

Description

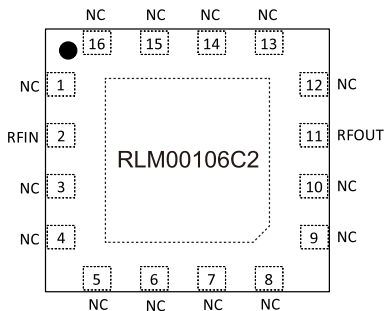
The RLM00106C2 is a low-loss, low-distortion and high power limiter. This device is designed for 100MHz - 6000MHz RF receiver applications.

The RLM00106C2 is fabricated with advanced GaAs technology, achieves low insertion loss , high input power(20W), over a wide range of operating frequency from 100MHz up to 6000MHz.

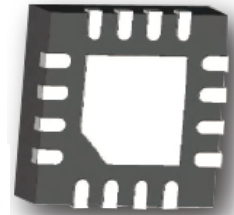
The RLM00106C2 is available in RoHS-Compliant, 3.0mm x 3.0mm x 0.75mm package.

Features

- Frequency bands: 100-6000 MHz
- Low insertion loss: 0.15dB@10MHz-500MHz
0.2dB@500MHz-1GHz
0.25dB@1GHz-2GHz
0.3dB@2GHz-3GHz
0.5dB@3GHz-4GHz
- 1dB-compression point=+14dBm
- Max input power : 43Bm@CW
- QFN: 3.0mmX3.0mmX 0.75mm, MSL3.



TOP VIEW



RF Electrical Specifications (Unless otherwise specified: T_{CASE} = +25 °C.)

Parameter		Conditions	Min.	Typ.	Max.	Units
Ac Electrical Characteristics						
Freq	Frequency Range		0.1		6.0	GHz
IL	Insertion loss	10MHz-500MHz 500MHz-1GHz 1GHz-2GHz 2GHz-3GHz 3GHz-4GHz 4GHz-5GHz		0.15 0.2 0.25 0.3 0.5 0.75	0.25 0.3 0.35 0.4 0.6 0.85	dB
RL	return loss	10MHz-500MHz 500MHz-1GHz 1GHz-2GHz 2GHz-3GHz 3GHz-4GHz 4GHz-5GHz		31 30 31 23 15 10	37 31 32 30 20 14	dB
Pmax	Max input power	CW		43		dBm
1dB	1dB compression	f=1000MHz		14		dBm
IIP3	Enter third-order breakpoint power	f=600MHz		52		dBm
Plim	Limited output power	f=2000MHz		14		dBm
TI	Carrier lifetime			20		ns

Yantel Corporation

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For detailed performance specs & shopping online see Yantel web site : www.yantel-corp.com

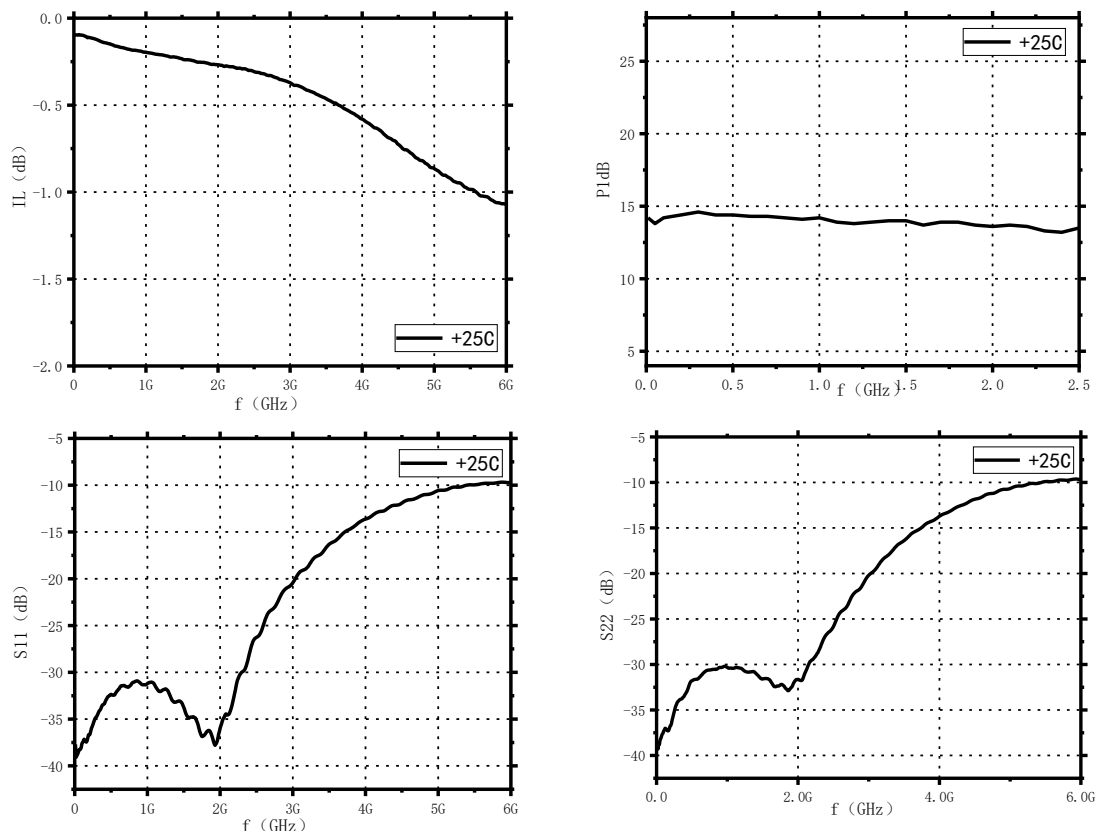
Absolute Maximum Ratings

Parameter	Symbol	Values			Units
		Min.	Typ.	Max.	
Reverse Voltage	V_{CC}	-0.3	-	50	V
RF input power	P_{IN}	-	-	44	dBm
Package thermal resistance	θ_{JA}	-	45		°C/W
Junction temperature	T_J	-	-	150	°C
Storage temperature range	T_{STG}	-55	-	+125	°C
Ambient temperature range	T_{amb}	-40	-	+85	°C
Solder temperature(10s)		-	260	-	°C
ESD(HBM)	VESD		3000		V
ESD(CDM)			2000		V

Application Information

The RLM00106C2 should be placed close to the antenna. Use 50-ohm micro-strip lines to connect RF INPUT and RF OUTPUT. Proper grounding of the GND pins is very important.

Typical Electrical Graphs



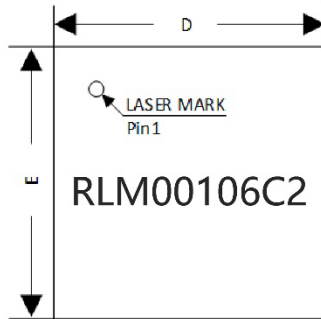
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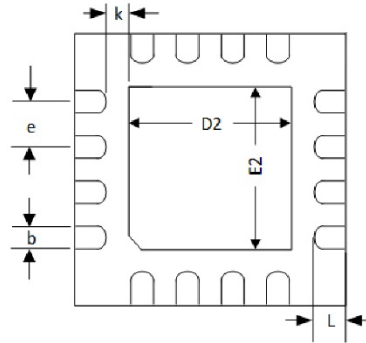
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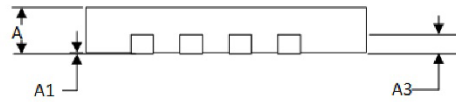
Package Information



TOP VIEW



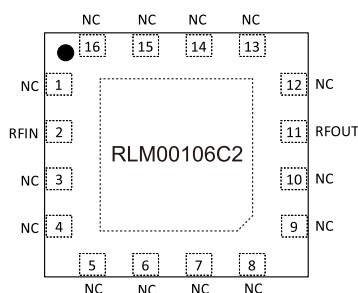
BOTTOM VIEW



SIDE VIEW

Ref.	Min	Typ	Max	Ref.	Min	Typ	Max
A	0.70	0.75	0.80	E2	1.80	1.90	2.00
A1	0.00	0.02	0.05	e	0.5 BSC		
A3	0.20REF			L	0.25	0.30	0.35
b	0.20	0.25	0.30	K	0.15	0.25	0.35
D	2.90	3.00	3.10				
D2	1.80	1.90	2.00				
E	2.90	3.00	3.10				

Pin Configuration and Marking



TOP VIEW

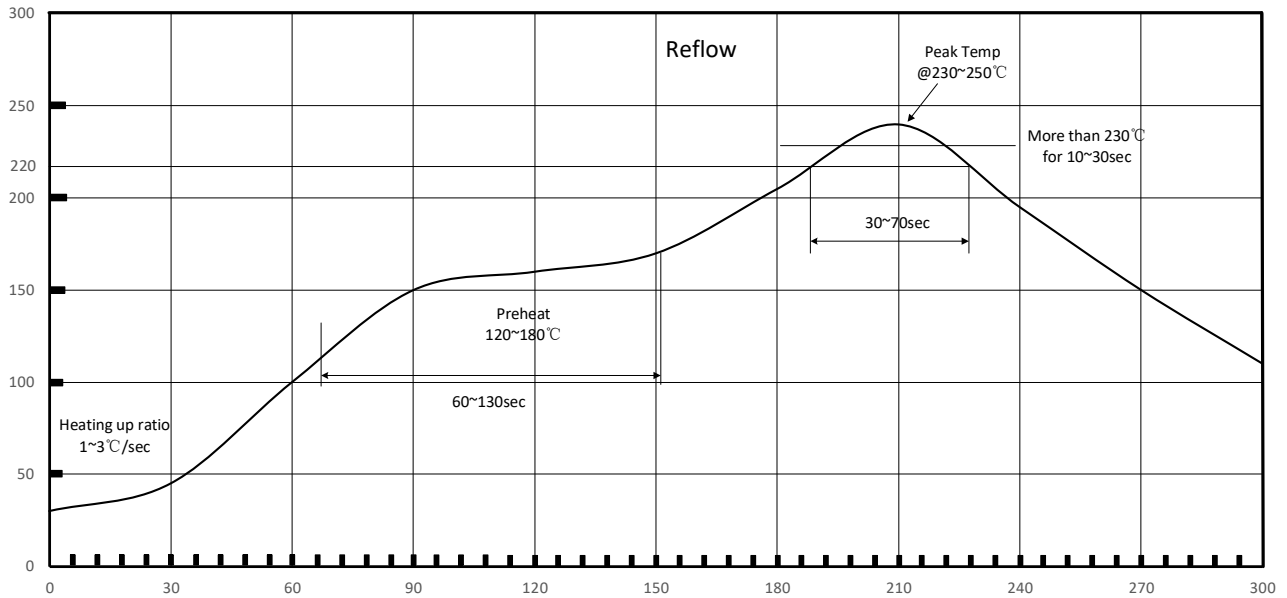
Pin	Name	Description
Center Pad	GND	Ground
2	RFIN	RF Input
11	RFOUT	RF Output
1,3,4,5,6,7,8,9,10,12,13, 14,15,16	NC	No Connection

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Recommended Solder Temperature



RoHS Compliant

The product does not contain lead, mercury, cadmium, hexavalent chromium, polybrominated biphenyls(PBB) or polybrominated diphenyl ethers(PBDE), and are therefore considered RoHS compliant.

Order Information

Part Number	Temperature	Package	RoHS	Mark	SPQ
RLM00106C2	-40°C ~ +85°C	3.0mm x 3.0 mm x 0.75mm	Yes	RLM00106C2	Tape and Reel 3000 pcs/Reel