CPC COOPERATIVE PATENT CLASSIFICATION

H ELECTRICITY

(NOTE omitted)

H03 ELECTRONIC CIRCUITRY

H03H IMPEDANCE NETWORKS, e.g. RESONANT CIRCUITS; RESONATORS (measuring, testing G01R; arrangements for producing a reverberation or echo sound G10K 15/08; impedance networks or resonators consisting of distributed impedances, e.g. of the waveguide type, H01P; control of amplification, e.g. bandwidth control of amplifiers, H03G; tuning resonant circuits, e.g. tuning coupled resonant circuits, H03J; networks for modifying the frequency characteristics of communication systems H04B)

NOTES

1. This subclass covers:
   - networks comprising lumped impedance elements;
   - networks comprising distributed impedance elements together with lumped impedance elements;
   - networks comprising electromechanical or electro-acoustic elements;
   - networks simulating reactances and comprising discharge tubes or semiconductor devices;
   - constructions of electromechanical resonators.
2. In this subclass, the following expression is used with the meaning indicated:
   "passive elements" means resistors, capacitors, inductors, mutual inductors or diodes.
3. Attention is drawn to the Notes following the titles of class B81 and subclass B81B relating to "microstructural devices" and "microstructural systems".
4. In this subclass, main groups with a higher number take precedence.

WARNING

In this subclass non-limiting references (in the sense of paragraph 39 of the Guide to the IPC) may still be displayed in the scheme.

1/00 **Constructional details of impedance networks whose electrical mode of operation is not specified or applicable to more than one type of network** (constructional details of electromechanical transducers H03H 9/00)

1/0007 . {of radio frequency interference filters}

2001/0014 . {Capacitor filters, i.e. capacitors whose parasitic inductance is of relevance to consider it as filter}

2001/0021 . {Constructional details}

2001/0028 . . {RFI filters with housing divided in two bodies}

2001/0035 . . {Wound magnetic core}

2001/0042 . . {Wound, ring or feed-through type capacitor}

2001/005 . . {Wound, ring or feed-through type inductor}

2001/0057 . . {comprising magnetic material}

2001/0064 . . {comprising semiconductor material}

2001/0071 . . {comprising zig-zag inductor}

2001/0078 . . {comprising spiral inductor on a substrate}

2001/0085 . . {Multilayer, e.g. LTCC, HTCC, green sheets (inside PCB filters H05K)}

2001/0092 . {Inductor filters, i.e. inductors whose parasitic capacitance is of relevance to consider it as filter}

1/02 . of RC networks, e.g. integrated networks

2/00 **Networks using elements or techniques not provided for in groups H03H 3/00 - H03H 21/00**

2/001 . {comprising magnetostatic wave network elements}

2/003 . {comprising optical fibre network elements (optical elements per se G02B, G02F; transmission systems using light waves H04B 10/00)}

2/005 . {Coupling circuits between transmission lines or antennas and transmitters, receivers or amplifiers}

2/006 . . {Transmitter or amplifier output circuits}

2/008 . . {Receiver or amplifier input circuits}

3/00 **Apparatus or processes specially adapted for the manufacture of impedance networks, resonating circuits, resonators**

3/007 . for the manufacture of electromechanical resonators or networks

2003/0071 . . {of bulk acoustic wave and surface acoustic wave elements in the same process}

3/0072 . . {of microelectro-mechanical resonators or networks (micromembranes or microbeams B81B 2203/01; manufacture of microstructural devices in general B81C)}

3/0073 . . . {Integration with other electronic structures}

3/0075 . . . {Arrangements or methods specially adapted for testing microelecro-mechanical resonators or networks}

3/0076 . . . {for obtaining desired frequency or temperature coefficients}

3/0077 . . . . {by tuning of resonance frequency}

3/0078 . . . . . {involving adjustment of the transducing gap}

3/013	. .	for obtaining desired frequency or temperature coefficient ({H03H 3/0076} H03H 3/04, H03H 3/10 take precedence)
3/02	. .	for the manufacture of piezoelectric or electrostrictive resonators or networks (H03H 3/08 takes precedence)
2003/021	. . .	{the resonators or networks being of the air-gap type}
2003/022	. . .	{the resonators or networks being of the cantilever type}
2003/023	. . .	{the resonators or networks being of the membrane type}
2003/025	. . .	{the resonators or networks comprising an acoustic mirror}
2003/026	. . .	{the resonators or networks being of the tuning fork type}
2003/027	. . .	{the resonators or networks being of the microelectro-mechanical [MEMS] type}
2003/028	. . .	{for obtaining desired values of other parameters}
3/04	. . .	for obtaining desired frequency or temperature coefficient
2003/0407	. . . .	{Temperature coefficient}
2003/0414	. . . .	{Resonance frequency}
2003/0421	. . . . .	{Modification of the thickness of an element}
2003/0428	. . . . . .	{of an electrode}
2003/0435	. . . . . .	{of a piezoelectric layer}
2003/0442	. . . . . .	{of a non-piezoelectric layer}
2003/045	. . . . .	{Modification of the area of an element}
2003/0457	. . . . . .	{of an electrode}
2003/0464	. . . . .	{operating on an additional circuit element, e.g. a passive circuit element connected to the resonator}
2003/0471	. . . . .	{of a plurality of resonators at different frequencies}
2003/0478	. . . . .	{in a process for mass production}
2003/0485	. . . . .	{during the manufacture of a cantilever}
2003/0492	. . . . .	{during the manufacture of a tuning-fork}
3/06	. .	for the manufacture of magnetostrictive resonators or networks
3/08	. .	for the manufacture of resonators or networks using surface acoustic waves
3/10	. . .	for obtaining desired frequency or temperature coefficient
5/00		**One-port networks comprising only passive electrical elements as network components**
5/003	.	{comprising distributed impedance elements together with lumped impedance elements}
5/006	.	{comprising simultaneously tunable inductance and capacitance}
5/02	.	without voltage- or current-dependent elements
5/10	. .	comprising at least one element with prescribed temperature coefficient
5/12	.	with at least one voltage- or current-dependent element
7/00		**Multiple-port networks comprising only passive electrical elements as network components** (receiver input circuits H04B 1/18; networks simulating a length of communication cable H04B 3/40)
7/002	.	{Gyrators}
7/004	.	{Capacitive coupling circuits not otherwise provided for}
2007/006	.	{MEMS}
2007/008	. .	{the MEMS being trimmable}
7/01	.	Frequency selective two-port networks
7/0107	. .	{Non-linear filters}
7/0115	. .	{comprising only inductors and capacitors (H03H 7/075, H03H 7/09, H03H 7/12, H03H 7/13 take precedence)}
7/0123	. .	{comprising distributed impedance elements together with lumped impedance elements}
2007/013	. .	{Notch or bandstop filters}
7/0138	. .	{Electrical filters or coupling circuits}
7/0146	. . .	{Coupling circuits between two tubes, not otherwise provided for}
7/0153	. .	{Electrical filters; Controlling thereof}
7/0161	. . .	{Bandpass filters (H03H 7/12 takes precedence)}
7/0169	. . . .	{Intermediate frequency filters}
7/0176	. . . . .	{witout magnetic core}
7/0184	. . . . .	{with ferromagnetic core}
2007/0192	. .	{Complex filters}
7/03	. .	comprising means for compensation of loss
7/06	. .	including resistors (H03H 7/075, H03H 7/09, H03H 7/12, H03H 7/13 take precedence)
7/065	. . .	Parallel T-filters
7/07	. . .	Bridged T-filters
7/075	. .	Ladder networks, e.g. electric wave filters
7/09	. .	Filters comprising mutual inductance
7/12	. .	Bandpass or bandstop filters with adjustable bandwidth and fixed centre frequency (H03H 7/09 takes precedence; automatic control of bandwidth in amplifiers H03G 5/16)
7/13	. .	using electro-optic elements
7/17	. .	{Structural details of sub-circuits of frequency selective networks}
7/1708	. . .	{Comprising bridging elements, i.e. elements in a series path without own reference to ground and spanning branching nodes of another series path (H03H 7/07 takes precedence)}
7/1716	. . .	{Comprising foot-point elements}
7/1725	. . . .	{Element to ground being common to different shunt paths, i.e. Y-structure}
7/1733	. . . .	{Element between different shunt or branch paths (H03H 7/425 takes precedence)}
7/1741	. . .	{Comprising typical LC combinations, irrespective of presence and location of additional resistors (when resistors are present, also classify in H03H 7/06 - H03H 7/07)}
7/175	. . . .	{Series LC in series path (H03H 7/1783 takes precedence)}
7/1758	. . . .	{Series LC in shunt or branch path (H03H 7/1791 takes precedence)}
7/1766	. . . .	{Parallel LC in series path (H03H 7/1783 takes precedence)}
7/1775	. . . .	{Parallel LC in shunt or branch path (H03H 7/1791 takes precedence)}
7/1783	. . . .	{Combined LC in series path}
7/1791	. . . .	{Combined LC in shunt or branch path}
7/18	.	Networks for phase shifting
7/185	. .	{comprising distributed impedance elements together with lumped impedance elements}

7/19 . . Two-port phase shifters providing a predetermined phase shift, e.g. "all-pass" filters
7/20 . . Two-port phase shifters providing an adjustable phase shift
7/21 . . providing two or more phase shifted output signals, e.g. n-phase output
7/24 . Frequency- independent attenuators
7/25 . . comprising an element controlled by an electric or magnetic variable (H03H 7/27 takes precedence)
7/251 . . . {the element being a thermistor}
7/253 . . . {the element being a diode}
7/255 . . . . {the element being a PIN diode}
7/256 . . . . {the element being a VARACTOR diode}
7/258 . . . {using a galvano-magnetic device}
7/27 . . comprising a photo-electric element
7/30 . Time-delay networks {(analogue shift registers G11C 27/04)}
7/32 . . with lumped inductance and capacitance
7/325 . . . {Adjustable networks}
7/34 . . with lumped and distributed reactance
7/345 . . . {Adjustable networks}
7/38 . Impedance-matching networks
7/383 . . {comprising distributed impedance elements together with lumped impedance elements}
2007/386 . . {Multiple band impedance matching}
7/40 . . Automatic matching of load impedance to source impedance
7/42 . Networks for transforming balanced signals into unbalanced signals and vice versa, e.g. baluns
7/422 . . {comprising distributed impedance elements together with lumped impedance elements}
7/425 . . {Balance-balance networks}
7/427 . . . {Common-mode filters (H02J 3/01 and H02M 1/126 takes precedence)}
7/46 . Networks for connecting several sources or loads, working on different frequencies or frequency bands, to a common load or source (for use in multiplex transmission systems H04J 1/00)
7/461 . . {particularly adapted for use in common antenna systems}
7/463 . . {Duplexers}
7/465 . . . {having variable circuit topology, e.g. including switches}
7/466 . . {particularly adapted as input circuit for receivers}
7/468 . . {particularly adapted as coupling circuit between transmitters and antennas}
7/48 . Networks for connecting several sources or loads, working on the same frequency or frequency band, to a common load or source (phase shifters providing two or more output signals H03H 7/21)
7/482 . . {particularly adapted for use in common antenna systems}
7/485 . . {particularly adapted as input circuit for receivers}
7/487 . . {particularly adapted as coupling circuit between transmitters and antennas}
7/52 . One-way transmission networks, i.e. unilines
7/54 . Modifications of networks to reduce influence of variations of temperature

9/00 Networks comprising electromechanical or electro-acoustic devices; Electromechanical resonators (making single crystals C30B; selection of materials thereof H01L; electromechanical transducers H04R; piezoelectric, electrostrictive or magnetostrictive devices per se H10N 30/00)
9/0004 . {Impedance-matching networks (H03H 9/145 takes precedence)}
9/0009 . . {using surface acoustic wave devices}
9/0014 . . {using bulk acoustic wave devices}
2009/0019 . {Surface acoustic wave multichip}
9/0023 . {Balance-unbalance or balance-balance networks}
9/0028 . . {using surface acoustic wave devices}
9/0033 . . . {having one acoustic track only}
9/0038 . . . . {the balanced terminals being on the same side of the track}
9/0042 . . . . {the balanced terminals being on opposite sides of the track}
9/0047 . . . {having two acoustic tracks (H03H 9/008, H03H 9/0085 take precedence)}
9/0052 . . . . {being electrically cascaded}
9/0057 . . . . . {the balanced terminals being on the same side of the tracks}
9/0061 . . . . . {the balanced terminals being on opposite sides of the tracks}
9/0066 . . . . {being electrically parallel}
9/0071 . . . . . {the balanced terminals being on the same side of the tracks}
9/0076 . . . . . {the balanced terminals being on opposite sides of the tracks}
9/008 . . . {having three acoustic tracks (H03H 9/0085 takes precedence)}
9/0085 . . . {having four acoustic tracks}
9/009 . . . . {Lattice filters}
9/0095 . . {using bulk acoustic wave devices}
9/02 . Details
9/02007 . . {of bulk acoustic wave devices}
9/02015 . . . {Characteristics of piezoelectric layers, e.g. cutting angles}
9/02023 . . . . {consisting of quartz}
9/02031 . . . . {consisting of ceramic}
9/02039 . . . . {consisting of a material from the crystal group 32, e.g. langasite, langatate, langanite}
9/02047 . . . {Treatment of substrates}
9/02055 . . . . {of the surface including the back surface}
9/02062 . . . {Details relating to the vibration mode}
9/0207 . . . . {the vibration mode being harmonic}
9/02078 . . . . {the vibration mode being overmoded}
9/02086 . . . {Means for compensation or elimination of undesirable effects}
9/02094 . . . . {of adherence}
9/02102 . . . . {of temperature influence (cutting angles H03H 9/02015)}
9/0211 . . . . {of reflections}
9/02118 . . . . {of lateral leakage between adjacent resonators}
9/02125 . . . . {of parasitic elements}
9/02133 . . . . {of stress}
9/02141 . . . . {of electric discharge due to pyroelectricity}
9/02149 . . . . {of ageing changes of characteristics, e.g. electro-acousto-migration}

9/02157 . . . {Dimensional parameters, e.g. ratio between two dimension parameters, length, width or thickness}
2009/02165 . . {Tuning}
2009/02173 . . . {of film bulk acoustic resonators [FBAR]}
2009/02181 . . . . {by application of heat from a heat source}
2009/02188 . . . . {Electrically tuning}
2009/02196 . . . . . {operating on the FBAR element, e.g. by direct application of a tuning DC voltage}
2009/02204 . . . . . {operating on an additional circuit element, e.g. applying a tuning DC voltage to a passive circuit element connected to the resonator}
2009/02212 . . . . {Magnetically tuning}
9/0222 . . {of interface-acoustic, boundary, pseudo-acoustic or Stonely wave devices}
9/02228 . . {Guided bulk acoustic wave devices or Lamb wave devices having interdigital transducers situated in parallel planes on either side of a piezoelectric layer}
9/02236 . . {of surface skimming bulk wave devices}
9/02244 . . {of microelectro-mechanical resonators}
2009/02251 . . . {Design}
9/02259 . . . {Driving or detection means}
2009/02267 . . . . {having dimensions of atomic scale, e.g. involving electron transfer across vibration gap}
9/02275 . . . . {Comb electrodes}
2009/02283 . . . {Vibrating means}
2009/02291 . . . . {Beams}
2009/02299 . . . . . {Comb-like, i.e. the beam comprising a plurality of fingers or protrusions along its length}
2009/02307 . . . . . {Dog-bone-like structure, i.e. the elongated part of the "bone" is doubly clamped}
2009/02314 . . . . . {forming part of a transistor structure}
2009/02322 . . . . . {Material}
2009/0233 . . . . {comprising perforations}
9/02338 . . . {Suspension means}
2009/02346 . . . . {Anchors for ring resonators}
2009/02354 . . . . . {applied along the periphery, e.g. at nodal points of the ring}
9/02362 . . . . {Folded-flexure}
2009/0237 . . . . . {applied at the center}
9/02377 . . . . . {Symmetric folded-flexure}
2009/02385 . . . . {Anchors for square resonators, i.e. resonators comprising a square vibrating membrane}
9/02393 . . . {Post-fabrication trimming of parameters, e.g. resonance frequency, Q factor}
9/02401 . . . . {by annealing}
9/02409 . . . . {by application of a DC-bias voltage (H03H 9/02417 takes precedence)}
9/02417 . . . . {involving adjustment of the transducing gap}
9/02425 . . . . . {by electrostatically pulling the beam}
9/02433 . . . {Means for compensation or elimination of undesired effects}
2009/0244 . . . . {Anchor loss}
9/02448 . . . . {of temperature influence}
2009/02456 . . . . {Parasitic elements or effects, e.g. parasitic capacitive coupling between input and output}
2009/02464 . . . . {Pull-in}
2009/02472 . . . . {Stiction}
2009/0248 . . . . {Strain}
2009/02488 . . . {Vibration modes}
2009/02496 . . . . {Horizontal, i.e. parallel to the substrate plane}
2009/02503 . . . . . {Breath-like, e.g. Lam? mode, wine-glass mode}
2009/02511 . . . . {Vertical, i.e. perpendicular to the substrate plane}
2009/02519 . . . . {Torsional}
2009/02527 . . . . {Combined}
9/02535 . . {of surface acoustic wave devices}
9/02543 . . . {Characteristics of substrate, e.g. cutting angles}
9/02551 . . . . {of quartz substrates}
9/02559 . . . . {of lithium niobate or lithium-tantalate substrates}
9/02566 . . . . {of semiconductor substrates}
9/02574 . . . . {of combined substrates, multilayered substrates, piezoelectrical layers on not-piezoelectrical substrate}
9/02582 . . . . {of diamond substrates}
9/0259 . . . . {of langasite substrates}
9/02598 . . . . {of langatate substrates}
9/02606 . . . . {of langanite substrates}
9/02614 . . . {Treatment of substrates, e.g. curved, spherical, cylindrical substrates ensuring closed round-about circuits for the acoustical waves}
9/02622 . . . . {of the surface, including back surface}
9/02629 . . . . {of the edges}
9/02637 . . . {Details concerning reflective or coupling arrays}
9/02645 . . . . {Waffle-iron or dot arrays}
9/02653 . . . . {Grooves or arrays buried in the substrate}
9/02661 . . . . . {being located inside the interdigital transducers}
9/02669 . . . . {Edge reflection structures, i.e. resonating structures without metallic reflectors, e.g. Bleustein-Gulyaev-Shimizu [BGS], shear horizontal [SH], shear transverse [ST], Love waves devices}
9/02677 . . . . . {having specially shaped edges, e.g. stepped, U-shaped edges}
9/02685 . . . . {Grating lines having particular arrangements}
9/02692 . . . . . {Arched grating lines}
9/027 . . . . . . {U-shaped grating lines}
9/02708 . . . . . {Shifted grating lines}
9/02716 . . . . . {Tilted, fan shaped or slanted grating lines}
9/02724 . . . . . {Comb like grating lines}
9/02732 . . . . . . {Bilateral comb like grating lines}
9/0274 . . . . . {Intra-transducers grating lines}
9/02748 . . . . . . {Dog-legged reflectors}
9/02755 . . . . . . {Meandering floating or grounded grating lines}
9/02763 . . . . . {Left and right side electrically coupled reflectors}
9/02771 . . . . . {Reflector banks}

9/02779 . . . . {Continuous surface reflective arrays}
9/02787 . . . . . {having wave guide like arrangements}
9/02795 . . . . {Multi-strip couplers as track changers}
9/02803 . . . . {Weighted reflective structures}
9/02811 . . . . . {Chirped reflective or coupling arrays}
9/02818 . . . {Means for compensation or elimination of undesirable effects}
9/02826 . . . . {of adherence}
9/02834 . . . . {of temperature influence (cut angles H03H 9/02543)}
9/02842 . . . . {of reflections (H03H 9/6406 takes precedence)}
9/0285 . . . . . {of triple transit echo}
9/02858 . . . . {of wave front distortion}
9/02866 . . . . {of bulk wave excitation and reflections}
9/02874 . . . . {of direct coupling between input and output transducers}
9/02881 . . . . {of diffraction of wave beam}
9/02889 . . . . {of influence of mass loading}
9/02897 . . . . {of strain or mechanical damage, e.g. strain due to bending influence}
9/02905 . . . . {Measures for separating propagation paths on substrate}
9/02913 . . . . {Measures for shielding against electromagnetic fields (shielding of electrical components in general H05K 9/00)}
9/02921 . . . . {Measures for preventing electric discharge due to pyroelectricity}
9/02929 . . . . {of ageing changes of characteristics, e.g. electro-acousto-migration}
9/02937 . . . . {of chemical damage, e.g. corrosion}
9/02944 . . . . {of ohmic loss}
9/02952 . . . . {of parasitic capacitance}
9/0296 . . . {Surface acoustic wave [SAW] devices having both acoustic and non-acoustic properties}
9/02968 . . . . {with optical devices (mounting in enclosures H03H 9/12)}
9/02976 . . . . {with semiconductor devices}
9/02984 . . . {Protection measures against damaging}
9/02992 . . . {Details of bus bars, contact pads or other electrical connections for finger electrodes}
9/05 . . Holders; Supports
9/0504 . . . {for bulk acoustic wave devices}
9/0509 . . . . {consisting of adhesive elements}
9/0514 . . . . {consisting of mounting pads or bumps}
9/0519 . . . . . {for cantilever (H03H 9/1021 takes precedence)}
9/0523 . . . . . {for flip-chip mounting}
9/0528 . . . . {consisting of clips}
9/0533 . . . . {consisting of wire}
9/0538 . . . {Constructional combinations of supports or holders with electromechanical or other electronic elements}
9/0542 . . . . {consisting of a lateral arrangement (H03H 9/0566 takes precedence)}
9/0547 . . . . {consisting of a vertical arrangement (H03H 9/0566 takes precedence)}
9/0552 . . . . . {the device and the other elements being mounted on opposite sides of a common substrate}
9/0557 . . . . . {the other elements being buried in the substrate}
9/0561 . . . . . {consisting of a multilayered structure}
9/0566 . . . . {for duplexers}
9/0571 . . . . . {including bulk acoustic wave [BAW] devices}
9/0576 . . . . . {including surface acoustic wave [SAW] devices}
9/058 . . . {for surface acoustic wave devices}
9/0585 . . . . {consisting of an adhesive layer}
9/059 . . . . {consisting of mounting pads or bumps}
9/0595 . . . {the holder support and resonator being formed in one body}
9/08 . . . Holders with means for regulating temperature
9/09 . . . Elastic or damping supports
9/10 . . . Mounting in enclosures {(constructional combinations of enclosure with electromechanical and other electronic elements H03H 9/0538)}
9/1007 . . . . {for bulk acoustic wave [BAW] devices}
9/1014 . . . . . {the enclosure being defined by a frame built on a substrate and a cap, the frame having no mechanical contact with the BAW device}
9/1021 . . . . . . {the BAW device being of the cantilever type}
9/1028 . . . . . . {the BAW device being held between spring terminals}
9/1035 . . . . . {the enclosure being defined by two sealing substrates sandwiching the piezoelectric layer of the BAW device}
9/1042 . . . . . {the enclosure being defined by a housing formed by a cavity in a resin}
9/105 . . . . . {the enclosure being defined by a cover cap mounted on an element forming part of the BAW device}
9/1057 . . . . {for microelectro-mechanical devices}
9/1064 . . . . {for surface acoustic wave [SAW] devices}
9/1071 . . . . . {the enclosure being defined by a frame built on a substrate and a cap, the frame having no mechanical contact with the SAW device}
9/1078 . . . . . {the enclosure being defined by a foil covering the non-active sides of the SAW device}
9/1085 . . . . . {the enclosure being defined by a non-uniform sealing mass covering the non-active sides of the BAW device}
9/1092 . . . . . {the enclosure being defined by a cover cap mounted on an element forming part of the surface acoustic wave [SAW] device on the side of the IDT's}
9/12 . . . . for networks with interaction of optical and acoustic waves
9/125 . . Driving means, e.g. electrodes, coils
9/13 . . . for networks consisting of piezoelectric or electrostrictive materials (H03H 9/145 takes precedence)
9/131 . . . . {consisting of a multilayered structure}
9/132 . . . . {characterized by a particular shape}
9/133 . . . . {for electromechanical delay lines or filters}
9/135 . . . for networks consisting of magnetostrictive materials (H03H 9/145 takes precedence)
9/145 . . . for networks using surface acoustic waves
9/14502 . . . . {Surface acoustic wave [SAW] transducers for a particular purpose}
9/14505 . . . . . {Unidirectional SAW transducers}

9/14508 . . . . . {Polyphase SAW transducers}
9/14511 . . . . . {SAW transducers for non-piezoelectric substrates}
9/14514 . . . . . {Broad band transducers}
9/14517 . . . . {Means for weighting}
9/1452 . . . . . {by finger overlap length, apodisation}
9/14523 . . . . . {Capacitive tap weighted transducers}
9/14526 . . . . . {Finger withdrawal}
9/14529 . . . . . {Distributed tap}
9/14532 . . . . . . {Series weighting; Transverse weighting}
9/14535 . . . . . . {Position weighting}
9/14538 . . . . {Formation}
9/14541 . . . . . {Multilayer finger or busbar electrode}
9/14544 . . . . {Transducers of particular shape or position (weighting H03H 9/14517)}
9/14547 . . . . . {Fan shaped; Tilted; Shifted; Slanted; Tapered; Arched; Stepped finger transducers}
9/1455 . . . . . {constituted of N parallel or series transducers}
9/14552 . . . . . {comprising split fingers}
9/14555 . . . . . {Chirped transducers (H03H 9/6406 takes precedence)}
9/14558 . . . . . {Slanted, tapered or fan shaped transducers (H03H 9/14561, H03H 9/14564 take precedence)}
9/14561 . . . . . {Arched, curved or ring shaped transducers}
9/14564 . . . . . {Shifted fingers transducers}
9/14567 . . . . . . {Stepped-fan shaped transducers}
9/1457 . . . . . {Transducers having different finger widths}
9/14573 . . . . . {Arrow type transducers}
9/14576 . . . . . {Transducers whereby only the last fingers have different characteristics with respect to the other fingers, e.g. different shape, thickness or material, split finger}
9/14579 . . . . . . {the last fingers having a different shape}
9/14582 . . . . . . {the last fingers having a different pitch}
9/14585 . . . . . . {the last fingers being split}
9/14588 . . . . . {Horizontally-split transducers}
9/14591 . . . . . {Vertically-split transducers}
9/14594 . . . . . {Plan-rotated or plan-tilted transducers}
9/14597 . . . . {Matching SAW transducers to external electrical circuits}
9/15 . Constructional features of resonators consisting of piezoelectric or electrostrictive material (H03H 9/25 takes precedence)
2009/155 . . {using MEMS techniques}
9/17 . . having a single resonator (crystal tuning forks H03H 9/21)
9/171 . . . {implemented with thin-film techniques, i.e. of the film bulk acoustic resonator [FBAR] type}
9/172 . . . . {Means for mounting on a substrate, i.e. means constituting the material interface confining the waves to a volume}
9/173 . . . . . {Air-gaps}
9/174 . . . . . {Membranes}
9/175 . . . . . {Acoustic mirrors}
9/176 . . . {consisting of ceramic material (H03H 9/177, H03H 9/178 take precedence)}
9/177 . . . {of the energy-trap type}
9/178 . . . {of a laminated structure of multiple piezoelectric layers with inner electrodes}
9/19 . . . consisting of quartz
9/205 . . having multiple resonators (crystal tuning forks H03H 9/21)
9/21 . . Crystal tuning forks
9/215 . . . consisting of quartz
9/22 . Constructional features of resonators consisting of magnetostrictive material
9/24 . Constructional features of resonators of material which is not piezoelectric, electrostrictive, or magnetostrictive
9/2405 . . {of microelectro-mechanical resonators}
2009/241 . . . {Bulk-mode MEMS resonators}
2009/2415 . . . . {with concave shape [CBAR]}
2009/2421 . . . . {with I shape [IBAR]}
9/2426 . . . {in combination with other electronic elements}
9/2431 . . . {Ring resonators}
9/2436 . . . {Disk resonators}
2009/2442 . . . {Square resonators}
9/2447 . . . {Beam resonators (H03H 9/2468 takes precedence)}
9/2452 . . . . {Free-free beam resonators}
9/2457 . . . . {Clamped-free beam resonators}
9/2463 . . . . {Clamped-clamped beam resonators}
9/2468 . . . {Tuning fork resonators}
9/2473 . . . . {Double-Ended Tuning Fork [DETF] resonators}
9/2478 . . . . {Single-Ended Tuning Fork resonators}
9/2484 . . . . . {with two fork tines, e.g. Y-beam cantilever}
9/2489 . . . . . {with more than two fork tines}
9/2494 . . . . {H-shaped, i.e. two tuning forks with common base}
9/25 . Constructional features of resonators using surface acoustic waves {(devices for manipulating acoustic surface waves in general G10K 11/36)}
9/30 . Time-delay networks
9/36 . . with non-adjustable delay time (H03H 9/40, H03H 9/42 take precedence)
9/38 . . with adjustable delay time (H03H 9/40, H03H 9/42 take precedence)
9/40 . . Frequency dependent delay lines, e.g. dispersive delay lines (H03H 9/42 takes precedence)
9/42 . . using surface acoustic waves {(devices for manipulating acoustic surface waves in general G10K 11/36)}
9/423 . . . {with adjustable delay time}
9/426 . . . {Magneto-elastic surface waves}
9/44 . . . Frequency dependent delay lines, e.g. dispersive delay lines
9/46 . Filters (multiple-port electromechanical filters H03H 9/70)
9/462 . . {Microelectro-mechanical filters}
9/465 . . . {in combination with other electronic elements}
9/467 . . . {Post-fabrication trimming of parameters, e.g. center frequency}
9/48 . . Coupling means therefor

9/485 . . . {for microelectro-mechanical filters}
9/50 . . . Mechanical coupling means
9/505 . . . . {for microelectro-mechanical filters}
9/52 . . . Electric coupling means
9/525 . . . . {for microelectro-mechanical filters}
9/54 . . comprising resonators of piezoelectric or electrostrictive material (H03H 9/64 takes precedence)
9/542 . . . {including passive elements (H03H 9/545 takes precedence)}
9/545 . . . {including active elements}
9/547 . . . {Notch filters, e.g. notch BAW or thin film resonator filters}
9/56 . . . Monolithic crystal filters
9/562 . . . . {comprising a ceramic piezoelectric layer}
9/564 . . . . {implemented with thin-film techniques}
9/566 . . . . {Electric coupling means therefor (H03H 9/0095 takes precedence)}
9/568 . . . . . {consisting of a ladder configuration}
9/58 . . . Multiple crystal filters
9/581 . . . . {comprising ceramic piezoelectric layers}
9/582 . . . . {implemented with thin-film techniques}
9/583 . . . . . {comprising a plurality of piezoelectric layers acoustically coupled}
9/584 . . . . . . {Coupled Resonator Filters [CFR]}
9/585 . . . . . . {Stacked Crystal Filters [SCF]}
9/586 . . . . . {Means for mounting to a substrate, i.e. means constituting the material interface confining the waves to a volume}
9/587 . . . . . . {Air-gaps}
9/588 . . . . . . {Membranes}
9/589 . . . . . . {Acoustic mirrors}
9/60 . . . . Electric coupling means therefor {(H03H 9/0095 takes precedence)}
9/605 . . . . . {consisting of a ladder configuration}
9/62 . . comprising resonators of magnetostrictive material (H03H 9/64 takes precedence)
9/64 . . using surface acoustic waves
9/6403 . . . {Programmable filters}
9/6406 . . . {Filters characterised by a particular frequency characteristic}
9/6409 . . . . {SAW notch filters}
9/6413 . . . . {SAW comb filters}
9/6416 . . . . {SAW matched filters, e.g. surface acoustic wave compressors, chirped or coded surface acoustic wave filters}
9/642 . . . . . {SAW transducers details for remote interrogation systems, e.g. surface acoustic wave transducers details for ID-tags (remote interrogation systems per se G06K 7/10009, G01S 13/74)}
9/6423 . . . {Means for obtaining a particular transfer characteristic}
9/6426 . . . . {Combinations of the characteristics of different transducers}
9/643 . . . . {the transfer characteristic being determined by reflective or coupling array characteristics}
9/6433 . . . . {Coupled resonator filters}
9/6436 . . . . . {having one acoustic track only}
9/644 . . . . . {having two acoustic tracks}
9/6443 . . . . . . {being acoustically coupled}
9/6446 . . . . {by floating multistrip couplers (H03H 9/645, H03H 9/6453 take precedence)}
9/645 . . . . {by grating reflectors overlapping both tracks}
9/6453 . . . . {by at least an interdigital transducer overlapping both tracks}
9/6456 . . . . . . {being electrically coupled}
9/6459 . . . . {via one connecting electrode}
9/6463 . . . . {the tracks being electrically cascaded}
9/6466 . . . . {each track containing more than two transducers}
9/6469 . . . . {via two connecting electrodes}
9/6473 . . . . {the electrodes being electrically interconnected}
9/6476 . . . . {the tracks being electrically parallel}
9/6479 . . . . . {Capacitively coupled SAW resonator filters}
9/6483 . . . . . {Ladder SAW filters}
9/6486 . . . . . {having crossing or intersecting acoustic tracks, e.g. intersection in a perpendicular or diagonal orientation}
9/6489 . . . {Compensation of undesirable effects}
9/6493 . . . . {Side lobe suppression}
9/6496 . . . . {Reducing ripple in transfer characteristic}
9/66 . Phase shifters
9/68 . . using surface acoustic waves
9/70 . Multiple-port networks for connecting several sources or loads, working on different frequencies or frequency bands, to a common load or source
9/703 . . {Networks using bulk acoustic wave devices}
9/706 . . . {Duplexers}
9/72 . . Networks using surface acoustic waves
9/725 . . . {Duplexers}
9/74 . Multiple-port networks for connecting several sources or loads, working on the same frequency or frequency band, to a common load or source (networks for phase shifting H03H 9/66)
9/76 . . Networks using surface acoustic waves

11/00 Networks using active elements
11/02 . Multiple-port networks
11/025 . . {using current conveyors}
11/04 . . Frequency selective two-port networks
11/0405 . . . {Non-linear filters}
2011/0411 . . . . {Rank order or median filters}
11/0416 . . . {using positive impedance converters (H03H 11/08 takes precedence)}
11/0422 . . . {using transconductance amplifiers, e.g. gmC filters}
11/0427 . . . . {Filters using a single transconductance amplifier; Filters derived from a single transconductor filter, e.g. by element substitution, cascading, parallel connection (H03H 11/0433 - H03H 11/0472 take precedence)}
11/0433 . . . . {Two integrator loop filters (H03H 11/0455 takes precedence)}
11/0438 . . . . . {Tow-Thomas biquad}
11/0444 . . . . {Simulation of ladder networks}
11/045 . . . . . {Leapfrog structures}
11/0455 . . . . {Multiple integrator loop feedback filters}

11/0461 . . . . {Current mode filters}
11/0466 . . . . {Filters combining transconductance amplifiers with other active elements, e.g. operational amplifiers, transistors, voltage conveyors}
11/0472 . . . . {Current or voltage controlled filters}
2011/0477 . . . {using current feedback operational amplifiers}
2011/0483 . . . {using operational transresistance amplifiers [OTRA]}
2011/0488 . . . {Notch or bandstop filters}
2011/0494 . . . {Complex filters}
11/06 . . . comprising means for compensation of loss
11/08 . . . using gyrators
11/10 . . . using negative impedance converters (H03H 11/08 takes precedence)
11/11 . . . {using current conveyors}
11/12 . . . using amplifiers with feedback ({H03H 11/0422} , H03H 11/08, H03H 11/10 take precedence)
11/1204 . . . . {Distributed RC filters}
11/1208 . . . . {comprising an electromechanical resonator}
11/1213 . . . . {using transistor amplifiers (H03H 11/1204 takes precedence; parallel-T filters H03H 11/1295)}
11/1217 . . . . {using a plurality of operational amplifiers (H03H 11/1204 takes precedence; parallel-T filters H03H 11/1295)}
11/1221 . . . . . {Theory; Synthesis (H03H 11/1226 - H03H 11/1252 take precedence)}
11/1226 . . . . . {Filters using operational amplifier poles}
11/123 . . . . . {Modifications to reduce sensitivity}
11/1234 . . . . . {Modifications to reduce detrimental influences of amplifier imperfections, e.g. limited gain-bandwith product, limited input impedance}
11/1239 . . . . . {Modifications to reduce influence of variations of temperature}
11/1243 . . . . . {Simulation of ladder networks}
11/1247 . . . . . . {Leapfrog structures}
11/1252 . . . . . {Two integrator-loop-filters}
11/1256 . . . . . . {Tow-Thomas biquad}
11/126 . . . . {using a single operational amplifier (H03H 11/1204 takes precedence; parallel-T filters H03H 11/1295)}
11/1265 . . . . . {Synthesis (H03H 11/1269 - H03H 11/1282 take precedence)}
11/1269 . . . . . {Filters using the operational amplifier pole}
11/1273 . . . . . {Modifications to reduce sensitivity}
11/1278 . . . . . {Modifications to reduce detrimental influences of amplifier imperfections, e.g. limited gain-bandwith product, limited input impedance}
11/1282 . . . . . {Modifications to reduce influence of variations of temperature}
11/1286 . . . . . {Sallen-Key biquad}
11/1291 . . . . {Current or voltage controlled filters}
11/1295 . . . . {Parallel-T filters}
11/14 . . . using electro-optic devices
11/16 . . Networks for phase shifting
11/18 . . . Two-port phase shifters providing a predetermined phase shift, e.g. "all-pass" filters
11/20 . . . Two-port phase shifters providing an adjustable phase shift
11/22 . . . providing two or more phase shifted output signals, e.g. n-phase output
11/24 . . Frequency-independent attenuators
11/245 . . . {using field-effect transistor}
11/26 . . Time-delay networks (analogue shift registers G11C 27/04)
11/265 . . . {with adjustable delay}
11/28 . . Impedance matching networks
11/30 . . . Automatic matching of source impedance to load impedance
11/32 . . Networks for transforming balanced signals into unbalanced signals and vice versa, e.g. baluns
11/34 . . Networks for connecting several sources or loads working on different frequencies or frequency bands, to a common load or source (for use in multiplex transmission systems H04J 1/00)
11/342 . . . {particularly adapted for use in common antenna systems}
11/344 . . . {Duplexers}
11/346 . . . {particularly adapted as input circuit for receivers}
11/348 . . . {particularly adapted as coupling circuit between transmitters and antenna}
11/36 . . Networks for connecting several sources or loads, working on the same frequency band, to a common load or source (phase shifters providing two or more output signals H03H 11/22)
11/362 . . . {particularly adapted for use in common antenna systems}
11/365 . . . {particularly adapted as input circuit for receivers}
11/367 . . . {particularly adapted as coupling circuit between transmitters and antenna}
11/38 . . One-way transmission networks, i.e. unilines
11/40 . . Impedance converters
11/405 . . . {Positive impedance converters (H03H 11/42 takes precedence; used in frequency selective networks H03H 11/0416)}
11/42 . . . Gyrators (used in frequency selective networks H03H 11/08)
11/44 . . . Negative impedance converters (H03H 11/42 takes precedence; used in frequency selective networks H03H 11/10)
11/46 . One-port networks
11/48 . . simulating reactances
11/481 . . . {Simulating capacitances}
11/483 . . . {Simulating capacitance multipliers}
11/485 . . . {Simulating inductances using operational amplifiers}
11/486 . . . {Simulating inductances using transconductance amplifiers}
11/488 . . . {Simulating inductances using current conveyors}
11/50 . . . using gyrators
11/52 . . simulating negative resistances
11/525 . . . {Simulating frequency dependent negative resistance [FDNR]}
11/53 . . {simulating resistances; simulating resistance multipliers}
11/54 . Modifications of networks to reduce influence of variations of temperature

15/00 **Transversal filters** (electromechanical filters H03H 9/46, H03H 9/70)
2015/002 . {Computation saving measures}
2015/005 . {comprising capacitors implemented with MEMS technology}
2015/007 . {Programmable filters}
15/02 . using analogue shift registers
15/023 . . {with parallel-input configuration}
2015/026 . {Matched filters in charge domain}

17/00 **Networks using digital techniques**
17/0009 . {Time-delay networks}
17/0018 . . {Realizing a fractional delay}
17/0027 . . . {by means of a non-recursive filter}
17/0036 . . . {by means of a recursive filter}
17/0045 . {Impedance matching networks}
17/0054 . {Attenuators}
17/0063 . {R, L, C, simulating networks}
2017/0072 . {Theoretical filter design}
2017/0081 . . {of FIR filters}
2017/009 . . {of IIR filters}
17/02 . Frequency selective networks {(digital computers for complex mathematical operations G06F 17/10)}
17/0201 . . {Wave digital filters}
17/0202 . . {Two or more dimensional filters; Filters for complex signals (multidimensional convolutions G06F 17/153)}
2017/0204 . . . {Comb filters}
2017/0205 . . . {Kalman filters}
2017/0207 . . . {Median filters}
2017/0208 . . . {using neural networks}
2017/021 . . . {Wave digital filters}
17/0211 . . {using specific transformation algorithms, e.g. WALSH functions, Fermat transforms, Mersenne transforms, polynomial transforms, Hilbert transforms (correlation computation G06F 17/156)}
17/0213 . . . {Frequency domain filters using Fourier transforms}
2017/0214 . . . . {with input-sampling frequency and output-delivery frequency which differ, e.g. interpolation, extrapolation; anti-aliasing}
17/0216 . . . {Quefrency domain filters}
17/0217 . . . {Number theoretic transforms}
17/0219 . . {Compensation of undesirable effects, e.g. quantisation noise, overflow (stability problems H03H 17/0461)}
2017/022 . . . {Rounding error}
2017/0222 . . . {Phase error}
17/0223 . . {Computation saving measures; Accelerating measures (computations per se G06F)}
17/0225 . . . {Measures concerning the multipliers}
17/0226 . . . . {comprising look-up tables}
17/0227 . . . {Measures concerning the coefficients}
17/0229 . . . . {reducing the number of taps}
17/023 . . . . {reducing the wordlength, the possible values of coefficients}
2017/0232 . . . . . {Canonical signed digit [CSD] or power of 2 coefficients}
17/0233 . . . {Measures concerning the signal representation}
17/0235 . . . . {reducing the wordlength of signals}
17/0236 . . . . {using codes}
17/0238 . . . {Measures concerning the arithmetic used (performing computations G06F 7/60)}
17/0239 . . . . {Signed digit arithmetic}
17/0241 . . . . {Distributed arithmetic}
17/0242 . . . . {Residue number arithmetic}
2017/0244 . . . {Measures to reduce settling time}
2017/0245 . . . {Measures to reduce power consumption (H03H 17/0223 takes precedence)}
2017/0247 . . . {Parallel structures using a slower clock}
17/0248 . . {Filters characterised by a particular frequency response or filtering method}
17/025 . . . {Notch filters}
17/0251 . . . {Comb filters}
17/0252 . . . {Elliptic filters}
17/0254 . . . {Matched filters}
17/0255 . . . {Filters based on statistics (adaptive filters H03H 21/0029)}
17/0257 . . . . {KALMAN filters}
17/0258 . . . . {ARMA filters}
17/026 . . . {Averaging filters}
17/0261 . . . {Non linear filters}
17/0263 . . . . {Rank order filters}
17/0264 . . . {Filter sets with mutual related characteristics}
17/0266 . . . . {Filter banks}
17/0267 . . . . . {comprising non-recursive filters}
17/0269 . . . . . {comprising recursive filters}
17/027 . . . . {Complementary filters; Phase complementary filters}
17/0272 . . . . {Quadrature mirror filters}
17/0273 . . . . {Polyphase filters}
17/0275 . . . . . {comprising non-recursive filters}
17/0276 . . . . . . {having two phases}
17/0277 . . . . . {comprising recursive filters}
17/0279 . . . . . . {having two phases}
17/028 . . . {Polynomial filters}
17/0282 . . . {Sinc or gaussian filters (H03H 17/0671 takes precedence)}
17/0283 . . {Filters characterised by the filter structure (H03H 17/0202, H03H 17/0219 - H03H 17/0248 take precedence)}
17/0285 . . . {Ladder or lattice filters}
17/0286 . . . {Combinations of filter structures}
17/0288 . . . . {Recursive, non-recursive, ladder, lattice structures}
17/0289 . . . . {Digital and active filter structures}
17/0291 . . . . {Digital and sampled data filters}
17/0292 . . . {Time multiplexed filters; Time sharing filters}
17/0294 . . {Variable filters; Programmable filters}
2017/0295 . . . {Changing between two filter characteristics}
2017/0297 . . . {Coefficients derived from input parameters}
2017/0298 . . {DSP implementation}
17/04 . . Recursive filters
17/0405 . . . {comprising a ROM addressed by the input and output data signals}
17/0411 . . . {using DELTA modulation}
17/0416 . . . {with input-sampling frequency and output-delivery frequency which differ, e.g. extrapolation; Anti-aliasing}
17/0422 . . . . {the input and output signals being derived from two separate clocks, i.e. asynchronous sample rate conversion}

17/0427 . . . . {characterized by the ratio between the input-sampling and output-delivery frequencies}
17/0433 . . . . . {the ratio being arbitrary or irrational}
17/0438 . . . . . {the ratio being integer}
17/0444 . . . . . . {where the output-delivery frequency is higher than the input sampling frequency, i.e. interpolation}
17/045 . . . . . . {where the output-delivery frequency is lower than the input sampling frequency, i.e. decimation}
17/0455 . . . . . {the ratio being rational}
17/0461 . . . {Quantisation; Rounding; Truncation; Overflow oscillations or limit cycles eliminating measures}
2017/0466 . . . . {Reduction of limit cycle oscillation}
2017/0472 . . . {based on allpass structures}
2017/0477 . . . {Direct form I}
2017/0483 . . . . {Transposed}
2017/0488 . . . {Direct form II}
2017/0494 . . . . {Transposed}
17/06 . . Non-recursive filters
17/0607 . . . {comprising a ROM addressed by the input data signals}
17/0614 . . . {using Delta-modulation}
17/0621 . . . {with input-sampling frequency and output-delivery frequency which differ, e.g. extrapolation; Anti-aliasing}
17/0628 . . . . {the input and output signals being derived from two separate clocks, i.e. asynchronous sample rate conversion}
17/0635 . . . . {characterized by the ratio between the input-sampling and output-delivery frequencies}
17/0642 . . . . . {the ratio being arbitrary or irrational}
17/065 . . . . . {the ratio being integer}
17/0657 . . . . . . {where the output-delivery frequency is higher than the input sampling frequency, i.e. interpolation}
17/0664 . . . . . . {where the output-delivery frequency is lower than the input sampling frequency, i.e. decimation}
17/0671 . . . . . {Cascaded integrator-comb [CIC] filters}
2017/0678 . . . . . . {with parallel structure, i.e. parallel CIC [PCIC]}
17/0685 . . . . . {the ratio being rational}
2017/0692 . . . {Transposed}
17/08 . Networks for phase shifting

19/00 Networks using time-varying elements, e.g. N-path filters
19/002 . {N-path filters}
19/004 . {Switched capacitor networks}
19/006 . . {simulating one-port networks}
19/008 . {with variable switch closing time}

21/00 Adaptive networks
21/0001 . {Analogue adaptive filters}
21/0003 . . {comprising CCD devices}
21/0005 . . {comprising SAW devices}
21/0007 . . {comprising switched capacitor [SC] devices}
2021/0009 . . {Details}
2021/001 . . . {Analog multipliers}
21/0012 . {Digital adaptive filters}
21/0014 . . {Lattice filters}
21/0016 . . {Non linear filters}
21/0018 . . {Matched filters}
21/002 . . {Filters with a particular frequency response (H03H 21/0014 - H03H 21/0018 take precedence)}
21/0021 . . . {Notch filters}
21/0023 . . . {Comb filters}
21/0025 . . {Particular filtering methods}
21/0027 . . . {filtering in the frequency domain}
21/0029 . . . {based on statistics}
21/003 . . . . {KALMAN filters}
21/0032 . . . . {ARMA filters}
2021/0034 . . . {Blind source separation}
2021/0036 . . . . {of convolutive mixtures}
2021/0038 . . . . {of instantaneous mixtures}
2021/004 . . . . {using state space representation}
2021/0041 . . . {Subband decomposition}
21/0043 . . {Adaptive algorithms}
2021/0045 . . . {Equation error}
2021/0047 . . . . {Combined output and equation error}
2021/0049 . . . {Recursive least squares algorithm}
2021/005 . . . . {with forgetting factor}
2021/0052 . . . . {combined with stochastic gradient algorithm}
2021/0054 . . . . . {Affine projection}
2021/0056 . . . {Non-recursive least squares algorithm [LMS]}
2021/0058 . . . . {Block LMS, i.e. in frequency domain}
2021/0059 . . . . {Delayed LMS}
2021/0061 . . . . {Normalized LMS [NLMS]}
2021/0063 . . . . . {Proportionate NLMS}
2021/0065 . . . . {Sign-sign LMS}
21/0067 . . {Means or methods for compensation of undesirable effects}
2021/0069 . . . {Finite wordlength}
2021/007 . . {Computation saving measures; Accelerating measures}
2021/0072 . . . {Measures relating to the coefficients}
2021/0074 . . . . {Reduction of the update frequency}
2021/0076 . . . {Measures relating to the convergence time (H03H 2021/0072 takes precedence)}
2021/0078 . . . . {varying the step size}
2021/0079 . . . {using look-up tables}
2021/0081 . . {Details}
2021/0083 . . . {Shadow filter, i.e. one of two filters which are simultaneously adapted, wherein the results of adapting the shadow filter are used for adapting the other filter}
2021/0085 . . {Applications}
2021/0087 . . . {Prediction}
2021/0089 . . . {System identification, i.e. modeling}
2021/009 . . . . {with recursive filters}
2021/0092 . . . {Equalization, i.e. inverse modeling}
2021/0094 . . . {Interference Cancelling}
2021/0096 . . {with input-sampling frequency and output-delivery frequency which differ, e.g. extrapolation; anti-aliasing}
2021/0098 . {Adaptive filters comprising analog and digital structures}

2210/00 Indexing scheme relating to details of tunable filters
2210/01 . Tuned parameter of filter characteristics

2210/012	. . Centre frequency; Cut-off frequency
2210/015	. . Quality factor or bandwidth
2210/017	. . Amplitude, gain or attenuation
2210/02	. Variable filter component
2210/021	. . Amplifier, e.g. transconductance amplifier
2210/023	. . . Tuning of transconductance via tail current source
2210/025	. . Capacitor
2210/026	. . Inductor
2210/028	. . Resistor
2210/03	. Type of tuning
2210/033	. . Continuous
2210/036	. . Stepwise
2210/04	. Filter calibration method
2210/043	. . by measuring time constant
2210/046	. . Master -slave
2218/00	**Indexing scheme relating to details of digital filters**
2218/02	. Coefficients
2218/025	. . updated selectively, e.g. by, in the presence of noise, temporally cancelling the update and outputting a predetermined value
2218/04	. In-phase and quadrature [I/Q] signals
2218/06	. Multiple-input, multiple-output [MIMO]; Multiple-input, single-output [MISO]
2218/08	. Resource sharing
2218/085	. . Multipliers
2218/10	. Multiplier and or accumulator units
2218/12	. Signal conditioning
2218/14	. Non-uniform sampling
2220/00	**Indexing scheme relating to structures of digital filters**
2220/02	. Modular, e.g. cells connected in cascade
2220/04	. Pipelined
2220/06	. Systolic
2220/08	. Variable filter length
2222/00	**Indexing scheme relating to digital filtering methods**
2222/02	. using fuzzy logic
2222/04	. using neural networks
2222/06	. using wavelets
2240/00	**Indexing scheme relating to filter banks**
2250/00	**Indexing scheme relating to dual- or multi-band filters**
2260/00	**Theory relating to impedance networks**