

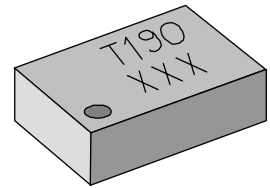


Datasheet (Version 2.2)

NWT190 CDMA TX Full Band BAW-filter for US PCS

Features

- Low-loss and high-selectivity Bulk-Acoustic-Wave Filter
- Passband: CDMA Tx 1850 .. 1910 MHz
- High selectivity and low temperature drift (TCF = -18 ppm/K)
- Leadless Plastic Package for **Surface Mounted Technology (SMT)**
- **Thin Small Leadless Package (TSLP)**
- Small Package dimensions of 2.0 x 1.6mm²
- Package height 0.6 mm
- “Green” package, suitable for 260°C reflow temperature
- Excellent ESD robustness, pyroelectric charge generation does not occur



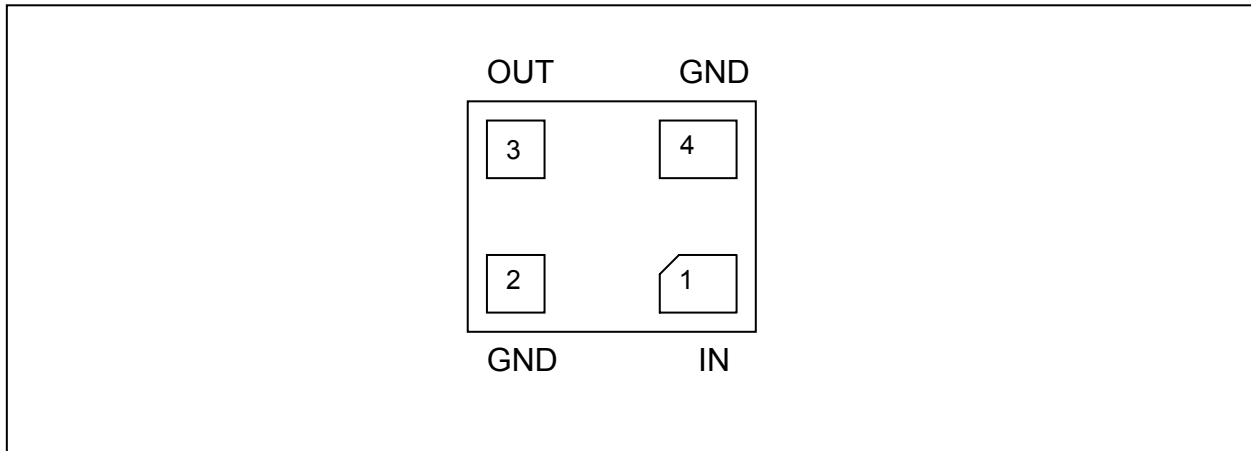
P-TSLP-4-5

Type	Marking	Ordering Code	Package
NWT190	T190	available on request	TSLP-4-5

Description:

NWT190 is a full-band PCS Tx Filter for US-CDMA and US W-CDMA that utilizes Bulk-Acoustic-Wave Filter technology. In typical cellular phone architectures, the transmit filter fits between the driver amplifier and the power amplifier. Benefits of this new transmit filter are reduced insertion loss, very low temperature drift and increased steepness of the filter skirts in lower and upper transition bands. NWT190 is packaged in a low profile plastic package.

Pin Configuration
(bottom view)



Pin Definitions and Functions

Pin No.	Symbol	Function
1	IN	unbalanced TX input
2	GND	ground
3	OUT	unbalanced TX output
4	GND	ground

Absolute Maximum Ratings		Unit
Operating temperature range	-30 .. +85	°C
Storage temperature range	-65 .. +150	°C
ESD (Machine Model)	100	V
ESD (Human Body Model)	1	kV
Power handling capability (10kh)	20	dBm

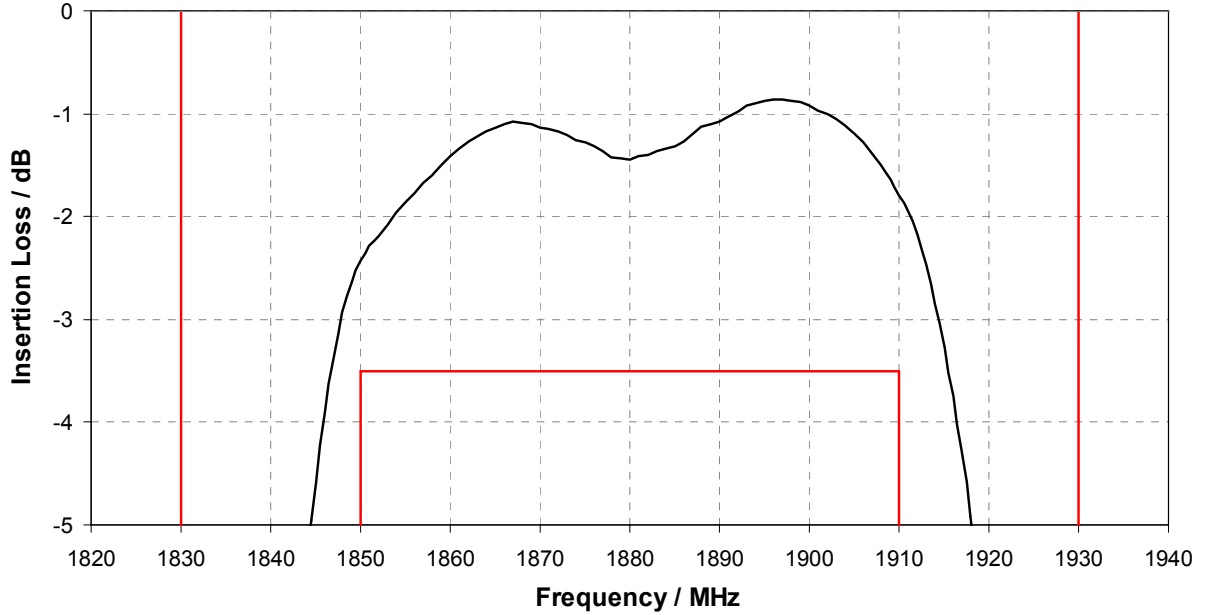
Electrical specifications

All parameters are valid over full operating temperature range unless otherwise stated. Parameters are tested at room temperature, variations over temperature are considered by temperature margins.

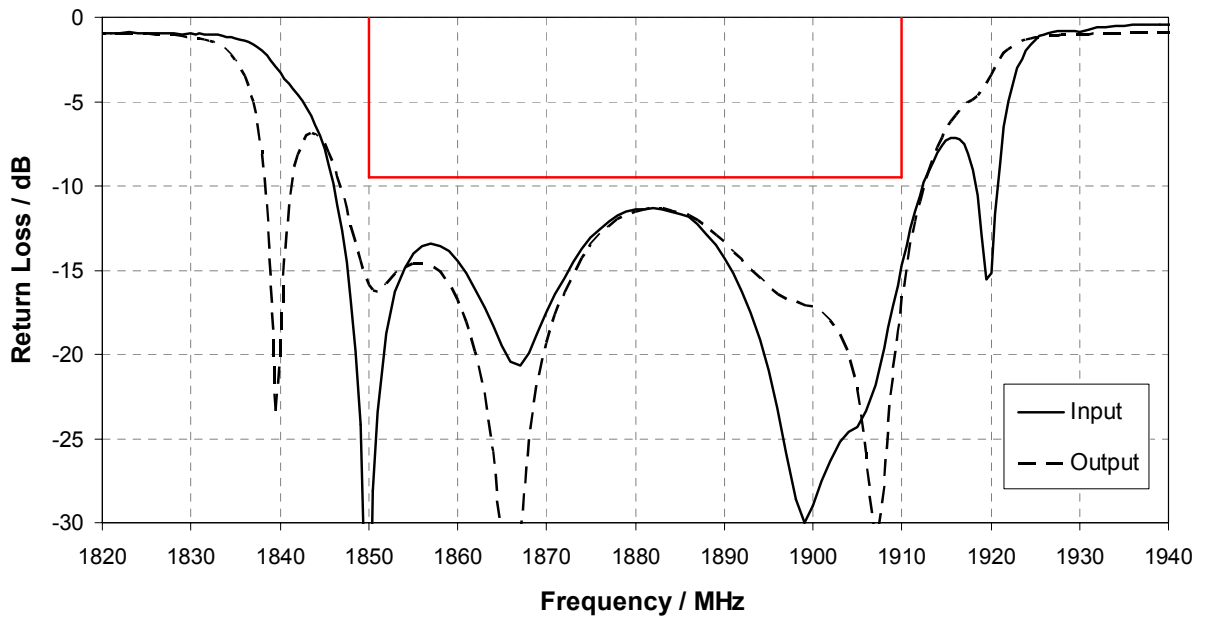
Passband Parameter	Min.	Typ.	Max.	Unit
Frequency	1850.6		1909.4	MHz
Insertion loss (+25°C) (-30 .. +85°C) (1855 to 1905 MHz)		2.3 2.8 1.8	3.5	dB
Total ripple over frequency		1.5	2.0	dB
Input impedance		50		Ω unbal.
Output impedance		50		Ω unbal.
Return loss	9.5	11		dB
Input/Output DC bias RF performance must not change			5	V

Stopband Parameter	Min.	Typ.	Max.	Unit
attenuation 0.3 to 1570 MHz	24			dB
attenuation 1570 to 1580 MHz	30			dB
attenuation 1580 to 1770 MHz	24			dB
attenuation 1770 to 1830 MHz	25	30		dB
attenuation 1930.6 to 1990 MHz (-10° ... +85°C) (-30° ... -10°C)	38 35	44		dB
attenuation 1990 to 2500 MHz	30			dB
attenuation 2500 to 3700 MHz	15	25		dB
attenuation 3700 to 3820 MHz	23	27		dB
attenuation 3820 to 6000 MHz	15			dB

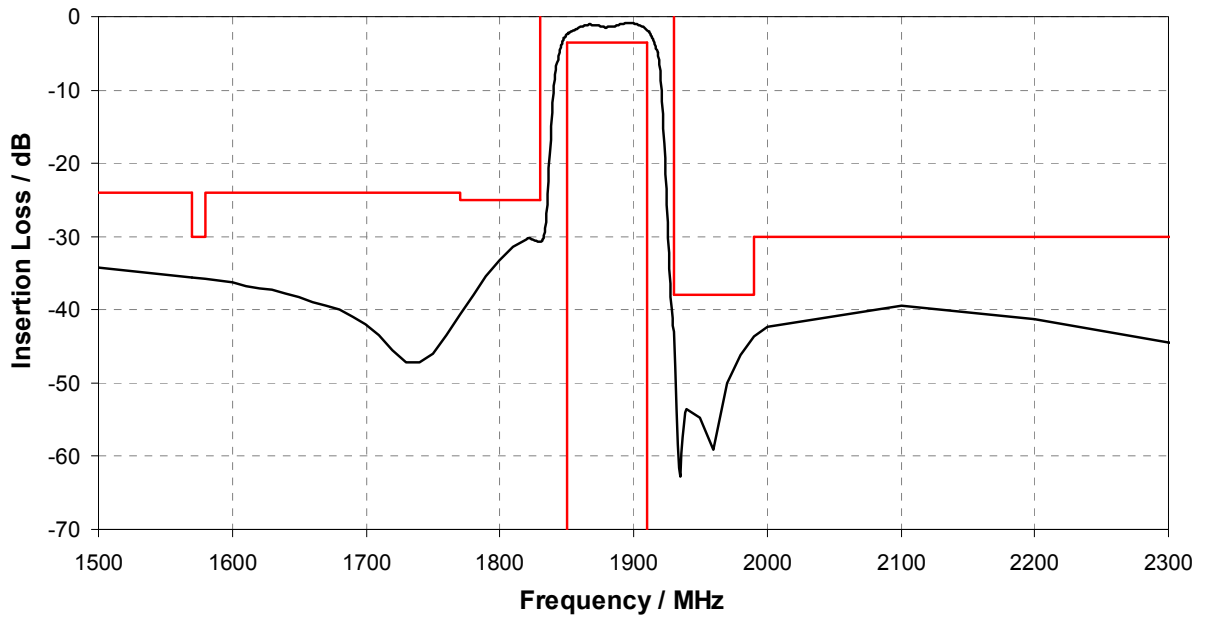
Insertion Loss (Passband)



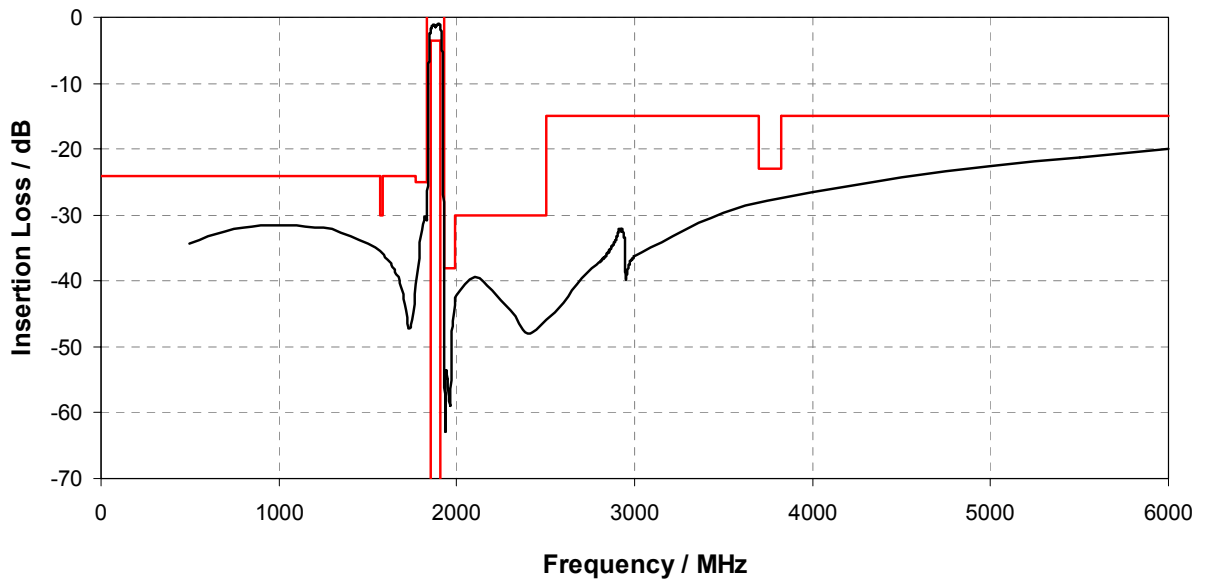
Return Loss (Passband)



Insertion Loss (Narrowband)

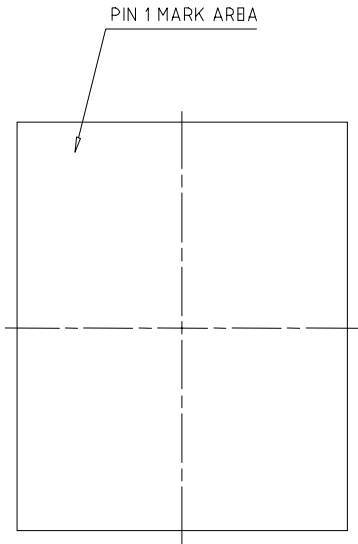


Insertion Loss (Wideband)

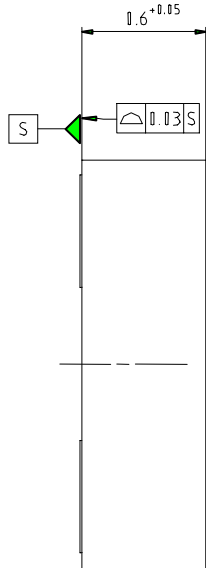


Package Dimensions

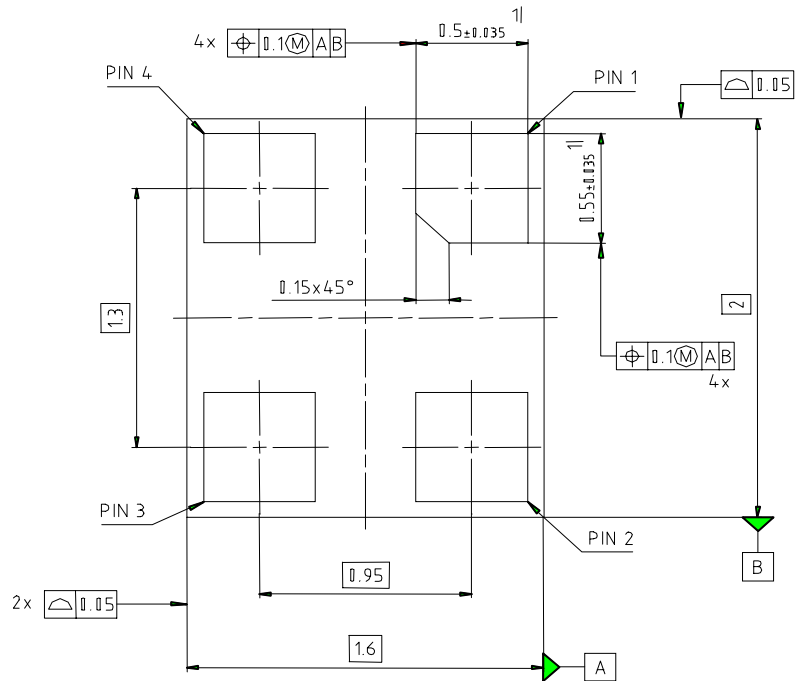
Top View



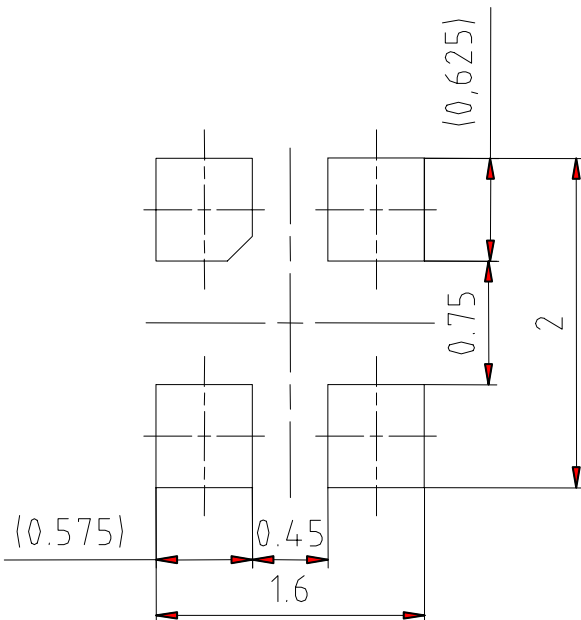
Side View



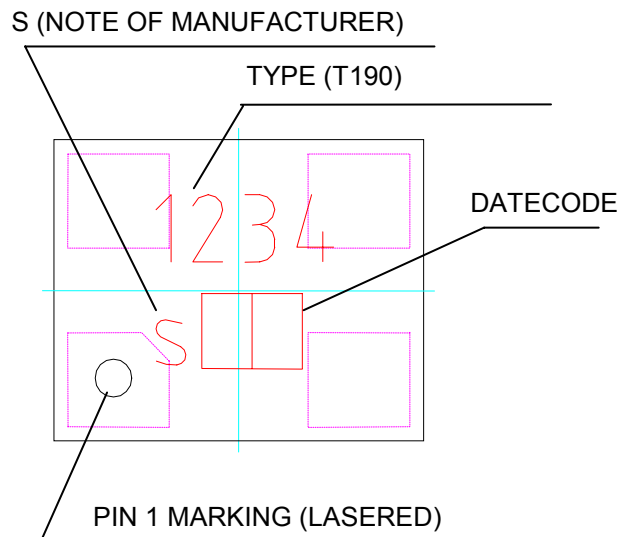
Bottom View



Recommended Landing Pad



Pin 1 Marking / Labeling



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