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Gefangen im Spinnennetz der Gesetze



Wolfgang Endrich

Die Regierungen der letzten Jahre haben über uns mit Gesetzen und Verordnungen ein Spinnennetz gespannt, das uns derzeit in ein Stadium der Bewegungslosigkeit versetzt. Unsere Konjunkturdaten sind negativ und die unternehmerischen Freiheiten wurden durch Gesetze und Verordnungen ziemlich beschnitten. Die Wirtschaft stöhnt unter der Flut an Meldepflichten von statistischen Daten und Beschränkungen, die uns aus politischen oder ideologischen Gründen der Regierungsparteien auferlegt wurden.

Der absolute Schocker war das Heizungsgesetz im letzten Jahr für die privaten Hausbesitzer

und das Lieferkettensorgfaltspflichtengesetz für Importeure. Hinzu kam noch die hohe Inflation, was die Stimmungslage bei der Bevölkerung, aber auch bei der Industrie ganz wesentlich negativ beeinflusst hat. Zusätzliche Belastungen sind die sogenannten „Baby-Boomer“, die jetzt langsam in Rente gehen und ein Sozialstaat, der uns ca. 50% der gesamten Staatseinnahmen kostet. Ferner starker Fachkräftemangel und schließlich der weltweite Konjunkturrückgang, was Deutschland, eine vom Export abhängige Industrienation, negativ beeinflusst hat.

Ergänzend hinzukommt eine ziemlich ratlose, sehr oft zerstrittene Regierung, die eigentlich alles unternimmt, um ihren guten Ruf zu schädigen. So ehrenwert wie die Bemühungen der Grünen sein mögen, mehr Umweltschutz einzuführen und die der Sozialdemokraten mehr soziale Unterstützungen für die einkommensschwachen Bevölkerungsgruppen zu schaffen; es war einfach zu viel Negatives für die allgemeine Stimmungslage der Bundesbürger.

Dabei wäre alles eigentlich viel einfacher gewesen, nach dem Motto: Schau nach bei „Ludwig Erhardt: Wohlstand für alle“ - hätte man zuerst an die wirtschaftliche Sanierung unseres Landes denken sollen, durch Steuererleichterungen, (Deutschland ist bekanntlich das höchstbesteuerte

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Land Europas, vielleicht der ganzen Welt) um die Industrie zu mehr Investitionen zu veranlassen und mit Reduzierung von Verbrauchssteuern den Konsum anzukurbeln. Aber der Egoismus der einzelnen Parteien war für unser Land zu viel.

Auch die Debatte der stärkeren Besteuerung der wohlhabenderen Bevölkerung und die Nichtbewältigung der Immigrationsprobleme haben dem Land sehr geschadet. Wir leisten uns den Luxus, hunderttausende von Immigranten mit sozialen Wohltaten zu beglücken, geben ihnen aber nicht die Möglichkeit, durch schnelle Arbeitsfindung selbst das Bruttosozialprodukt zu steigern. Das bedeutet, der Mangel an Arbeitskräften wäre teilweise gelöst, die Lohnsteuereinnahmen und die Sozialbeiträge würden steigen und die Kosten für die Unterbringung der Flüchtlinge würde sich drastisch verringern.

Eigentlich kennt man die Faktoren, wie man die Wirtschaft in einer Konjunkturdelle wieder aufmöbeln kann. Aber wenn ideologisch überzogene Forderungen gestellt werden, fehlt der Konjunktur leider die Kraft, sich selbst zu erholen. Dann treten die Effekte der politischen Versäumnisse der letzten Jahrzehnte besonders kräftig hervor: die Bundesbahn, marode Brücken und Bundesstraßen und dazu die hohen Kosten in Folge des Ukraine Krieges und die jahrzehntelange Abrüstung der Bundeswehr

zeigt uns schonungslos, wie perspektivlos unsere letzten Regierungen gewirtschaftet haben. Nicht zu vergessen der „Kinderglaube“ an die Friedfertigkeit unseres östlichen Nachbarn.

Auch der Dirigismus, den wir zu spüren bekamen, war öfters negativ - siehe die Proteste der Bauern.

Es wäre besser gewesen, Fachleute in die Regierung und in die Ministerien zu rufen, als teilweise kompromisslose Verfolger ideologischer Ideen.

Eine prosperierende Wirtschaft funktioniert nur dann, wenn die Industrie voll beschäftigt ist, die Arbeitslosenzahlen gering und die Steuereinnahmen ausreichend hoch sind, um dann den Sozialstaat, den man sich wünscht, zu finanzieren. Alles unter gleichzeitiger Berücksichtigung der notwendigen Maßnahmen, wie der Erderwärmung Einhalt zu gebieten und die CO₂-Produktion zu reduzieren. Alles gleichzeitig zu fordern, war zu viel für unser Land. Alles gleichzeitig zu bewältigen, ist eine fast unlösbare Aufgabe. Es fragt sich nur, wann unser Kanzler und seine Regierung dies erkennen und die richtigen Prioritäten setzen.

Mit freundlichen Grüßen,
Wolfgang Endrich

NEWS

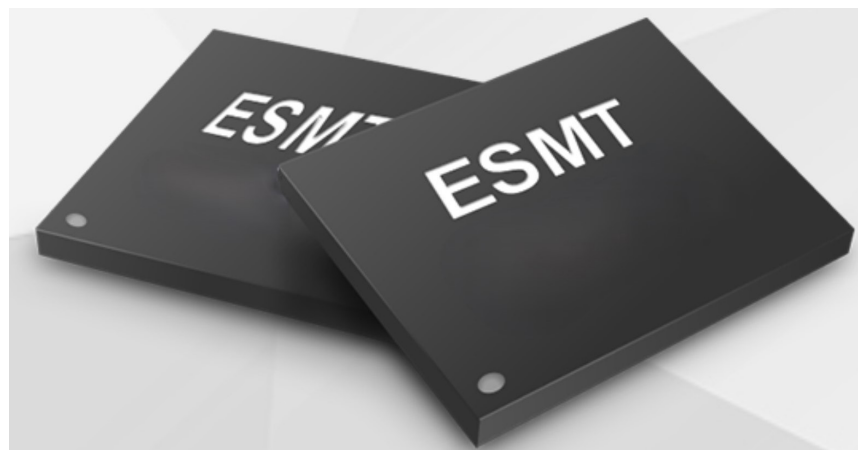
2X60W ESMT AD83586C AUDIO AMPLIFIER

The AD83586C is a digital audio amplifier with robust performance that supports various configurations of speakers. It can power various types of speakers with different power requirements, including 8 Ω , 4 Ω , and 2 Ω speakers, with a 24-volt supply and appropriate cooling.

The amplifier also features advanced audio processing functions such as volume control, speaker EQ, audio mixing, surround sound and Dynamic Range Control (DRC), which are programmed via an I2C control interface. The AD83586C is equipped with a robust protection circuit that prevents damage caused by incorrect operating conditions.

It is also more resistant to noise and fluctuations in process, voltage and temperature compared to analog amplifiers. An integrated anti-pop circuit also reduces noise when switching the power supply.

The AD83586C's highly configurable output stage allows it to be used in 2.1, stereo, or mono applications. Two units can also be used to create 5.1-channel systems for home cinema setups. Overall, the AD83586C is a versatile solution for various audio amplification requirements.



TARGET APPLICATION AREAS

- TV audio
- Boom-box, CD and DVD receiver, docking system
- Powered speaker
- Wireless audio

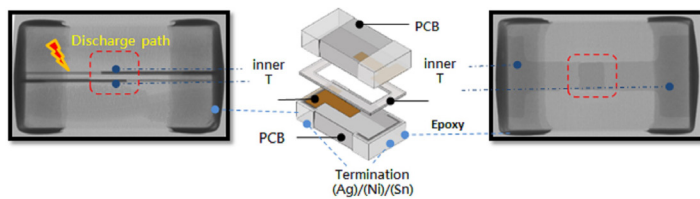
KEY FEATURES OF THE AD83586C

- VDD Range of 4,5~26 V
- 36-band EQ and volume control
- 60W x 2CH into 4 Ω output power
- Short circuit and over-temperature protection
- Supports 16/18/20/24-bit I2S
- Built-in anti-pop circuit

ESMT



ULTRA LOW CAPACITANCE ESD SUPPRESSOR COMPONENTS



caused by electrostatic persecution.

The main structure of the ultra-low capacitance electrostatic suppressor is composed of two printed circuit boards (PCB), an insulating frame (Epoxy), and two T-shaped inner electrodes.

Among various port specifications, the high-speed transmission speed is as high as 10G or more, so the requirements for the parasitic capacitance of the protection element are relatively strict, which must be below 0.1pF.

The insulating frame is located between two printed circuit boards, forming a main structure with a cavity inside.

The STD (OR05) developed by SFI is ultra-low capacitance (0.05pF) ESD protection device.

In this manufacturing method, the thickness of the insulating frame can be adapted to determine the relative distance of different printed circuit boards, and then the trigger voltage of the electrostatic suppressor can be adjusted.

The components can be applied to ultra-high-speed transmission interfaces to protect the circuit from problems

Part No.	Working Voltage	Typical ESD Trigger Voltage	Typical ESD Clamping Voltage at 30ns	Leakage Current (at Initial State)	Leakage Current (after ESD Test)	Cap. Value at 1MHz
Symbol	VDC(max.)	Vtrigger(typ.)	VC(typ.)	ILDC	ILDCA	C
Unit	V	V	V	μA	μA	pF
SFIO402TD060-OR05P-11	6	300	30	< 0.05	< 10	0.05pF
SFIO402TD120-OR05P-11	12	300	30	< 0.05	< 10	0.05pF
SFIO402TD240-OR05P-11	24	300	30	< 0.05	< 10	0.05pF

TARGET APPLICATION AREAS

- USB 3.1
- HDMI 2.0
- Thunderbolt
- Wi-Fi 6
- Ethernet 10G
- Antenna

KEY FEATURES OF THE SFIO402TDXXX

- Capacitance 0,05 pF
- Clamping Voltage 30V
- Trigger Voltage 300V
- Working Voltage 6V to 24V
- Withstanding ESD capability: Level 4



NEWS

SMD PIEZO TRANSDUCER

Piezo transducers are a technology based on the principle of piezoelectricity for creating sound. They have numerous applications in many areas of modern technology and are expected to continue to play an important role in the future. For example, they are used in medicine, in the automotive industry and in the sector of smart products as well.

An advantage of this kind of Piezo Transducer is the low energy consumption. Piezoelectric Transducers require significantly less energy compared to electromagnetic solutions. This makes them ideal for applications where energy efficiency is essential. Another advantage is the SMD capability. Because of that, a lot of space and weight can be saved as it is soldered directly on the circuit board.

With the different manufacturers Qinlon, Universal (with their brand HXE) and Chinasound, endrich can provide the best suitable and most cost-effective solution with SMD Piezo Transducers. As well, customized adjustments are possible.

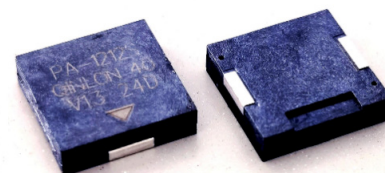
With the different certified manufacturers endrich has the possibility to provide every variation of quantity, adapted to the needs of the customer. The range of Transducers endrich can provide is very wide.

The technical details of 3 examples are shown in the table below:

Model	Dimensions (mm)	Operating Voltage (Vp-p)	Operating Frequency (Hz)	Sound Output (dB)	Operating Current (mA)	Operating Temp. (°C)
CSPT12A03-4.0F	12x12x3	1-20	4.000	75	2	-40/+105
UGPT12BM4003P	12x12x2,8	1-25	4.000	78	1	-40/+85
PA-1212S-4.0UI005	12x12x3	1-25	4.000	75	5	-40/+85

FEATURES

- Numerous applications in many areas of modern technology
- Every quantity can be delivered from 1kpcs to several 100kpcs
- Very high quality standards with the best outcome possible
- Designed for SMT process



QINLON

ChinaSound



3D CAMERAS

For industrial automation, autonomous driving, intelligent transportation and urban safety applications

With the help of AI, data from sensors such as temperature sensors, thermal imaging cameras, ultrasonic sensors, gas sensors, magnetic field sensors, pressure sensors, flow sensors, level sensors, radar, LiDAR, vision cameras and motion sensors are processed and analyzed to predict and prevent machine problems. Real-time detection of the flow of people in public transportation systems such as buses and subways has become inevitable in terms of intelligent transportation and urban safety. Driving assistance by monitoring the driver's state while driving through ToF sensors and real-time alerts to prevent accidents caused by distracted driving is one of the major innovations in the automotive field. With the help of high-precision 3D ToF sensors, package dimensions and sizes can be measured in real time, people can be counted on public transportation and in shopping malls, and forklift trucks can be aligned.

ToF (Time of Flight) uses the speed of light to measure distances or to take three-dimensional images with a ToF camera. There are two methods for this: the direct and the indirect ToF method. Direct ToF measures the time between the transmission of an optical pulse and the arrival of the reflected light pulse. iToF measures the distance by collecting reflected light and detecting the phase shift between emitted and reflected light. This is particularly effective for fast and high-resolution 3D imaging of objects at short and long distances. A ToF camera generally consists of: Illumination unit (infrared LEDs, laser diodes, surface emitters VCSELs), optics (collects the light reflected from the environment and images the scene on the sensor), sensor (measures the transit time for each pixel separately), control electronics (for the illumination and the sensor), evaluation/interface (calculation of the distance from the measured values). Calibration

Distance measurement and motion detection scale

Technology Features	Radar	Infrared	PIR	Ultrasonic	TOF/VCSEL	Laser/Lindar	Camera
Range	High	Low	Low	Low	Low	Medium	Low
Precision Range	High	Low	Low	High	High	High	Medium
Precision angle	Medium	Low	Low	Low	Low	High	High
Radial movement	High	High	Low	High	High	High	High
Tangential movement	Low	High	High	Low	High	High	Low
Pattern matching field	Medium	Medium	High	High	High	Medium	Medium
Object separation	High	Low	Low	High	High	High	High
Environmental resilience	High	Low	Low	Low	Medium	Medium	Low
Material intrusion	High	Low	Low	Low	Low	Low	Low
Design Flexibility	High	Low	Low	Medium	Medium	Medium	Low
Costs	Medium	Low	Low	Low	Medium	High	Low

NEWS

values are also stored in the system. The interfaces used include USB and Ethernet.

Synexens has its own ToF technology including SPAD pixels (Single-Photon Avalanche Diode Pixels: highly sensitive photon detector can detect single photon with high time accuracy), anti-sunlight processing circuits, digital histogram, etc. The products mainly include D-ToF chips and i-ToF modules, which are used in laser ranging, obstacle avoidance and Simultaneous Localization and Mapping (SLAM) of sweeping robots.

CS20-P is equipped with a ToF sensor and a resolution of 640 x 480. It utilizes ToF technology to obtain 3D information of objects and space. It has excellent performance such as wide field of view and Ethernet transmission, providing users with convenient and efficient 3D perception.

The CS40 is equipped with a PToF image sensor with a resolution of 640 * 480, which uses PToF technology to obtain three-dimensional information of objects and space. It has excellent performances such as wide field of view, long

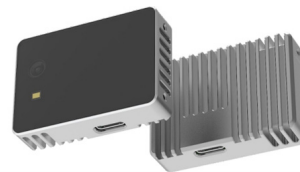
distance, resistance to ambient light (120 klux), Ethernet transmission, etc., and provides users with practical and efficient 3D perception functions. The CS20-P and CS40 products utilize a powerful hardware processing platform, and users can integrate multiple application algorithms to reduce dependence on the back-end application platform. They support TCP/IP network communication protocol to achieve long-distance data transmission. CS30 is an RGBD depth camera equipped with a ToF image sensor (640 x 480 resolution) and a color image sensor (1920 x 1080 resolution). The product is powered by a Type-C interface and simultaneously outputs depth and 2D color image information, supporting the fusion of 3D point clouds and 2D color images.

The CS20 is a solid-state lidar equipped with a TOF image sensor (640 x 480 pixel resolution).

CS30 and CS20 are characterized by excellent performance such as long range, long distance detection and low power consumption, providing users with convenient and efficient 3D perception functions.



CS20-P: Solid-State LiDAR



CS20: Solid-State LiDAR

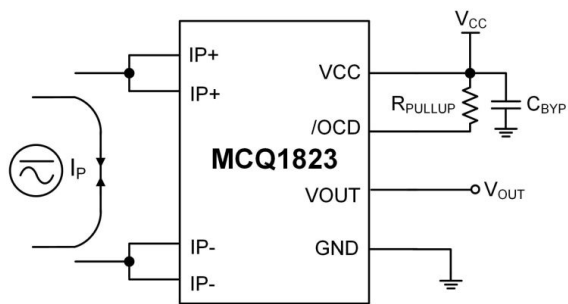


CS30: RGB-D Camera



CS40/CS40-Pro: Industrial LiDAR

AUTOMOTIVE-GRADE, LINEAR HALL-EFFECT CURRENT SENSOR IC MCS1823



The MCQ1823's small footprint reduces board area and makes this device well-suited for space-constrained applications. The MCQ1823 is available in an ultra-small TQFN-12 (3mmx3mm) package and is AEC-Q100 qualified

The MCQ1823 is an automotive-grade, linear Hall-effect current sensor IC for AC or DC current sensing. The differential Hall array cancels out homogeneous or gradient stray magnetic fields.

The primary conductor's low resistance (0.6mΩ) allows large currents to flow within close proximity to the integrated circuit that contains high-accuracy Hall sensors. This current generates a magnetic field, which is sensed at two different points by the integrated Hall transducers. The magnetic field difference between these two points is then converted into a voltage that is proportional to the applied current. A spinning current technique is used for a low, stable offset.

The MCQ1823 integrates fast over-current detection (OCD), which makes it simple to monitor system over-current (OC) events.

APPLICATIONS

- Motor control
- Automotive systems
- Load detection & management
- Switched-mode power supplies
- Over current fault protection

FEATURES

- 3.3V or 5V single supply options
- Immune to all external magnetic fields by differential sensing
- No magnetic hysteresis
- Extremely low leakage current
- 0.6mΩ internal conductor resistance
- ±2.5% total accuracy, factory trimmed
- 5A to 50A range
- Custom Over-Current Detection, 1μs response time
- Fast OCD with 1μs response time
- Output proportional to AC or DC currents
- Ratiometric or absolute output voltage options



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