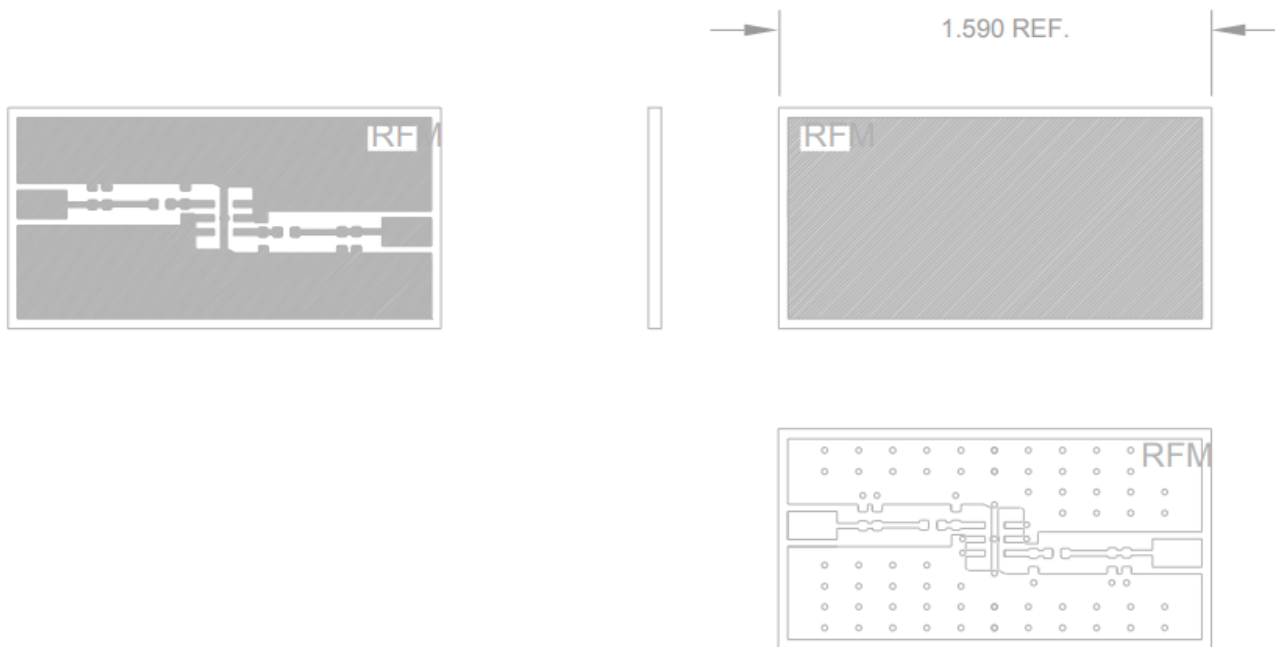
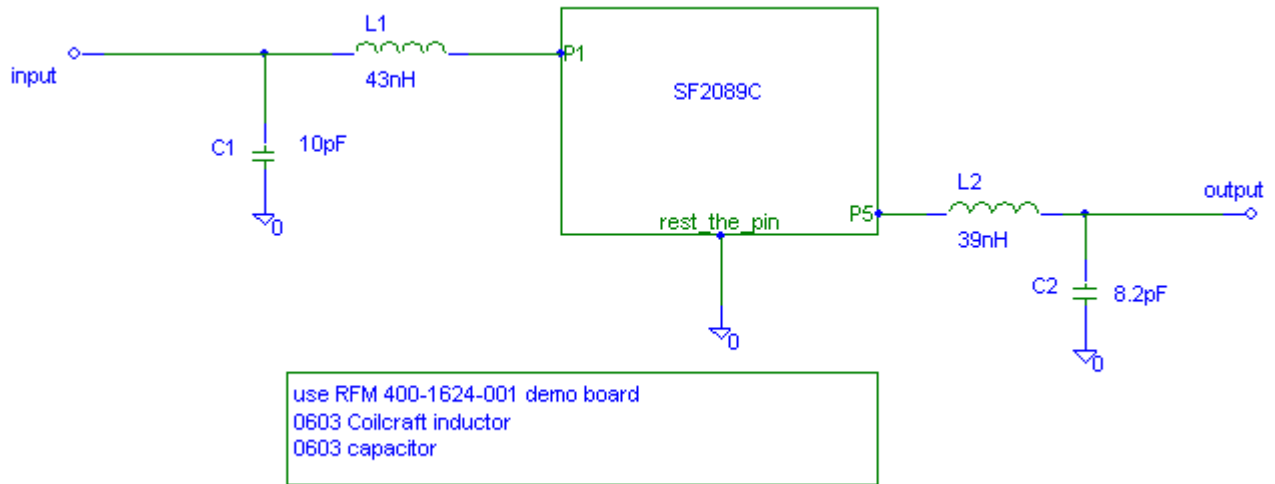
CH2 Markers
 Δ REF=1
 BW: 39.723986 MHz
 cent: 327.782553 MHz
 Q: 8.2515
 1_loss: -10.490 dB

↑

CENTER 327.500 000 MHz SPAN 100.000 000 MHz

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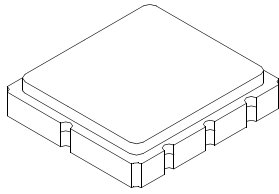


DRILL ALL HOLES #76 DRILL (0.020)
ALL HOLES ARE PLATED THRU.

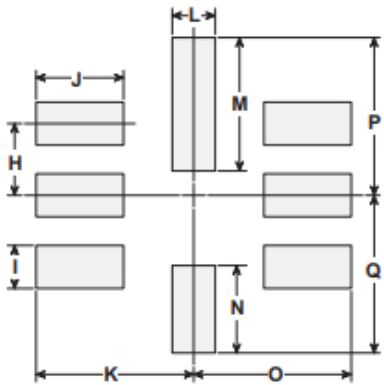
SM5050-8 Surface-Mount 8-Terminal Ceramic Case

5.0 X 5.0 mm Nominal Footprint

Case Dimensions



Dimension	mm			Inches		
	Min	Nom	Max	Min	Nom	Max
A	4.80	5.00	5.20	0.189	0.197	0.205
B	4.80	5.00	5.20	0.189	0.197	0.205
C	1.30	1.50	1.70	0.050	0.060	0.067
D	1.98	2.08	2.18	0.078	0.082	0.086
E	1.07	1.17	1.27	0.042	0.046	0.050
F	0.50	0.64	0.70	0.020	0.025	0.028
G	2.39	2.54	2.69	0.094	0.100	0.106
H		1.27			0.050	
I		0.76			0.030	
J		1.55			0.061	
K		2.79			0.110	
L		0.76			0.030	
M		2.36			0.093	
N		1.55			0.061	
O		2.79			0.110	
P		2.79			0.110	
Q		2.79			0.110	

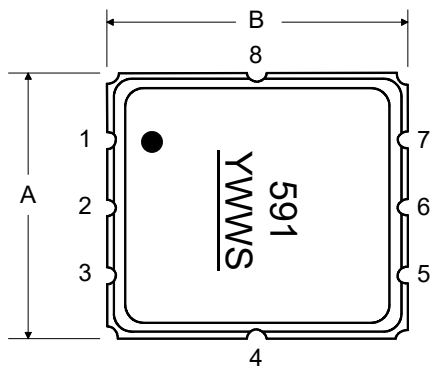


Case Materials

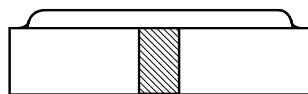
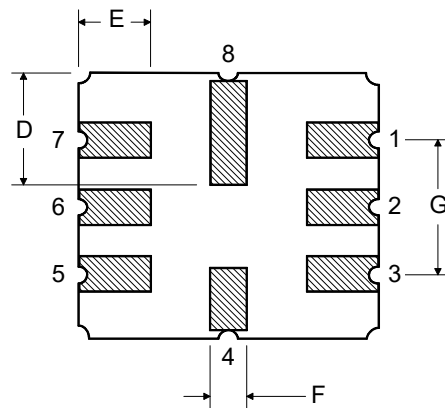
Materials	
Solder Pad Plating	0.3 to 1.0 μm Gold over 1.27 to 8.89 μm Nickel
Lid Plating	2.0 to 3.0 μm Nickel
Body	Al_2O_3 Ceramic

PCB Footprint

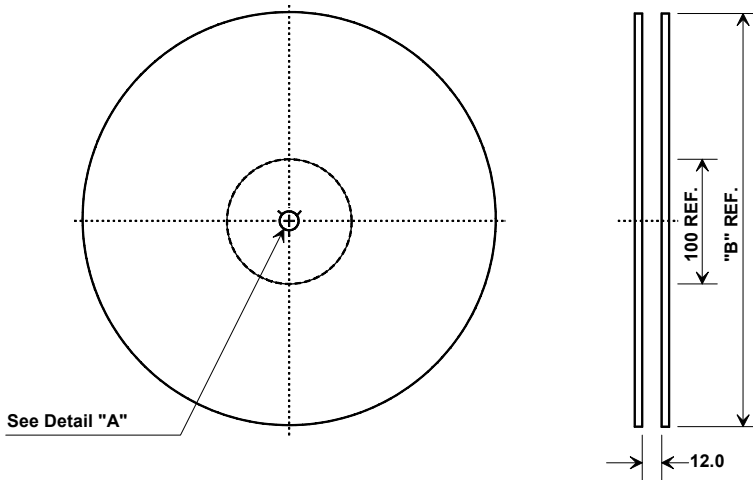
TOP VIEW



BOTTOM VIEW

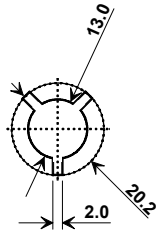


Tape and Reel Specifications



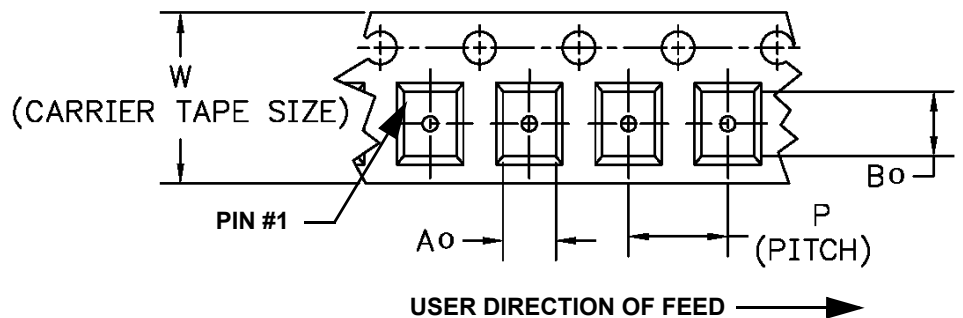
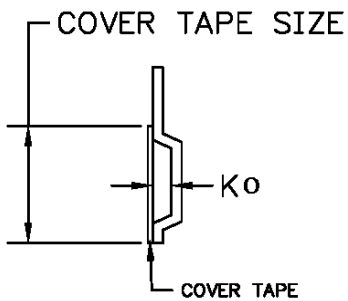
Tape and Reel Standard per ANSI/EIA-481

"B" Nominal Size		Quantity Per Reel
Inches	millimeters	
7	178	500
13	330	3000



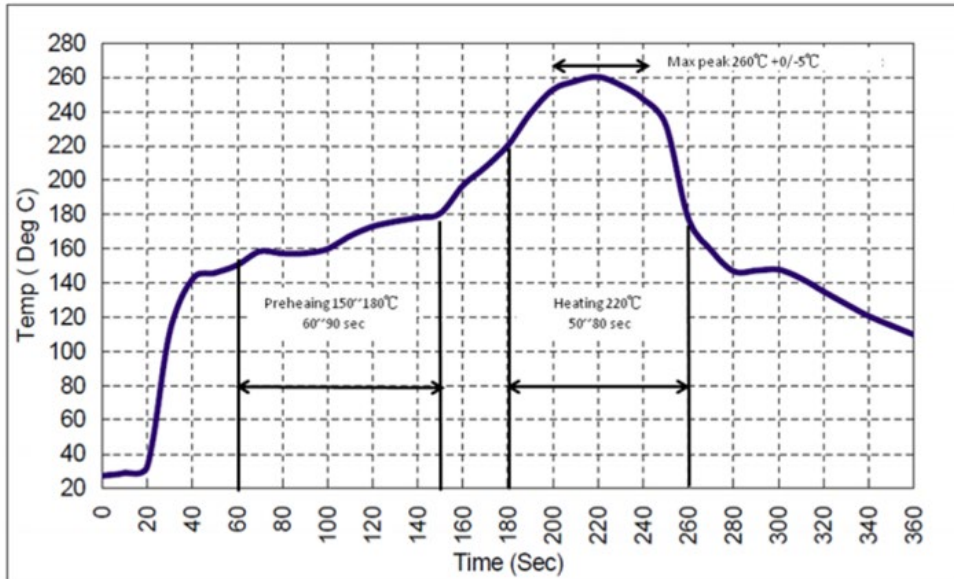
COMPONENT ORIENTATION and DIMENSIONS

Carrier Tape Dimensions	
Ao	5.3 mm
Bo	5.3 mm
Ko	2.0 mm
Pitch	8.0 mm
W	12.0 mm



Recommended Reflow Profile

1. Preheating shall be fixed at 150~180°C for 60~90 seconds.
2. Ascending time to preheating temperature 150°C shall be 30 seconds min.
3. Heating shall be fixed at 220°C for 50~80 seconds and at 260°C +0/-5°C peak (10 seconds).
4. Time: 5 times maximum.



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