



ANATECH ELECTRONICS, INC.

Manufacturer of RF & Microwave Products



1850.6-1909.4/1930.6-1989.4 MHz LTE SAW Duplexer

P/N: AM1880-1960SD369

Tx → Ant		Specifications (+25° C)		
Parameters Description	Condition [MHz]	Minimum	Typical	Maximum
Insertion Loss	1850.6 ~ 1909.4	-	1.5 dB	3.0 dB
Passband Ripple	1850.6 ~ 1909.4	-	1.0 dB	2.0 dB
Return Loss	1850.6 ~ 1909.4	9.5 dB	1.4 dB	-
Attenuation	1930.6~1909.4	43 dB	48 dB	-

Ant → Rx		Specifications		
Parameters Description	Condition [MHz]	Minimum	Typical	Maximum
Insertion Loss	1930.6 ~ 1989.4	-	2.0 dB	3.5 dB
Passband Ripple	1930.6 ~ 1989.4	-	1.1 dB	2.6 dB
Return Loss	1930.6 ~ 1989.4	9.5 dB	16 dB	-
Attenuation	1930.6 ~ 1909.4	50 dB	55 dB	-

Tx → Rx		Specifications		
Parameters Description	Condition [MHz]	Minimum	Typical	Maximum
Isolation	1850.6 ~ 1909.4	54 dB	57 dB	-
	1910.0 ~ 1930.0	15 dB	20	-
	1930.6 ~ 1989.4	45 dB	50 dB	-
Item		Minimum	Typical	Maximum
Operation Temperature Range		-30 °C	-	+85 °C
Storage Temperature Range		-40 °C	-	+85 °C
Maximum DC Voltage		0 V		
Maximum Input Power		2.0 W		
Source Impedance (Single ended) (1)		50 Ω		
Load Impedance (single ended) (1)		50 Ω		
Package type & size		PA		
Length x Width		-	3.8 x 3.8 mm ²	-
Height		-	-	1.4 mm



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Tx → Ant		Specifications (-30 ~ +85° C)		
Parameters Description	Condition [MHz]	Minimum	Typical	Maximum
Insertion Loss	1850.6 ~ 1909.4	-	-	3.5 dB
Passband Ripple	1850.6 ~ 1909.4	-	-	2.8 dB
Return Loss	1850.6 ~ 1909.4	9.5 dB	-	-
Attenuation	1930.6 ~ 1989.4	43 dB	-	-

Ant → Rx		Specifications		
Parameters Description	Condition [MHz]	Minimum	Typical	Maximum
Insertion Loss	1930.6 ~ 1989.4	-	-	3.8 dB
Passband Ripple	1930.6 ~ 1989.4	-	-	3.0 dB
Return Loss	1930.6 ~ 1989.4	9.5 dB	-	-
Attenuation	1850.6 ~ 1909.4	50 dB	-	-

Tx → Rx		Specifications		
Parameters Description	Condition [MHz]	Minimum	Typical	Maximum
Isolation	1850.6 ~ 1909.4	54 dB	-	-
	1910.0 ~ 1930.0	15 dB	-	-
	1930.6 ~ 1989.4	45 dB	-	-



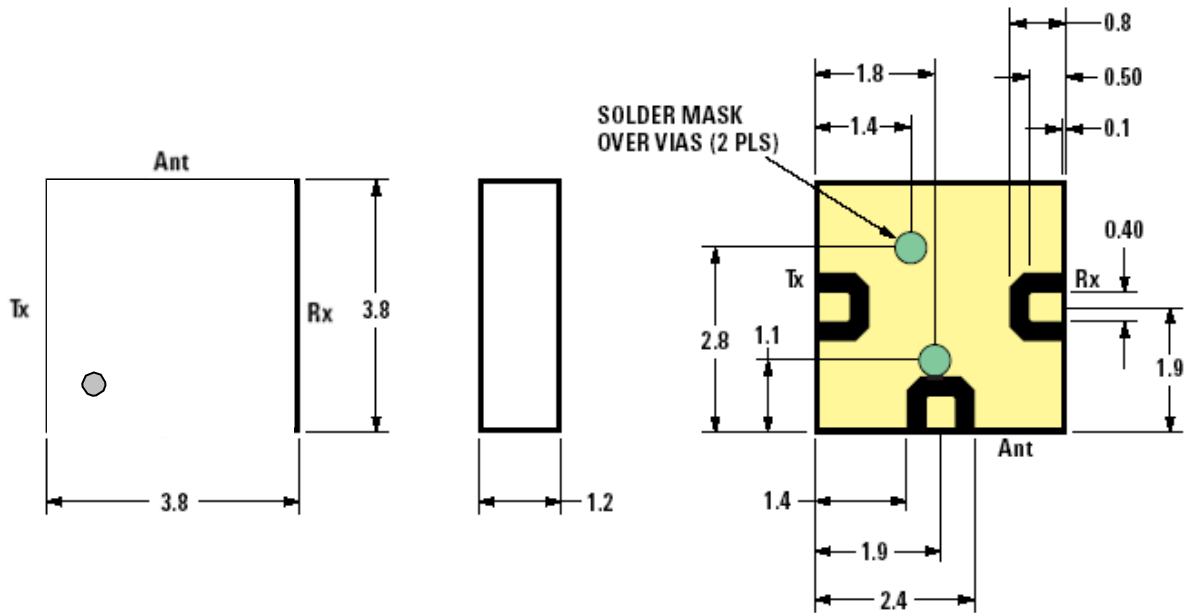
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1. Tolerance: XX±0.1, X,XX±0.05
2. Package Height: 1.4mm Max
3. Contact areas are Gold plated

PIN NO.	FUNCTION
①	Tx (1880MHz)
②	Rx (1960MHz)
③	Antenna
④	GND

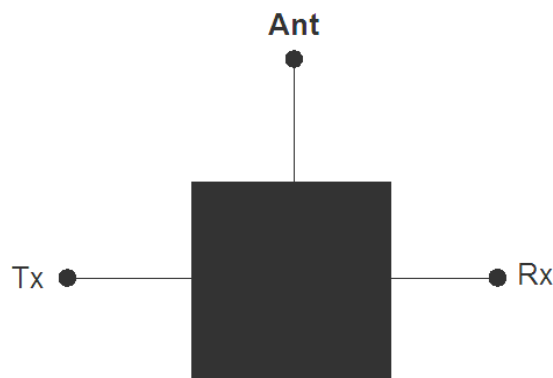
- ①, ②, ③: Exposed ports
 ④: Exposed ground plane



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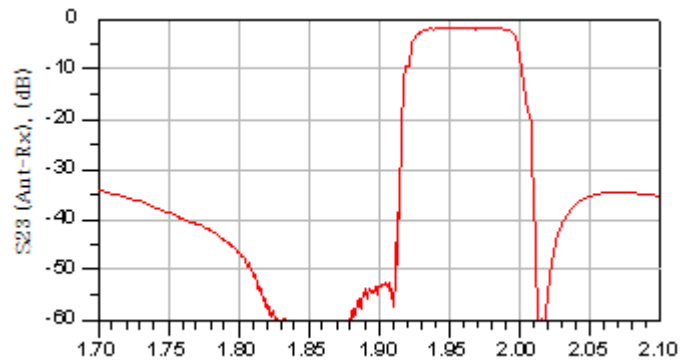
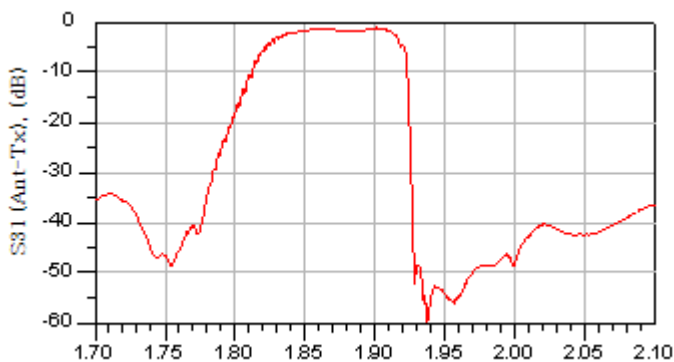
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Testing Environment



Frequency Characteristics

Tx to Ant, Ant to Rx





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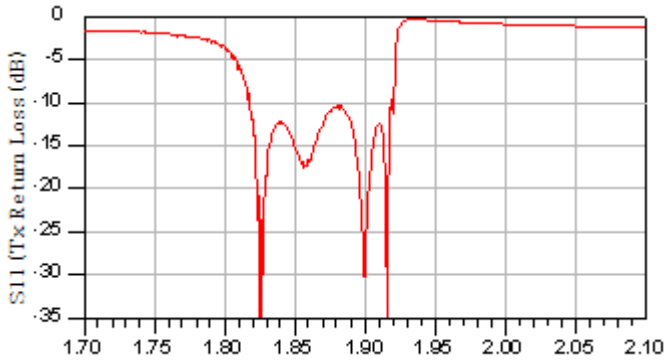
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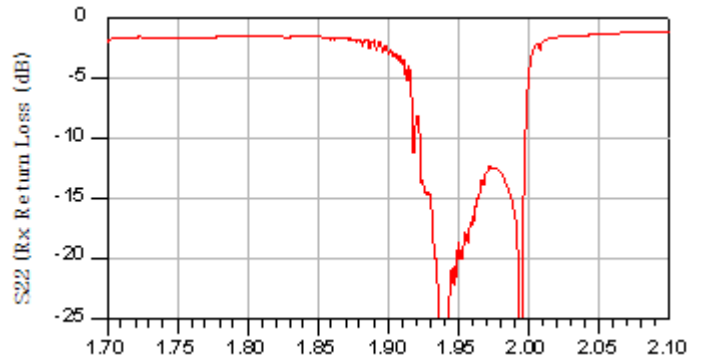
1850.6-1909.4/1930.6-1989.4 MHz LTE SAW Duplexer

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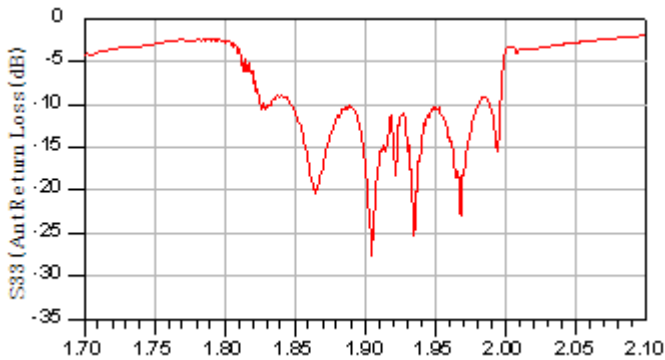
Return Loss Tx



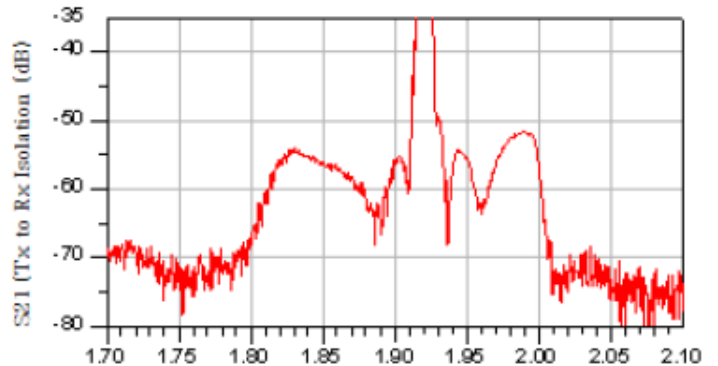
Return Loss Rx



Return Loss Ant



Tx to Rx Isolation





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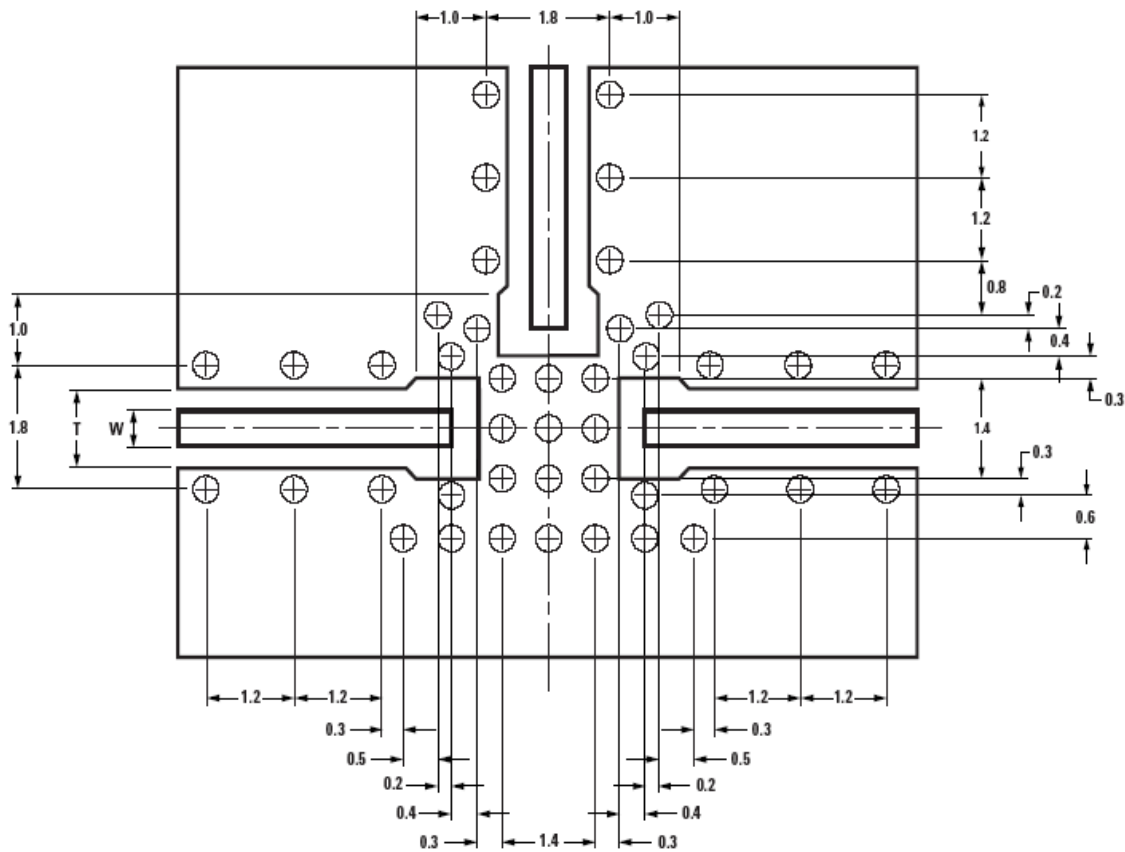
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Recommended PCB Layout Print



※ Notes:

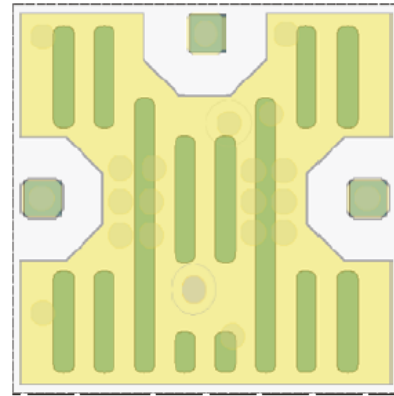
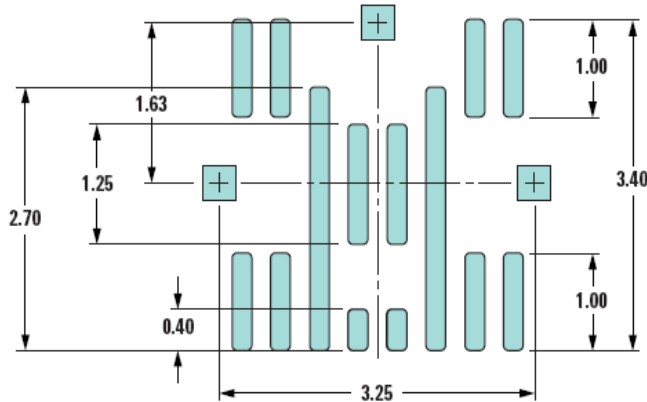
- ✓ Dimensions in millimeters (mm)
- ✓ All via are Φ 0.40
- ✓ Angles 45°
- ✓ RF ports are CPW
- ✓ T & W selected for 50 Ω
- ✓ Pattern centered on duplexer



1850.6-1909.4/1930.6-1989.4 MHz LTE SAW Duplexer

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Recommended Solder Stencil



Duplexer superposed on solder stencil

※ **Notes:**

- ✓ Dimensions in millimeters (mm)
- ✓ Solder stripes (14pls) are 0.20wide, pitch
- ✓ Solder pads for I/O are 0.35x0.35
- ✓ Stencil pattern is centered on duplexer