

COMMUNICATION NARROW BAND

SURFACE MOUNT DEVICE (SMD) ISOLATORS

PRODUCT DESCRIPTION

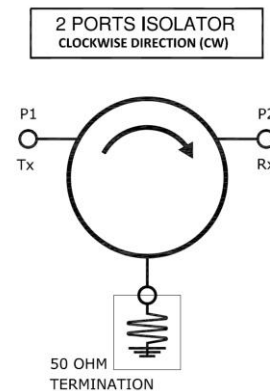
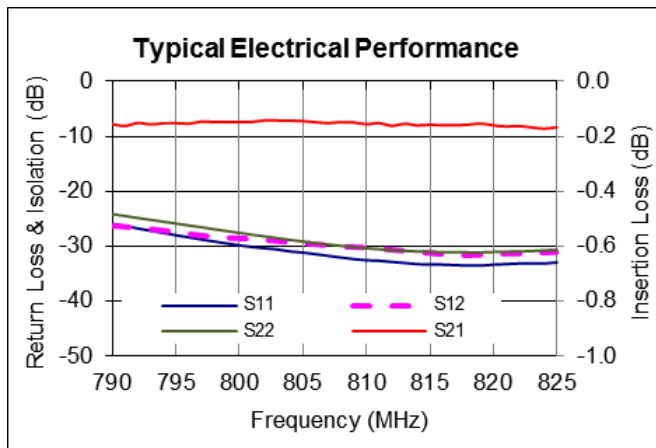
RFCI SMD Isolators, designed to meet the demands of commercial communication systems for applications in high performance linear power amplifiers. Feature a robust construction for reliability performance at low cost and high reverse power handling capability. These designs package ideally suited for high volume manufacturing.



KEY FEATURES

- Broad selection of Frequency
 - Low Insertion loss
 - High Isolation and Return loss
 - Wide Operation Temperature Range
 - Magnetically Shielded
 - Designed to function after exposure to the shock, vibration, thermal shock and moisture conditions
 - Matrix Bar Code for part identify
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- ❖ Products available with alternative configuration such as high power termination and reverse rotation direction
 - ❖ S-parameters are available upon request
 - ❖ Ship on tape and reel on high volume Order

FUNCTION DIAGRAM



PIN STYLE SURFACE MOUNT ISOLATORS

- Standard industry package size and designed for automated SMT placement
- Robust package and connection lead Construction for High Reliability
- Low Insertion Loss, Excellent IMD, High Forward and Reverse Power Handling
- Custom products available with alternative configuration such as attenuators, and High power Termination

80W ISOLATOR -SMD Pin Style-25.4mm Diameter

Frequency Range (MHz)		Insertion Loss (dB)		Isolation (dB)		Return Loss (dB)		Fwd. PWR P/CW (W)	Rev PWR CW (W)	Operating Temperature (°C)	Package Outline	RFI Part Number
Low	High	Room/OT		Room/OT		Room/OT		Max.	Max.			
728	768	0.22/0.30	23/20	23/20	23/20	23/20	500/100	80	-40 to +85°C	SMI-01	<u>RFSL5104</u>	
773	803	0.22/0.30	23/20	23/20	23/20	23/20	500/100	80	-40 to +85°C	SMI-01	<u>RFSL5108</u>	
791	821	0.22/0.30	23/20	23/20	23/20	23/20	500/100	80	-40 to +85°C	SMI-01	<u>RFSL5110</u>	
830	890	0.35/0.40	21/19	21/19	21/19	21/19	500/100	80	-40 to +85°C	SMI-01	<u>RFSL5207</u>	
860	890	0.22/0.30	23/20	23/20	23/20	23/20	500/100	80	-40 to +85°C	SMI-01	<u>RFSL5209</u>	
869	894	0.22/0.30	23/20	23/20	23/20	23/20	500/100	80	-40 to +85°C	SMI-01	<u>RFSL5202</u>	
902	928	0.22/0.30	23/20	23/20	23/20	23/20	500/100	80	-40 to +85°C	SMI-01	<u>RFSL5306</u>	
920	960	0.22/0.30	23/20	23/20	23/20	23/20	500/100	80	-40 to +85°C	SMI-01	<u>RFSL5301</u>	
1020	1090	0.22/0.30	23/20	23/20	23/20	23/20	500/100	80	-40 to +85°C	SMI-01	<u>RFSL5303</u>	
1165	1215	0.22/0.30	23/20	23/20	23/20	23/20	500/100	80	-40 to +85°C	SMI-01	<u>RFSL5309</u>	
1200	1400	0.25/0.35	23/20	23/20	23/20	23/20	500/100	80	-40 to +85°C	SMI-01	<u>RFSL5311</u>	
1420	1520	0.22/0.30	23/20	23/20	23/20	23/20	500/100	80	-40 to +85°C	SMI-01	<u>RFSL5313</u>	
1520	1665	0.25/0.30	23/20	23/20	23/20	23/20	500/100	80	-40 to +85°C	SMI-01	<u>RFSL5402</u>	
1625	1680	0.25/0.30	23/20	23/20	23/20	23/20	500/100	80	-40 to +85°C	SMI-01	<u>RFSL5404</u>	
1710	1785	0.25/0.30	23/20	23/20	23/20	23/20	500/100	80	-40 to +85°C	SMI-01	<u>RFSL5406</u>	
1805	1880	0.22/0.30	23/20	23/20	23/20	23/20	500/100	80	-40 to +85°C	SMI-01	<u>RFSL5501</u>	
1880	1930	0.22/0.30	23/20	23/20	23/20	23/20	500/100	80	-40 to +85°C	SMI-01	<u>RFSL5505</u>	
1930	1995	0.22/0.30	23/20	23/20	23/20	23/20	500/100	80	-40 to +85°C	SMI-01	<u>RFSL5601</u>	
2090	2190	0.22/0.30	23/20	23/20	23/20	23/20	500/100	80	-40 to +85°C	SMI-01	<u>RFSL5701</u>	
2130	2280	0.22/0.30	23/20	23/20	23/20	23/20	500/100	80	-40 to +85°C	SMI-01	<u>RFSL5705</u>	

Standard Part Number is Clockwise (CW) Rotation. Add letter “R” at the end to Part number for a Counter Clockwise (CCW) Rotation

20W ISOLATOR -SMD Pin Style-25.4mm Diameter

Frequency Range (MHz)		Insertion Loss (dB)	Isolation (dB)	Return Loss (dB)	Fwd. PWR P/CW (W)	Rev PWR CW (W)	Operating Temperature (°C)	Package Outline	RF CI Part Number
Low	High	Room/OT	Room/OT	Room/OT	Max.	Max.	(°C)		
728	768	0.22/0.30	23/20	23/20	500/100	20	-40 to +85°C	SMI-02	<u>RFSL5105</u>
773	803	0.22/0.30	23/20	23/20	500/100	20	-40 to +85°C	SMI-02	<u>RFSL5109</u>
791	821	0.22/0.30	23/20	23/20	500/100	20	-40 to +85°C	SMI-02	<u>RFSL5111</u>
830	890	0.35/0.40	21/19	21/19	500/100	20	-40 to +85°C	SMI-02	<u>RFSL5208</u>
860	890	0.22/0.30	23/20	23/20	500/100	20	-40 to +85°C	SMI-02	<u>RFSL5205</u>
869	894	0.22/0.30	23/20	23/20	500/100	20	-40 to +85°C	SMI-02	<u>RFSL5203</u>
902	928	0.22/0.30	23/20	23/20	500/100	20	-40 to +85°C	SMI-02	<u>RFSL5307</u>
920	960	0.22/0.30	23/20	23/20	500/100	20	-40 to +85°C	SMI-02	<u>RFSL5308</u>
1020	1090	0.22/0.30	23/20	23/20	500/100	20	-40 to +85°C	SMI-02	<u>RFSL5304</u>
1165	1215	0.22/0.30	23/20	23/20	500/100	20	-40 to +85°C	SMI-02	<u>RFSL5310</u>
1200	1400	0.25/0.35	23/20	23/20	500/100	20	-40 to +85°C	SMI-02	<u>RFSL5312</u>
1420	1520	0.22/0.30	23/20	23/20	500/100	20	-40 to +85°C	SMI-02	<u>RFSL5314</u>
1520	1665	0.25/0.30	23/20	23/20	500/100	20	-40 to +85°C	SMI-02	<u>RFSL5403</u>
1625	1680	0.25/0.30	23/20	23/20	500/100	20	-40 to +85°C	SMI-02	<u>RFSL5405</u>
1710	1785	0.25/0.30	23/20	23/20	500/100	20	-40 to +85°C	SMI-02	<u>RFSL5407</u>
1805	1880	0.22/0.30	23/20	23/20	500/100	20	-40 to +85°C	SMI-02	<u>RFSL5502</u>
1880	1930	0.22/0.30	23/20	23/20	500/100	20	-40 to +85°C	SMI-02	<u>RFSL5506</u>
1930	1995	0.22/0.30	23/20	23/20	500/100	20	-40 to +85°C	SMI-02	<u>RFSL5602</u>
2090	2190	0.22/0.30	23/20	23/20	500/100	20	-40 to +85°C	SMI-02	<u>RFSL5702</u>
2130	2280	0.22/0.30	23/20	23/20	500/100	20	-40 to +85°C	SMI-02	<u>RFSL5706</u>

Standard Part Number is Clockwise (CW) Rotation. Add letter “R” at the end to Part number for a Counter Clockwise (CCW) Rotation

60W ISOLATOR-SMD Pin Style-14.5mm Diameter

Frequency Range (MHz)		Insertion Loss (dB)	Isolation (dB)	Return Loss (dB)	Fwd. PWR P/CW (W)	Rev PWR CW (W)	Operating Temperature	Package Outline	RFCI Part Number
Low	High	Room/OT	Room/OT	Room/OT	Max.	Max.	(°C)		
1625	1680	0.25/0.30	23/20	23/20	500/80	60	-40 to +85°C	SMI-03	RFSL5409
1710	1785	0.25/0.30	23/20	23/20	500/80	60	-40 to +85°C	SMI-03	RFSL5410
1805	1880	0.22/0.30	23/20	23/20	500/80	60	-40 to +85°C	SMI-03	RFSL5508
1880	1930	0.22/0.30	23/20	23/20	500/80	60	-40 to +85°C	SMI-03	RFSL5509
1930	1995	0.22/0.30	23/20	23/20	500/80	60	-40 to +85°C	SMI-03	RFSL5603
2110	2170	0.22/0.30	23/20	23/20	500/80	60	-40 to +85°C	SMI-03	RFSL5703
2130	2280	0.25/0.35	23/20	23/20	500/80	60	-40 to +85°C	SMI-03	RFSL5708
2200	2400	0.25/0.35	23/20	23/20	500/80	60	-40 to +85°C	SMI-03	RFSL5815
2320	2370	0.25/0.30	23/20	23/20	500/80	60	-40 to +85°C	SMI-03	RFSL5816
2365	2435	0.25/0.30	23/20	23/20	500/80	60	-40 to +85°C	SMI-03	RFSL5817
2400	2500	0.25/0.30	23/20	23/20	500/80	60	-40 to +85°C	SMI-03	RFSL5818
2550	2650	0.25/0.30	23/20	23/20	500/80	60	-40 to +85°C	SMI-03	RFSL5819
2620	2690	0.25/0.30	23/20	23/20	500/80	60	-40 to +85°C	SMI-03	RFSL5801
2700	2900	0.25/0.30	23/20	23/20	500/80	60	-40 to +85°C	SMI-03	RFSL5820
2900	3100	0.25/0.30	23/20	23/20	500/80	60	-40 to +85°C	SMI-03	RFSL5821
3100	3300	0.25/0.30	23/20	23/20	500/80	60	-40 to +85°C	SMI-03	RFSL5822
3200	3400	0.25/0.30	23/20	23/20	500/80	60	-40 to +85°C	SMI-03	RFSL5823

20W ISOLATOR-SMD Pin Style-14.5mm Diameter

Frequency Range (MHz)		Insertion Loss (dB)	Isolation (dB)	Return Loss (dB)	Fwd. PWR P/CW (W)	Rev PWR CW (W)	Operating Temperature	Package Outline	RFCI Part Number
Low	High	Room/OT	Room/OT	Room/OT	Max.	Max.	(°C)		
1805	1880	0.22/0.30	23/20	23/20	500/80	20	-40 to +85°C	SMI-04	RFSL5504
1880	1930	0.22/0.30	23/20	23/20	500/80	20	-40 to +85°C	SMI-04	RFSL5507
1930	1995	0.22/0.30	23/20	23/20	500/80	20	-40 to +85°C	SMI-04	RFSL5604
2110	2170	0.22/0.30	23/20	23/20	500/80	20	-40 to +85°C	SMI-04	RFSL5704
2130	2280	0.25/0.35	23/20	23/20	500/80	20	-40 to +85°C	SMI-04	RFSL5707
2200	2400	0.25/0.35	23/20	23/20	500/80	20	-40 to +85°C	SMI-04	RFSL5805
2320	2370	0.25/0.30	23/20	23/20	500/80	20	-40 to +85°C	SMI-04	RFSL5807
2365	2435	0.25/0.30	23/20	23/20	500/80	20	-40 to +85°C	SMI-04	RFSL5808
2400	2500	0.25/0.30	23/20	23/20	500/80	20	-40 to +85°C	SMI-04	RFSL5809
2550	2650	0.25/0.30	23/20	23/20	500/80	20	-40 to +85°C	SMI-04	RFSL5810
2620	2690	0.25/0.30	23/20	23/20	500/80	20	-40 to +85°C	SMI-04	RFSL5802
2700	2900	0.25/0.30	23/20	23/20	500/80	20	-40 to +85°C	SMI-04	RFSL5811
2900	3100	0.25/0.30	23/20	23/20	500/80	20	-40 to +85°C	SMI-04	RFSL5812
3100	3300	0.25/0.30	23/20	23/20	500/80	20	-40 to +85°C	SMI-04	RFSL5813
3200	3400	0.25/0.30	23/20	23/20	500/80	20	-40 to +85°C	SMI-04	RFSL5814

10W ISOLATOR-SMD Pin Style-12.4mm Diameter

Frequency Range (MHz)		Insertion Loss (dB)	Isolation (dB)	Return Loss (dB)	Fwd. PWR P/CW (W)	Rev PWR CW (W)	Operating Temperature (°C)	Package Outline	RFCI Part Number
Low	High	Room/OT	Room/OT	Room/OT	Max.	Max.			
2320	2370	0.25/0.30	22/20	22/20	500/50	10	-40 to +85°C	SMI-05	RFSL5824
2365	2435	0.25/0.30	22/20	22/20	500/50	10	-40 to +85°C	SMI-05	RFSL5825
2400	2500	0.25/0.30	22/20	22/20	500/50	10	-40 to +85°C	SMI-05	RFSL5826
2550	2650	0.25/0.30	22/20	22/20	500/50	10	-40 to +85°C	SMI-05	RFSL5827
2620	2690	0.25/0.30	22/20	22/20	500/50	10	-40 to +85°C	SMI-05	RFSL5828
2700	2900	0.25/0.30	22/20	22/20	500/50	10	-40 to +85°C	SMI-05	RFSL5829
2900	3100	0.25/0.30	22/20	22/20	500/50	10	-40 to +85°C	SMI-05	RFSL5830
3100	3300	0.25/0.30	22/20	22/20	500/50	10	-40 to +85°C	SMI-05	RFSL5831
3200	3400	0.25/0.30	22/20	22/20	500/50	10	-40 to +85°C	SMI-05	RFSL5832

Standard Part Number is Clockwise (CW) Rotation. Add letter “R” at the end to Part number for a Counter Clockwise (CCW) Rotation

NOTES:

Exposure to maximum rating conditions for extended periods may reduce device reliability

Use multiple plated thru holes in ground area under the housing of device

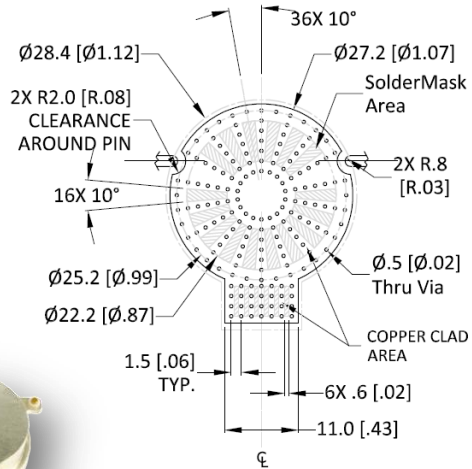
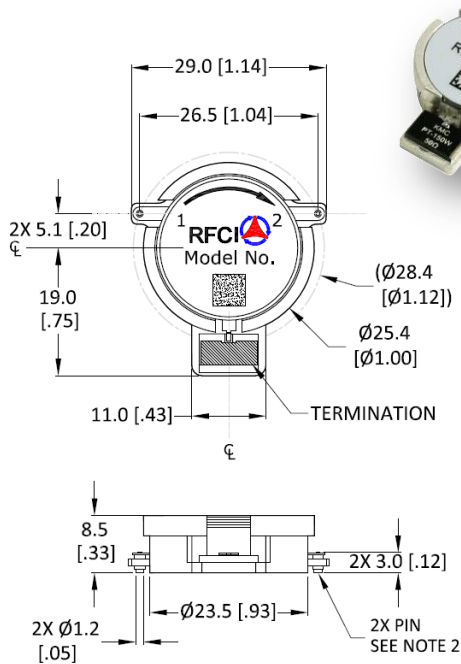
- Reverse Power Rating: Isolator Flange held to maximum +85°C; 30 Min. maximum Duration
- See RFCI Application Notes for Intermodulation Distortion Measurements and Solder reflows Profile
- The land Pattern should be with good thermal conductivity
- Evaluation Board (EVB) is available upon request
-

UNLESS OTHERWISE SPECIFIED ALL DIMENSIONS ARE IN MILLIMETERS [INCHES]:	
TOLERANCES ARE:	
1 PLACE DECIMAL	±.2 [±.01]
2 PLACE DECIMAL	±.10 [±.004]
	ANGULAR: ±1.0°
	SURFACE ROUGHNESS 16/√

Finish:

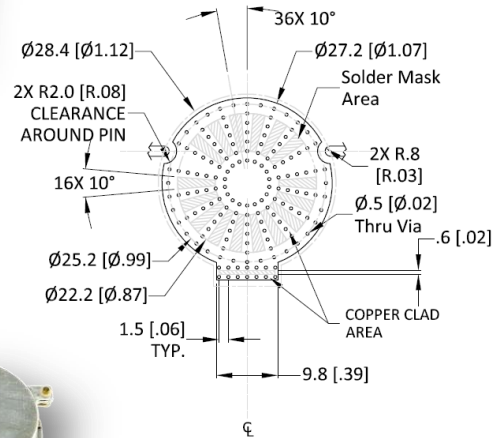
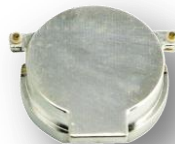
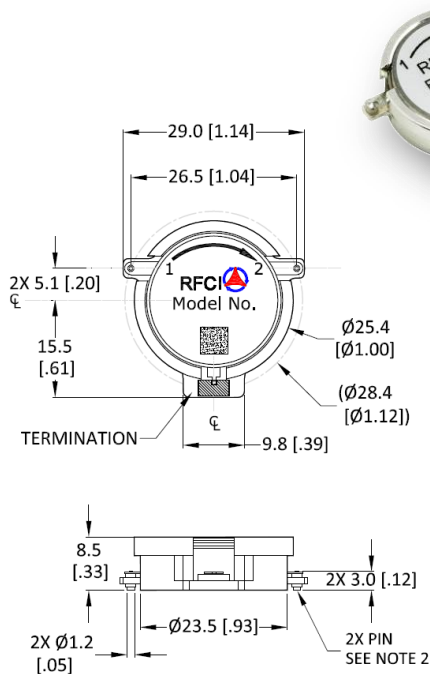
1. Housing: Silver plated
2. Pin: Gold plated
3. Coplanarity specification: 0.10 [.004] Max.
4. Matrix Bar Code: Part No., Serial No., and Date Code

Figure SMI-01 (80W-25.4mm Diameter Package Outline)



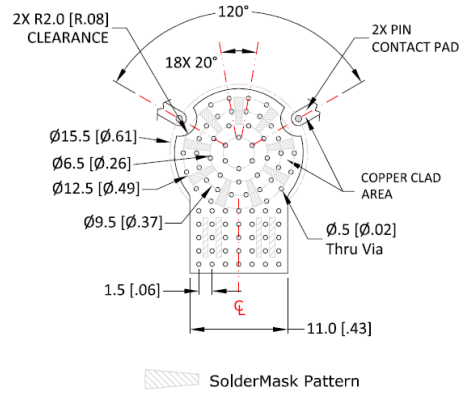
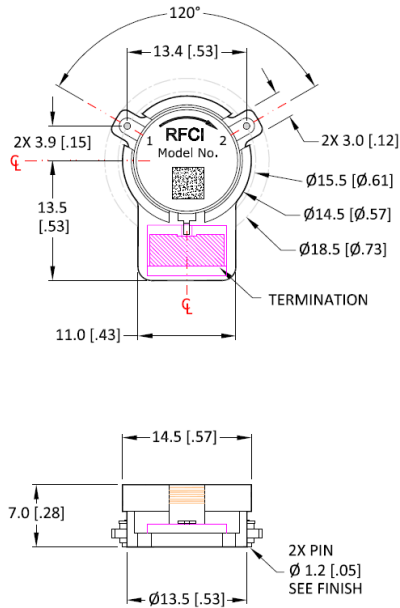
**Recommended Footprint
Copper-SolderMask Pattern**

Figure SMI-02 (20W-25.4mm Diameter Package Outline)



**Recommended Footprint
Copper-SolderMask Pattern**

Figure SMI-03 (60W-14.5mm Diameter Package Outline)

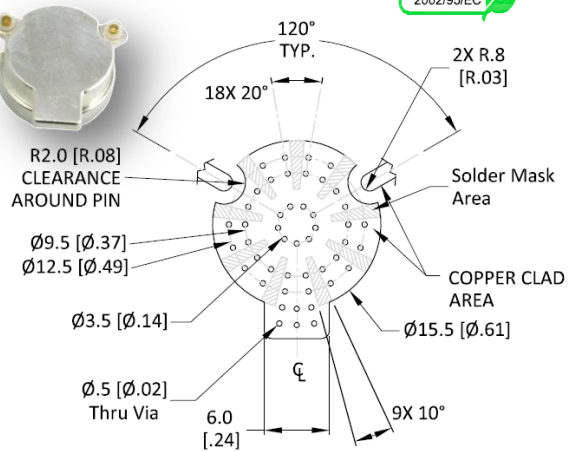
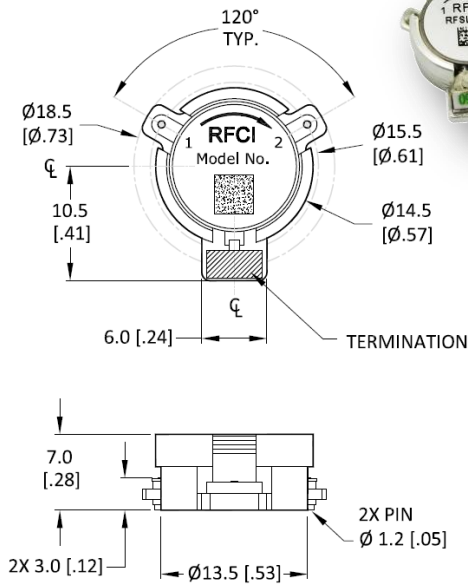


**Recommended Footprint
Copper-Solder Mask Pattern**

The Land Pattern should be with good thermal conductivity

- Finish:
1. Housing: Silver plated
 2. Pin: Gold plated
 3. Coplanarity specification: 0.10 [004] MAX.

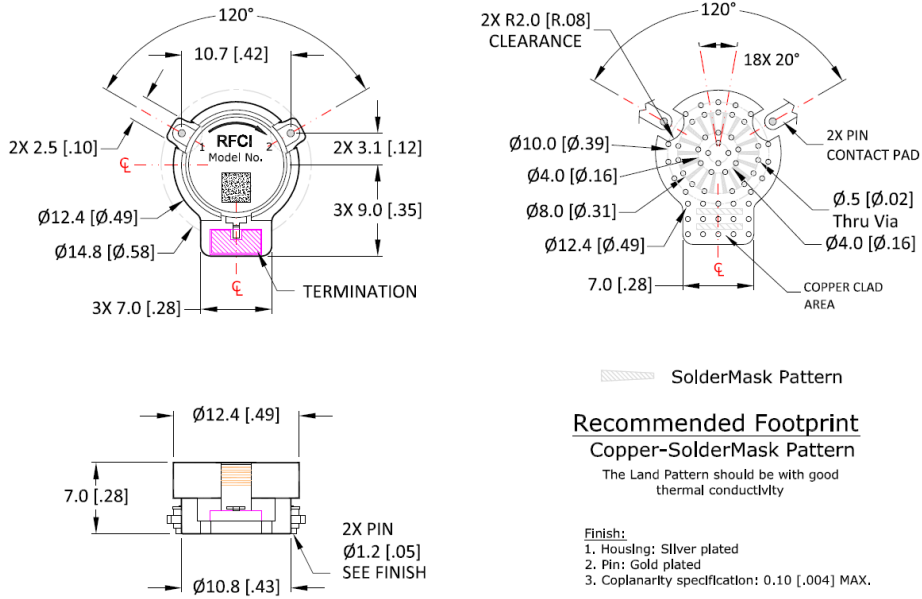
Figure SMI-04 (20W-14.5mm Diameter Package Outline)



**Recommended Footprint
Copper-Solder Mask Pattern**



Figure SMI-05 (10W-12.4mm Diameter Package Outline)



For order or technical support, please contact support@rf-ci.com
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