




SPECIFICATION SHEET

SPECIFICATION SHEET NO.	Q1017-SBF315M00S3025	
DATE	Oct. 17, 2023	
REVISION	A0	Updated With Most Recent Data - Official First Release
DESCRIPTION AND MAIN PARAMETRICS	<p>SMD SAW Filter L3.8*W3.8*H1.50mm 3838 Type 6 Pads SBF Series 315.000MHz, Insertion Loss: 1.8 dB Typical, 3.0MHz Bandwidth Operating Temp. Range -40°C ~+85°C, Reflow Profile Condition 260 °C Max. Tape/Reel, RoHS/RoHS III compliant</p>	
CUSTOMER		
CUSTOMER PART NO.		
CROSS REF. PART NO.		
ORIGINAL MFG/PART NO.	TGS/SBF 315.0M DX3025 TLF	
PART CODE	SBF315M00S3025	

VENDOR APPROVE			
Issued/Checked/Approved			
DATE: Oct. 17, 2023			

CUSTOMER APPROVE	
DATE:	

10/17/2023

SMD SAW FILTER 3838 TYPE SBF SERIES

MAIN FEATURE

- SMD SAW Filter L3.8*W3.8*H1.50mm 3838 Type 6 Pads
- Low-loss SAW Components
- Low Amplitude Ripple
- Sharp Rejection As Both Out-bands
- Usable Passband 3.0MHz
- Package code DCC6
- Electronic Sensitive Device (ESD)
- Cross More Competitors Part
- RoHS/RoHS III Compliant



APPLICATION

- Bluetooth, wireless communication set
- Communication Electronics

RFQ

[Request For Quotation](#)

PART CODE GUIDE

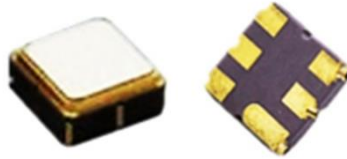
SBF	315M00	S	3025
1	2	3	4

- 1) SBF: SMD SAW Filter L3.8*W3.8*H1.50mm 3838 Type 6 Pads SBF Series
- 2) 315M00: Frequency range code for 315.0000MHz
- 3) S: SMD type, Package Tape/Reel,
- 4) 3025: Internal code (A~Z or 1~9 or Blank) for custom parametric

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DIMENSION (Unit: mm)

Image for reference



Marking

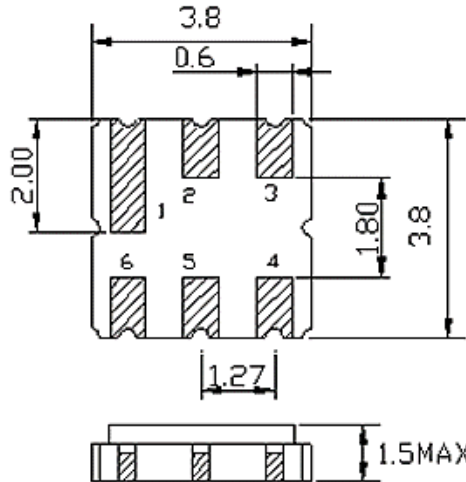
Line 1: Internal code

Line 2: ● Pin 1 + Special code

SBF series

L3.8*W3.8*H1.50mm

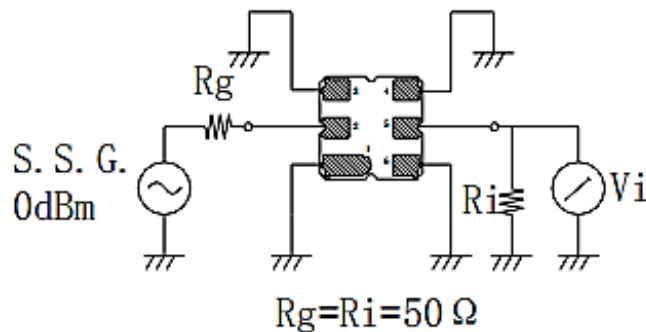
3838 Type



Pin	Configuration
2	Input
5	Output
1,3,4,6	Case Ground

Test Circuit

(Bottom View)



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ELECTRICAL PARAMETERS

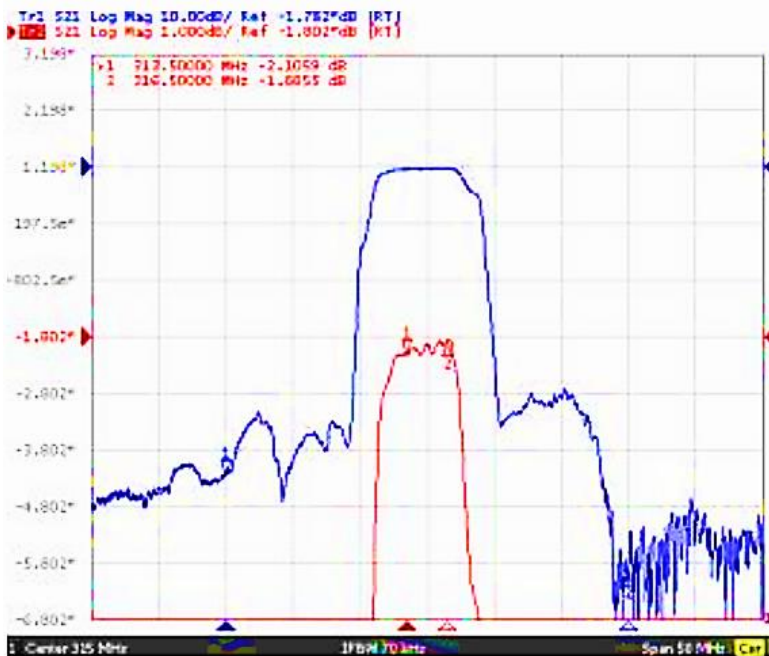
Parameter	Part No. Symbol	Units	Value			
			Min.	Typical	Max.	
Original Manufacturer	TGS		TGS Crystals			
Holder Type	SBF		SMD SAW Filter, L3.8*W3.8*H1.50mm 3838 Type 6 Pads			
Center Frequency (fc)	315.0M	MHz	315.0000			
DC Voltage (VDC)	DX3025	V		5		
Operation Temperature Range (T)		°C	-40		+85	
Storage Temperature Range (Tstg)		°C	-40		+85	
RF Power Dissipation (P)		dBm		20		
Insertion Loss (Min.) (IL)		dB		1.8	2.5	
Insertion Loss 313.50-316.50MHz (IL)		dB		2.1	3.2	
Amplitude Ripple (p-p) 313.50-316.50MHz ($\Delta\alpha$)		dB		0.9	2.0	
Bandwidth		MHz		3.0		
Group Delay Ripple 313.50-316.50MHz (GDR)		ns		40.0	100.0	
Amplitude Consistency		dB		/		
Aging (Absolute Value during the First Year)		ppm/y		$\leq\pm 10$		
Input VSWR 313.50-316.50MHz				1.8:1.0	2.0:1.0	
Output VSWR 313.50-316.50MHz				1.8:1.0	2.0:1.0	
Absolute Attenuation (α)		DC - 300.00 MHz	dB	50.0	55.0	
		330.00 - 500.00 MHz		50.0	55.0	
		500.00 - 700.00 MHz		38.0	42.0	
	700.00 - 800.00 MHz	30.0		38.0		
Package	T		Tape/Reel			
RoHS Status	LF		RoHS III compliant			
Add Value			Blank: N/A			
Internal Control Code			Blank: N/A			

Electronic Characteristics: 1) Test Temperature: 25°C±2°C 2) Terminating source impedance: 50Ω 3) Terminating load impedance: 50Ω

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FREQUENCY CHARACTERISTICS



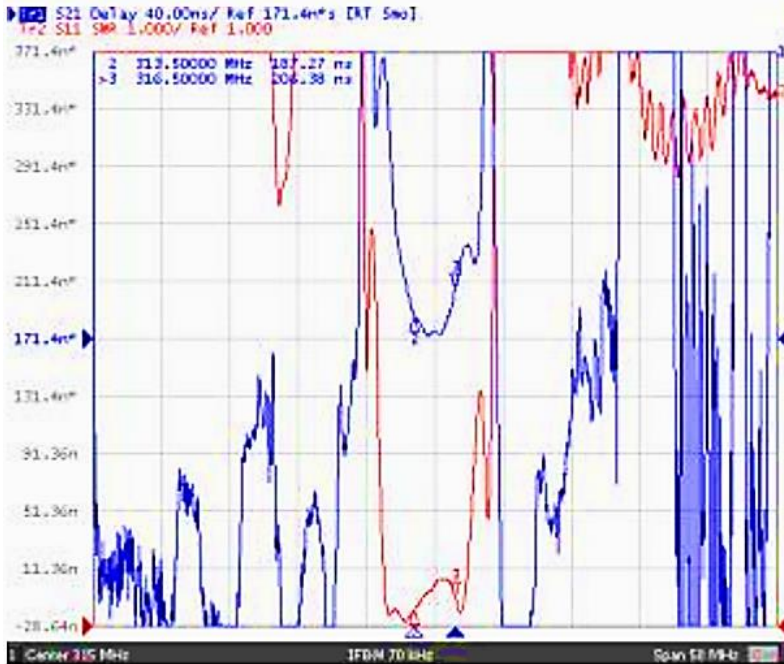
Frequency Response



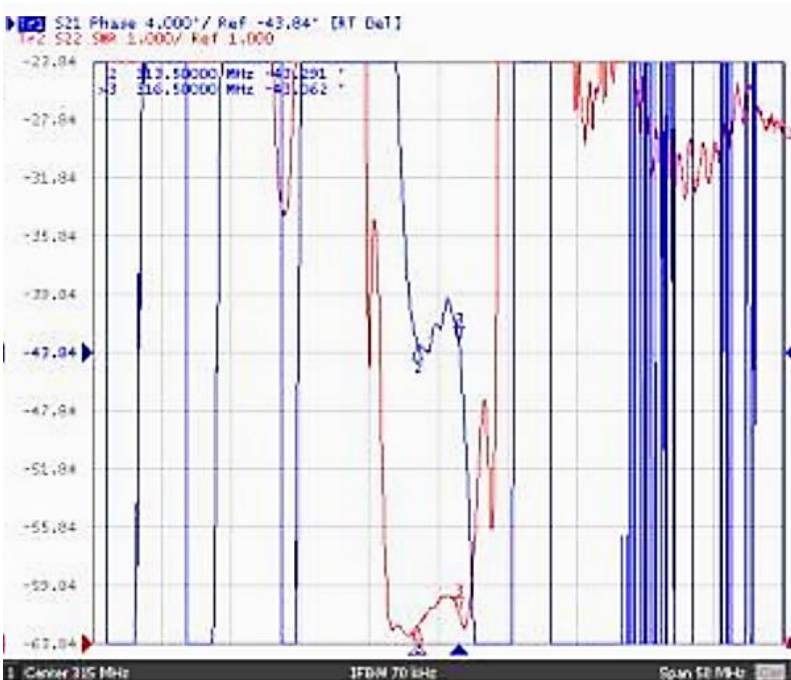
Frequency Response (wideband)

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FREQUENCY CHARACTERISTICS



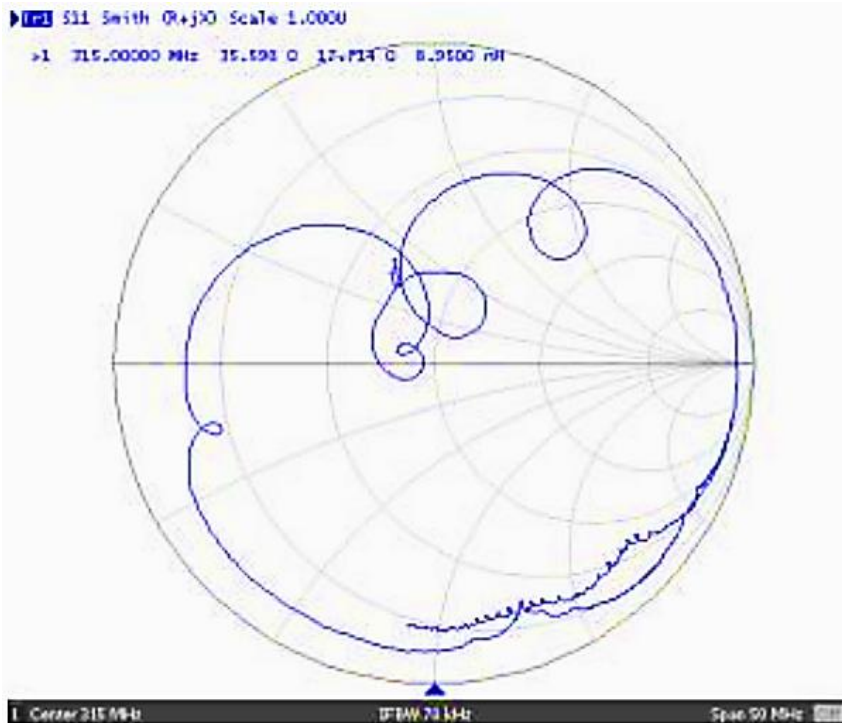
Delay Ripple & S11 VSWR



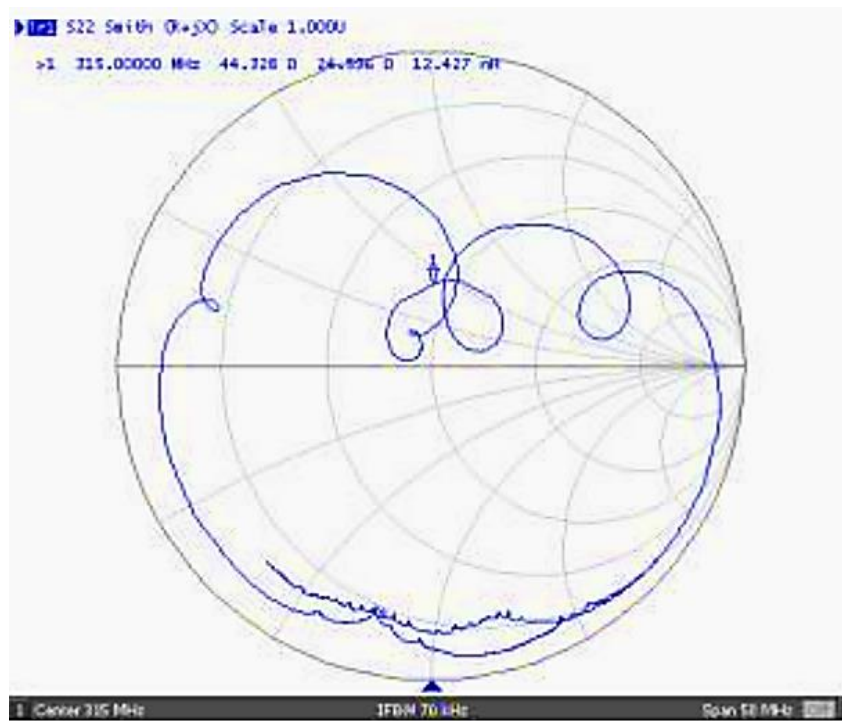
Phase Linearity & S22 VSWR

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FREQUENCY CHARACTERISTICS



S11 Smith Chart



S22 Smith Chart

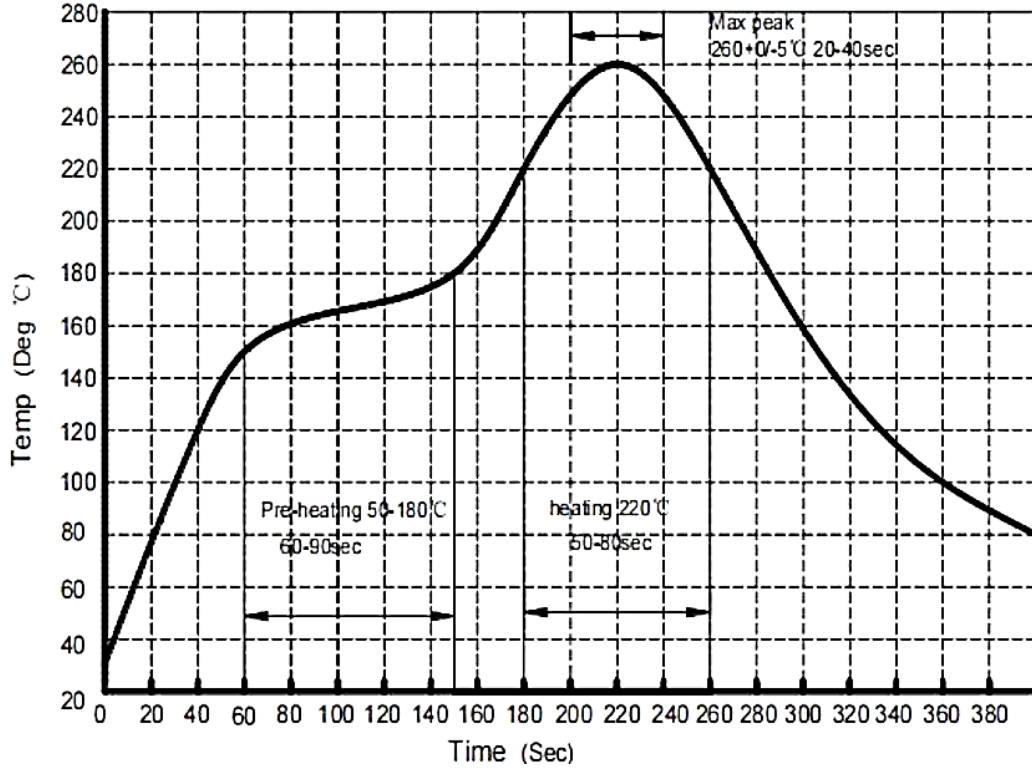
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RELIABILITY

Test Items	Test Method And Conditions	Requirement
Temperature Storage	(1) Temperature: 85°C±2°C , Duration: 250h , Recovery time: 2h±0.5h (2) Temperature: -55°C±3°C , Duration: 250h ,Recovery time: 2h±0.5h	It shall remain electrical performance after tests
Humidity Test	Conditions: 60°C±2°C , 90~95% RH Duration: 250h	
Thermal Shock	Heat cycle conditions: TA=-55°C±3°C, TB=85°C±2°C, t1=t2=30min, Switch time: ≤3min, Cycle time: 100 times, Recovery time: 2h±0.5h.	
Vibration Fatigue	Frequency of vibration: 10~55Hz Amplitude:1.5mm Directions: X,Y and Z Duration: 2h	
Drop Test	Cycle time: 10 times Height: 1.0m	
Solderability	Temperature: 245°C±5°C Duration: 3.0s--5.0s Depth: DIP--2/3 , SMD--1/5	
Resistance to Soldering Heat	(1)Thickness of PCB:1mm , Solder condition: 260°C±5°C , Duration: 10±1s (2)Temperature of Soldering Iron: 350°C±10°C , Duration: 3~4s , Recovery time : 2 ± 0.5h	

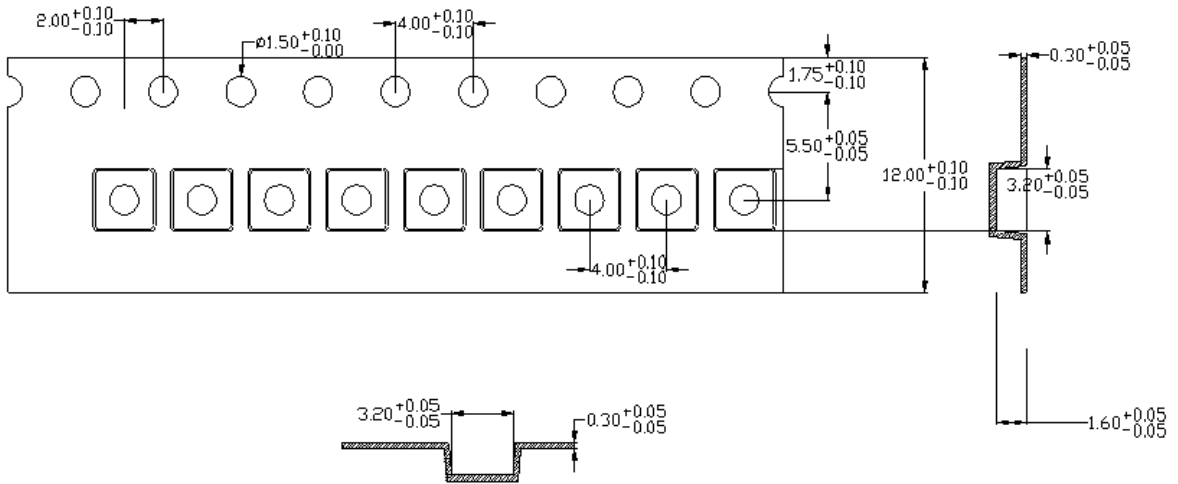
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SUGGESTED REFLOW PROFILE (For Reference Only)

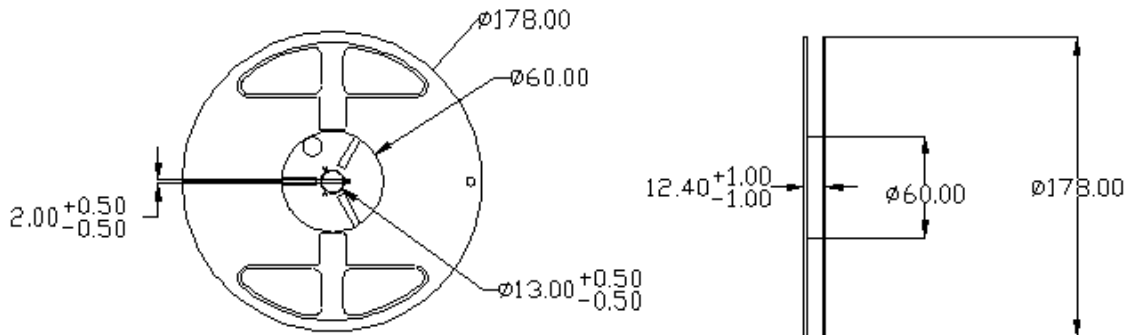


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TAPE DIMENSION (Unit: mm, 3000pcs/Reel)



REEL DIMENSION (Unit: mm)



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CAUTION

1. As a result of the particularity of inner structure of SAW products, it easy to be breakdown by electrostatic, so we should pay attention to ESD protect in the test.
2. Static voltage between signal load and ground may cause deterioration and destruction of the component. Please avoid static voltage.
3. Ultrasonic cleaning may cause deterioration and destruction of the component. Please avoid ultrasonic cleaning.
4. Only leads of component may be soldered. Please avoid soldering another part of component.
5. There is a close relationship between the device's performance and matching network. The specifications of this device are based on the test circuit shown above. L and C values may change depending on board layout. Values shown are intended as a guide only.
6. The temperature of manual welding should not exceed 300 °C.
7. The specifications of this device are based on the test circuit shown above and subject to change or obsolescence without notice.
8. All equipment designs utilizing this product must be approved by the appropriate government agency prior to manufacture or sale.
9. Our liability is only assumed for the Surface Acoustic Wave (SAW) component(s) perse, not for applications, processes and circuits implemented within components or assemblies.
10. For questions on technology, prices and delivery, please contact our sales offices or e-mail: sales@NextGenComponent.com.

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ROHS COMPLIANCE

- The levels of RoHS restricted materials in this product are below the maximum concentration values (also referred to as the threshold limits) permitted for such substances, or are used in an exempted application, in accordance with EU RoHS Directive (EU) 2015/863 EC (RoHS3).

REACH COMPLIANCE

- REACH substances of high concern (SVHCs) information is available for this product. Since the European Chemical Agency (ECHA) has published notice of their intent to frequently revise the SVHC listing for the foreseeable future, REACH

IMPORTANT NOTES AND DISCLAIMER

- 1) All Product parametric performance is indicated in the Electrical Characteristics for the listed herein test conditions, unless otherwise noted. Product performance may not be indicated by the Electrical Characteristics if operated under different conditions.
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