



सीमाशुल्क अग्रिम विनिर्णय प्राधिकरण

Customs Authority for Advance Rulings

नवीन सीमाशुल्क भवन, बेलार्ड इस्टेट, मुंबई - ४००००१

New Custom House, Ballard Estate, Mumbai - 400 001

E-MAIL: cus-advrulings.mum@gov.in

F.No. CAAR/CUS/APPL/176/2025-O/o Commr-CAAR-Mumbai

दिनांक/Date: 04.02.2026

Ruling No. & date	CAAR/Mum/ARC/145/2025-26 dated 04.02.2026
Issued by	Shri Prabhat K. Rameshwaram, Customs Authority for Advance Rulings, Mumbai
Name and address of the applicant	Samsung India Electronics Private Limited No. 10, No. 49/50L, EA Chamber, Tower-2, Whites Road, Royapettah, Chennai, Tamil Nadu, 600014 {Email: k.suresh@samsung.com }
Concerned Commissionerate	The Pr. Commissioner of Customs, Customs Commissionerate – VII (Air Cargo), New Customs House, GST Road, Meenambakkam, Chennai- 600016 {Email: pcommr7acc-cusehn@gov.in}

ध्यान दीजिए/ N.B.:

1. सीमाशुल्क अधिनियम, 1962 की धारा 281 की उप-धारा (2) के तहत किए गए इस आदेश की एक प्रति संबंधित को निःशुल्क प्रदान की जाती है।

A copy of this order made under sub-section (2) of Section 28-I of the Customs Act, 1962 is granted to the concerned free of charge.

2. इस अग्रिम विनिर्णय आदेश के खिलाफ कोई भी अपील ऐसे निर्णय या आदेश के संचार की तारीख से 60 दिनों के भीतर संबंधित क्षेत्राधिकार के उच्च न्यायालय के समक्ष की जाएगी।

Any appeal against this Advance Ruling order shall lie before the **High Court of concerned jurisdiction**, within 60 days from the date of the communication of such ruling or order.

3. धारा 28-I के तहत प्राधिकरण द्वारा सुनाया गया अग्रिम विनिर्णय तीन साल तक या कानून या तथ्यों में बदलाव होने तक, जिसके आधार पर अग्रिम विनिर्णय सुनाया गया है, वैध रहेगा, जो भी पहले हो।

The advance ruling pronounced by the Authority under Section 28 - I shall remain valid for three years or till there is a change in law or facts on the basis of which the advance ruling has been pronounced, whichever is earlier.

4. जहां प्राधिकरण को पता चलता है कि आवेदक द्वारा अग्रिम विनिर्णय धोखाधड़ी या तथ्यों की गलत बयानी द्वारा प्राप्त किया गया था, उसे शुरू से ही अमान्य घोषित कर दिया जाएगा।

Where the Authority finds that the advance ruling was obtained by the applicant by fraud or misrepresentation of facts, the same shall be declared void *ab initio*.



अग्रिम विनिर्णय / Advance Ruling

Samsung India Electronics Private Limited (having IIC No. 0595032818) and hereinafter referred to as 'the applicant', in short) having registered address at No. 10, No. 49/50L, EA Chamber, Tower-2, Whites Road, Royapettah, Chennai, Tamil Nadu, 600014, filed application (CAAR-1) for advance ruling before the Customs Authority for Advance Rulings, Mumbai (CAAR in short). The said application was received in the secretariat of the CAAR, Mumbai on 01.10.2025 along with enclosures in terms of Section 28H (1) of the Customs Act, 1962 (hereinafter referred to as the 'Act' also). The applicant is seeking advance ruling on the classification for import of "Resonator - Ceramic" proposed to be imported by the Applicant under CTH 85416000 or as electrical machines having individual functions under CTH 8543 or as parts of domestic washing machine under CTH 845090 by application of Note 2(b) to Section XVI.

2. M/s Samsung India Electronics Private Limited (hereinafter referred to as "the Applicant"), is a Private Limited company engaged in the production and sale of finished products, including televisions, refrigerators, washers, air conditioners, smartphones, and components such as semiconductors and display panels. The applicant is proposing to import "Resonator - Ceramic" (hereinafter referred to as "the subject goods").

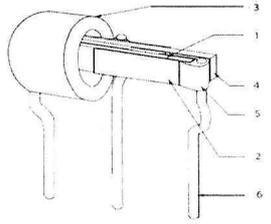
2.1 The applicant submitted that the subject good in question is an electronic component consisting of a piece of piezoelectric ceramic material. It is connected in an electronic circuit and functions as an oscillator, due to its inherent property of generating electronic signals which are resonant with mechanical vibrations experienced by it. It is made of a ceramic material Viz., PZT (Lead Zirconium Titanate), which exhibits piezoelectric properties. In other words, the ceramic material is a mounted piezo electric crystal.

2.2 The subject goods are essentially based on piezoelectric crystals and are used in the Power Assembly Board (PBA) of an appliance's electronic oscillator circuit. When connected in an electronic oscillator circuit, resonant mechanical vibrations in the subject goods generate an oscillating signal of a specific frequency. Thereby, the subject goods are used as the source of the clock signal for digital circuits such as microprocessors where the frequency accuracy is not critical.

2.3 The following table gives an overview of the subject goods in question:

Product Code	Product Description	Product Specification	Reference Image
--------------	---------------------	-----------------------	-----------------



CSTLS8M00G 53-A0	RESONATOR - CERAMIC	A piezoelectric device that is an electronic component connected in an electronic circuit and functions as an oscillator, due to its inherent property of generating electronic signals which are resonant with mechanical vibrations experienced by it.	
---------------------	------------------------	--	---

2.4. From the catalogue, it could be seen that the subject goods are used to generate a clock signal that repeatedly turns on and off at a specific frequency in order to provide a timing reference to another microcontroller on the washing machine's circuit board. Though termed as a resonator, being piezoelectric ceramic based, the subject goods convert electrical signals into a specific frequency. Given the nature, technical features and functional characteristics of the subject goods, the same are proposed to be imported and would be classifiable based on the Harmonized System Nomenclature under CTH 85416000.

3. **Applicant's interpretation of Laws/Facts:**

3.1 In the case of import by applicant, the entries which merit consideration primarily are tabulated hereunder:

Section	Chapter	HSN	Description
XVI	85- Electrical machinery and equipment and parts thereof; sound recorders and reproducers, television image and sound recorders and reproducers, and parts and accessories of such articles	8541	Semiconductor devices (for example, diodes, transistors, semiconductor-based transducers); photosensitive semiconductor, devices, including photovoltaic cells whether or not assembled in modules or made up into panels; light-emitting diodes (led), whether or not assembled with other light-emitting diodes (led); mounted piezo-electric crystals



XVI	85- Electrical machinery and equipment and parts thereof; sound recorders and reproducers, television image and sound recorders and reproducers, and parts and accessories of such articles	8543	Electrical machines and apparatus, having individual functions, not specified or included elsewhere in this Chapter.
XVI	85- Electrical machinery and equipment and parts thereof; sound recorders and reproducers, television image and sound recorders and reproducers, and parts and accessories of such articles	8548	Electrical parts of machinery or apparatus, not specified or included elsewhere in this Chapter.
XVI	Machinery and mechanical appliances; electrical equipment; parts thereof; sound recorders and reproducers, television image and sound recorders and reproducers, and parts and accessories of such articles	84509010	Parts of household type machines

3.2 The Applicant states that the subject good in question is essentially a PZT Ceramic crystal, which meets the definition of a mounted piezo electric crystal as described in the IISN Explanatory Notes under the heading 8541, with electric connections for transmitting the electrical signals that are classifiable under CTH 85416000.

3.3 The subject goods are essentially a mounted piezo electric crystal with electrical connections specifically covered under CTH 854160. The resonator can be used in any machine where the resonator function is required and therefore the subject goods is not an identifiable part of any machine. Further, in terms of GIR 1, when goods are specifically described in a heading the classification under that heading is legally correct.

3.4 Classification under CT 8543 or CTH 8548.

Classification under CTH 8543 could be justified only if the requirement of individual function can be satisfied. In this regard a reference to the IISN Explanatory Notes under CTH 8543 will be relevant:

“The electrical appliances and apparatus of this heading must have individual functions. The introductory provisions of Explanatory Note to heading 84.79 concerning machines and mechanical appliances having individual functions apply, mutatis mutandis, to the appliances and apparatus of this heading.”



The test for individual function as laid down in the HS ENs under CTH 8479, which is equally applicable to CTH 8543 is as shown below:

“This heading is restricted to machinery having individual functions, which:

(a) Is not excluded from this Chapter by the operation of any Section or Chapter Note; and

(b) Is not covered more specifically by a heading in any other Chapter of the Nomenclature; and

(c) Cannot be classified in any other particular heading of this Chapter since:

(i) No other heading covers it by reference to its method of functioning, description or type; and

(ii) No other heading covers it by reference to its use or to the industry in which it is employed; or

(iii) It could fall equally well into two or more other such headings (general purpose machines).”

As already submitted the subject goods are specifically covered under CTH 85416000 by application of GIR 1. Therefore, the subject goods do not satisfy the individual function test laid down in clauses (b) and (c) (i) of the individual function tests laid down under CTH 8479. Therefore, classification under CTH 8543 can be legally ruled out.

Further the heading 8548 is a residuary heading. As the subject goods in question could be classified under CTH 8541 as a mounted piezo electric crystal, we cannot resort to classification under CTH 8548.

3.5 Classification as parts of Washing machine

It has been stated that the subject goods in question are used in the PBA of a washing machine. Therefore, one possible alternative classification could be as parts of air-conditioner under CTH 845090 by applying Note 2(b) to Section XVI. As already seen the subject goods in question could be classified under CTH 8541 by application of Note 2 (a) to Section XVI. Therefore, classification under CTH 845090 can be ruled out.

Port of Import and reply from concerned jurisdictional Commissionerate

4. The applicant in their CAAR-1 indicated that they intend to import the subject goods i.e. ceramic resonator at the jurisdiction of Office of the Commissioner of Customs, ACC, Chennai. The application was forwarded to the Office of the Commissioner of Customs, ACC, Chennai for their comments vide letter dated 17.10.2025, 06.11.2025 and 27.11.2025.

4.1 Comments were received from the jurisdictional Commissionerate vide letter dated 02.01.2026 wherein it is submitted that classification of the product “Resonator-Ceramic.



Model CSTLS8M00G53-A0” has been examined with reference to its material composition, electrical characteristics, mechanical functionality, and intended use.

The item in question is the piezoelectric ceramic element constructed from Lead Zirconium Titanate (PZT), which is a recognised piezoelectric material. The presence of silver inner electrodes and tin-copper solder terminals establishes that the resonator is not an unworked ceramic blank but a fully mounted, electrically ready piezoelectric device capable of producing an oscillatory output.

Heading 8541 covers “diodes, transistors and similar semiconductor devices; photosensitive semiconductor devices...; light-emitting diodes (LED); mounted piezo-electric crystals.” The term “mounted piezo-electric crystals” is not confined to natural quartz crystals alone. The HSN clarifies expressly that this expression includes “piezo-electric elements, whether or not mounted, provided that when mounted they are equipped with electrodes or electric connections” and further that such units may be based on “barium titanate, lead titanate zirconate, or other ceramic crystals.”

The product under import matches this description exactly: a piezoelectric ceramic crystal provided with electrodes, encapsulation, and solderable terminals for surface-mount deployment. The working principle of the device is also consistent with what is contemplated in Heading 8541. When an alternating electrical field is applied across the ceramic crystal, the piezoelectric effect causes mechanical resonance, which in turn induces a stable oscillatory electric signal at the resonant frequency of 8.00 MHz. The electrical oscillation generated by this electromechanical interaction is the functional attribute of mounted piezoelectric crystals.

Further, the HSN Explanatory Notes state that mounting is established where the units “are at least equipped with electrodes or electric connections.” The resonator under import is equipped not merely with electrodes but with machine solderable terminals specifically designed for SMT (surface-mount technology) placement on printed circuit boards. The encapsulation in epoxy resin further indicates that the product is a finished component ready for direct incorporation into an electronic assembly, which is also consistent with the notion of “mounted.”

And, as per Note 2(a) to Section XVI, “Parts which are goods included in any of the headings of Chapter 84 or Chapter 85 (other than headings 8409, 8431, 8448, 8466, 8473, 8485 and 8503) are in all cases to be classified in their respective headings.” Accordingly, where a part has an independent identity and is covered by a specific heading in Chapter 85, it must be classified under that heading and not under the heading of the machine in which it is used.

Here, the resonator is recognised globally as a discrete electronic timing device, and not as a general-purpose undifferentiated component. Its function of generating clock signals by exploiting the piezoelectric effect is technologically distinct from the functions of a washing machine, even though the washing machine control board depends on it.

One possible alternative is Heading 8543, which covers “electrical machines and apparatus having individual functions, not specified or included elsewhere in this Chapter.”



However, this is a residuary heading whose scope expressly excludes goods already covered by other headings in Chapter 85. Since mounted piezoelectric crystals are specifically included in Heading 8541, Heading 8543 cannot apply. The interpretative sequence laid down in GIR 3(a) strengthens this point, requiring that “the heading which provides the most specific description shall be preferred to headings providing a more general description.”

Another possible suggestion could be Heading 8548, which covers “electrical parts of machinery or apparatus, not specified or included elsewhere in this Chapter.” Here again, the restrictive clauses “not specified or included elsewhere” exclude from its ambit any component that is already covered by a specific heading of the Chapter. Since the resonator corresponds precisely to the technical description of mounted piezoelectric crystals under Heading 8541, resorting to Heading 8548 is legally impermissible.

Further, heading 8542 applies to “electronic integrated circuits,” which are semiconductor-based logic devices comprising transistors, diodes, resistors and capacitors formed by semiconductor processing on a substrate. The subject resonator is not an IC; it is an electromechanical crystal resonator whose function is resonance, not logic or signal processing. The Explanatory Notes to Heading 8542 also exclude devices that are not semiconductor circuits.

The applicant has additionally cited international rulings, such as US Customs Ruling NY F89973, wherein ceramic resonators were classified as mounted piezoelectric crystals under the US tariff heading corresponding to 8541. While foreign rulings are not determinative under Indian customs law, they illustrate global tariff alignment and support an interpretation consistent with the HSN structure.

Applying the above reasoning to the physical device—the PZT ceramic element with electrodes, its frequency stability characteristics, its SMD structure, its encapsulation, its electromechanical resonance function, and its identity as an oscillator component—it is clear that the resonator satisfies the technical and legal criteria for classification under Heading 8541.

In view of the above, the classification of the goods declared as "RESONATOR CERAMIC (MODEL: CSTLS8M00G53-A0)" is under Customs Tariff Item 8541 60 00 – “Mounted piezo-electric crystals.”

Details of Hearing

5. A hearing was held on 27.11.2025 at 12.30 PM. Shri P. Sridharan has appeared for the hearing and reiterated the contention submitted with the application. He submitted that the subject goods are piezo-electric ceramic resonator. That the piezo-electric ceramic resonator work on the principle of oscillating frequency. That the device is made of PZT (Lead, zirconium and Titanium) and merit classification under 8541, more specifically under CTI 85416000 (That CTH 8543 and 8548 do not merit classification). He relied upon Note-2 of section XVI, GRIs, Note 12 of chapter 85, clarification and provisions given in the last lines of the Notes. He also relied upon US cross ruling attached with the application.



5.2 Nobody appeared on behalf of the Department for hearing.

Discussion and findings

6. I have considered all the materials placed before me in respect of the subject goods. I have gone through the submissions made by the applicant during the personal hearing and comments received from the concerned Commissionerate. I proceed to pronounce a ruling on the basis of information available on record as well as existing legal framework.

6.1 At the outset, I find that the issue raised in the question in the Form CARR-1 is squarely covered under Section 28II(2) of the Customs Act, 1962, being a matter related to classification of goods under the provisions of this Act.

6.2 Before deciding the issue, let me deliberate on the legal framework prescribed in Customs Tariff Act, 1975, Chapter/ Section notes along with HSN explanatory notes. As per Rule 1 of GRI, the titles of Sections, Chapters and sub-Chapters are provided for ease of reference only; for legal purposes, classification shall be determined according to the terms of the headings and any relative Section or Chapter Notes.

6.3 Rule 1 of the General Rules for Interpretation provides that the classification of goods shall be determined according to the terms of the headings of the tariff and any relative Section notes or Chapter notes and thus, gives precedence to this while classifying a product. Rules 2 to 6 provide the general guidelines for classification of goods under the appropriate sub-heading. In the event the goods cannot be classified solely on the basis of Rule 1, and if the headings and section or chapter notes do not otherwise require, the remaining Rules 2 to 6 may then be applied in sequential order.

6.4 Before going for the classification of the subject goods, it is better to understand the product "CERAMIC RESONATOR" :

The characteristic of converting mechanical energy to electrical energy, and from electric energy to mechanical energy is called piezoelectric. In other words, piezoelectric materials will expand or contract when subjected to a voltage, and generate a voltage when subjected to a pressure.

Generally, ceramics are comprised of fine crystals. Each crystal is comprised of atoms with a positive or negative electrical charge. Most ceramics have well balanced positive and negative electric charges. However, some dielectric ceramics called "ferroelectrics" have unbalanced positive and negative electric charges in the crystals, even under natural conditions, resulting in biased electric charges (spontaneous polarization).

Immediately after being subjected to firing, the ferroelectric ceramics will develop spontaneous polarization with random polar axes. As a whole, the ceramics seem to have well balanced positive and negative electric charges. However, with the application of a high DC



voltage, the polar axes generated by spontaneous polarization are aligned in a uniform direction, which cannot be cancelled even if the voltage is removed. The process to align the polar axes of spontaneous polarization is called the polarizing process. If the polarizing process is applied to ferroelectric ceramics, piezoelectric ceramics are produced.

When an external voltage is applied to piezoelectric ceramics, the centers of the positive and negative electrical charges in the ceramics are individually attracted or repelled by the external electric charges, causing the ceramics to expand or contract.

On the other hand, applying a pressure to piezoelectric ceramics generates positive and negative electric charges on opposite face of the piezoelectric ceramic. Conversely, if a tensile force is applied to the same material, the polarity of the electric charges will be reversed.

As described above, piezoelectric ceramics enable mutual conversion between electric energy and mechanical energy by utilizing polarization of the crystals.

The ceramic resonators utilize the mechanical resonance of piezoelectric ceramics, typically of lead zirconate titanate (PZT), which provide various vibration behaviours (modes) depending on the resonance frequency.

The subject goods are essentially based on piezoelectric crystals and are used in the Power Assembly Board (PBA) of an appliance's electronic oscillator circuit. When connected in an electronic oscillator circuit, resonant mechanical vibrations in the subject goods generate an oscillating signal of a specific frequency. Thereby, the subject goods are used as the source of the clock signal for digital circuits such as microprocessors where the frequency accuracy is not critical.

6.5 The subject goods under import are Resonator-Ceramic components, Model No. CSTLS8M00G53- A0, manufactured primarily from piezoelectric ceramic material (Lead Zirconium Titanate - PZT) with silver inner electrodes and tin-copper solder terminals, encapsulated in epoxy resin. These are electronic oscillator components used for generating stable clock signals at 8.00 MHz frequency for microprocessor-based control circuits. The goods are manufactured as surface-mount devices (SMD) designed for automated assembly onto printed circuit boards. The resonators exhibit specific electrical characteristics: nominal frequency of 8.00 MHz, frequency tolerance within specified limits, load capacitance, and defined temperature operating ranges. This demonstrates that they are precision electronic components, not generic piezoelectric materials. However, it is noted that the resonators are imported as standalone electronic components, not yet assembled onto printed circuit boards at the time of import, and they function as timing/clock generation elements when integrated into electronic circuits.

The resonators function on the principle of the piezoelectric effect. An alternating electric voltage applied across the PZT ceramic element causes mechanical resonance at a specific frequency, which in turn generates a stable electrical oscillation signal. This signal



serves as a timing reference (clock signal) for microprocessors and digital integrated circuits, enabling synchronised operation of electronic control systems.

6.6 Now, I will discuss the classification of the subject goods “ Ceramic Resonator”. CTH heading 8541 provides:

8541 Semiconductor devices (for example, diodes, transistors, semiconductor-based transducers); photosensitive semiconductor, devices, including photovoltaic cells whether or not assembled in modules or made up into panels; light-emitting diodes (led), whether or not assembled with other light-emitting diodes (led); mounted piezo-electric crystals

85411000 - Diodes, other than photosensitive or light emitting diodes

- Transistors, other than photosensitive transistors:

85412100 -- With a dissipation rate of less than 1 W

85412900 -- Other

854130 - Thyristors, diacs and triacs, other than photosensitive devices:

85413010 --- Thyristors

85413090 --- Other

854140 - Photosensitive semi-conductor devices, including photovoltaic cells whether or not assembled in modules or made up into panels; light emitting diodes:

--- Photocells:

85414011 --- Solar cells whether or not assembled in modules or panels

85414019 --- Other

85414020 --- Light emitting diodes (electro-luminescent)

85414090 --- Other

85415000 - Other semi-conductors devices

85416000 - Mounted piezo-electric crystals

85419000 - Parts

6.7 The IISN Explanatory Notes under CTH 8541 in the relevant part, states as under:

“These are mainly barium titanate (including polycrystalline polarised elements of barium titanate), lead titanate zirconate or other crystals of heading 38.24 (see the corresponding Explanatory Note), or quartz or tourmaline crystals. They are used in microphones, loudspeakers, ultrasonic apparatus, stabilised frequency oscillating circuits, etc. They are classified here only if mounted. They are generally in the form of plates, bars, discs, rings, etc., and must, at least, be equipped with electrodes or electric connections. They may be coated with graphite, varnish, etc., or arranged on supports and they are often inside an envelope (e.g., metal box, glass bulb). If, however, because of the addition of other components, the complete article (mounting plus crystal) can no longer be regarded as merely a mounted crystal but has become identifiable as a specific part of a machine or appliance, the assembly is classified as a part of the machine or appliance in question : e.g., piezo-electric cells for microphones or loudspeakers (heading 85.18), sound-heads (heading 85.22), pick-up elements

(feelers) for ultrasonic thickness measuring or detecting instruments (generally classified in accordance with Note 2 (b) to Chapter 90 or in heading 90.33, as the case may be), quartz oscillators for electronic watches (heading 91.14).

This heading also excludes unmounted piezo-electric crystals (generally heading 38.24, 71.03 or 71.04)."

Further, note 12 of chapter 85 provides:

12.- For the purposes of headings 85.41 and 85.42 :

(a) (i) "Semiconductor devices" are semiconductor devices the operation of which depends on variations in resistivity on the application of an electric field or semiconductor-based transducers. Semiconductor devices may also include assembly of plural elements, whether or not equipped with active and passive device ancillary functions.

"Semiconductor-based transducers" are, for the purposes of this definition, semiconductor based sensors, semiconductor-based actuators, semiconductor-based resonators and semiconductor-based oscillators, which are types of discrete semiconductor-based devices, which perform an intrinsic function, which are able to convert any kind of physical or chemical phenomena or an action into an electrical signal or an electrical signal into any type of physical phenomenon or an action.

All the elements in semiconductor-based transducers are indivisibly combined, and may also include necessary materials indivisibly attached, that enable their construction or function.

The following expressions mean :

(1) "Semiconductor-based" means built or manufactured on a semiconductor substrate or made of semiconductor materials, manufactured by semiconductor technology, in which the semiconductor substrate or material plays a critical and unreplaceable role of transducer function and performance, and the operation of which is based on semiconductor properties including physical, electrical, chemical and optical properties.

(2) "Physical or chemical phenomena" relate to phenomena, such as pressure, acoustic waves, acceleration, vibration, movement, orientation, strain, magnetic field strength, electric field strength, light, radioactivity, humidity, flow, chemicals concentration, etc.

(3) "Semiconductor-based sensor" is a type of semiconductor device, which consists of microelectronic or mechanical structures that are created in the mass or on the surface of a semiconductor and that have the function of detecting physical or chemical



quantities and converting these into electric signals caused by resulting variations in electric properties or displacement of a mechanical structure.

(4) "Semiconductor-based actuator" is a type of semiconductor device, which consists of microelectronic or mechanical structures that are created in the mass or on the surface of a semiconductor and that have the function of converting electric signals into physical movement.

(5) "Semiconductor-based resonator" is a type of semiconductor device, which consists of microelectronic or mechanical structures that are created in the mass or on the surface of a semiconductor and that have the function of generating a mechanical or electrical oscillation of a predefined frequency that depends on the physical geometry of these structures in response to an external input.

(6) "Semiconductor-based oscillator" is a type of semiconductor device, which consists of microelectronic or mechanical structures that are created in the mass or on the surface of a semiconductor and that have the function of generating a mechanical or electrical oscillation of a predefined frequency that depends on the physical geometry of these structures.

(ii) "Light-emitting diodes (LED)" are semiconductor devices based on semiconductor materials which convert electrical energy into visible, infrared or ultra ... violet rays, whether or not electrically connected among each other and whether or not combined with protective diodes. Light-emitting diodes (LED) of heading 85.41 do not incorporate elements for the purposes of providing power supply or power control;

(b) "Electronic integrated circuits" are :

(i) monolithic integrated circuits in which the circuit elements (diodes, transistors, resistors, capacitors, inductances, etc.) are created in the mass (essentially) and on the surface of a semiconductor or compound semiconductor material (for example, doped silicon, gallium arsenide, silicon germanium, indium phosphide) and are inseparably associated;

(ii)

(iii)

For the classification of the articles defined in this Note, **headings 85.41 and 85.42 shall take precedence over any other heading in the Nomenclature**, except in the case of heading 85.23, which might cover them by reference to, in particular, their function.

The item in question is the piezoelectric ceramic element constructed from Lead Zirconium Titanate (PZT), which is a recognised piezoelectric material that is covered under CTH 8541. The presence of inner electrodes and tin-copper solder terminals establishes that



the resonator is not an unworked ceramic crystal but a fully mounted, electrically ready piezoelectric device capable of producing an oscillatory output.

6.8 From the facts, technical submission and diagram of the subject goods it is understood that the resonator in question is essentially a PZT Ceramic crystal mounted, with the electric connections for transmitting the electrical signals. The PZT crystal is mounted with an outercoat of epoxy support and connected with terminals. The subject goods are essentially a mounted piezo electric crystal with electrical connections specifically covered under CTH 854160. The resonator can be used in any machine where the resonator function is required and therefore the subject goods is not an identifiable part of any machine. Further, in terms of GIR 1, when goods are specifically described in a heading the classification under that heading is legally correct. Therefore, the subject goods are classifiable under CTH 85416000.

Classification as parts of Washing machine

7. It has been stated that the subject goods in question are used in the PBA of a washing machine. Therefore, an another possible alternative classification could be as parts of air-conditioner sunder CTH 845090 by applying Note 2(b) to Section XVI. But in terms of the sequential application of ratio laid down by the Hon'ble Supreme Court in the matter of Delton Cables Ltd. reported in 2005 (181) ELT 373 (SC), recourse to Note 2(b) or 2(c) ibid would not be appropriate when the classification of the part in question could be determined by application of Note 2(a).

As already seen the subject goods in question could be classified under CTH 8541 by application of Note 2 (a) to Section XVI. Therefore, classification under CTH 845090 can be ruled out.

Classification under CT 8543 or CTH 8548.

7.2 Classification under CTH 8543 could be justified only if the requirement of individual function can be satisfied. In this regard a reference to the IISN Explanatory Notes under CTH 8543 will be relevant:

"The electrical appliances and apparatus of this heading must have individual functions. The introductory provisions of Explanatory Note to heading 84.79 concerning machines and mechanical appliances having individual functions apply, mutatis mutandis, to the appliances and apparatus of this heading."

The test for individual function as laid down in the IIS ENs under CTH 8479, which is equally applicable to CTH 8543 is as shown below:

*"This heading is restricted to machinery having individual functions, which:
(a) Is not excluded from this Chapter by the operation of any Section or Chapter Note;
and*



(b) Is not covered more specifically by a heading in any other Chapter of the Nomenclature; and
(c) Cannot be classified in any other particular heading of this Chapter since:
(i) No other heading covers it by reference to its method of functioning, description or type; and
(ii) No other heading covers it by reference to its use or to the industry in which it is employed; or
(iii) It could fall equally well into two or more other such headings (general purpose machines).”

As already submitted the subject goods are specifically covered under CTH 85416000 by application of GIR 1. Therefore, the subject goods do not satisfy the individual function test laid down in clauses (b) and (c) (i) of the individual function tests laid down under CTH 8479. Therefore, classification under CTH 8543 can be legally ruled out.

7.3 Further the heading 8548 is a residuary heading. As the subject goods in question could be classified under CTH 8541 as a mounted piezo electric crystal, classification under CTH 8548 is not appropriate.

In this regard it would also be appropriate to refer to the judgment of Apex Court in the case of Dunlop India Ltd. v. UOI & Others, 1983 (13) E.L.T. 1566 (S.C.), which held as under:

“...When an article has, by all standards, a reasonable claim to be classified under an enumerated item in the Tariff Schedule, it will be against the very principle of classification to deny it the parentage and consign it to an orphanage of the residuary clause...”

Therefore, resort to classification under CTH 8548 would be against the ratio laid down by the Hon`ble Supreme Court also in India.

7.4 The American Customs in their Ruling No. NY F89973 August 17, 2000, have also Ruled that a Resonator described as under would be classifiable under CTH 8541 600090 of the US Customs Schedule:

“As indicated by the submitted descriptive literature, the resonator is a surface mount design ceramic resonator that is mounted onto a printed circuit assembly. Its function is to receive an input signal and send an output AC signal at a fixed frequency to a logic integrated circuit. The oscillator is a mounted quartz piezoelectric crystal. It is mounted in a ceramic package and cap. It is used to generate an output AC signal, oscillating at a frequency of 14.318 MHz, to a logic integrated circuit. The output signal is used by the integrated circuit as a timer to execute its operational functions”.

In yet another American Cross Ruling No. NY. I.81823, January 24, 2005, Surface Acoustic Wave (SAW) Filters and Surface Acoustic Wave (SAW) Resonators, made of mounted piezo electric crystals were approved to be classifiable under CTH 8541 60 as mounted piezo electric crystal.



7. In view of the above facts and circumstances of the case, I reach to conclusion that:

The products in question attracts merit classification under CTII 8541, more specifically under CTI 85416000 as "Mounted piezo-electric crystals" of the First Schedule of the Customs Tariff Act, 1975.

9. I rule accordingly.

Y. Ramesh
4/2/26

(Prabhat K. Rameshwaram)
Customs Authority for Advance Rulings,
Mumbai.



This copy is certified to be a true copy of the ruling and is sent to:

1. Samsung India Electronics Private Limited
No. 10, No. 49/50L, EA Chamber, Tower-2, Whites Road,
Royapettah, Chennai, Tamil Nadu, 600014
{Email: k.suresh@samsung.com }
2. The Pr. Commissioner of Customs,
Customs Commissionerate - VII (Air Cargo),
New Customs House, GST Road,
Meenambakkam, Chennai- 600016
{Email: pcommr7acc-cuschn@gov.in}
3. The Customs Authority for Advance Rulings,
First Floor, Wing No. 6, West Block-8,
R.K. Puram, New Delhi-110066.
Email: cus-advrulings.del@gov.in
4. The Principal Chief Commissioner of Customs, Mumbai Customs Zone-I, Ballard Estate,
Mumbai -400001. Email: ccu-cusmum1@nic.in
5. The Commissioner (Legal), CBIC Offices,
Legal/CX.8A, Cell, 5th floor, Hudco Vishala Building,
C-Wing, Bhikaji Cama Place, R. K. Puram, New Delhi – 110066.
Email: commr.legal-cbec@nic.in
6. The Member (Customs), Central Boards of Indirect Taxes & Customs, North Block, New
Delhi-110001. Email: mem.cus-cbec@nic.in
7. The Webmaster, Central Boards of Indirect Taxes & Customs.
Email: webmaster.cbec@icegate.gov.in
8. Guard file.

For
Vivek Dwivedi
04/02/26

(Vivek Dwivedi)

Dy. Commissioner & Secretary
Customs Authority for Advance Rulings,
Mumbai

