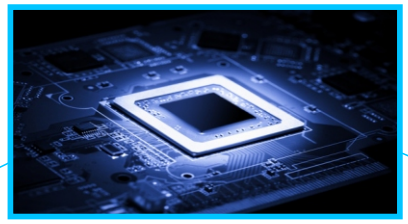
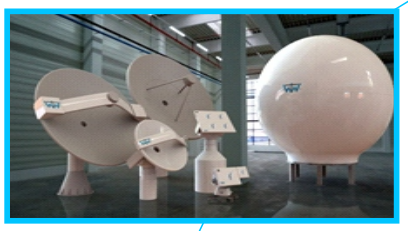
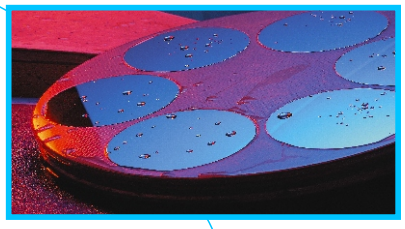
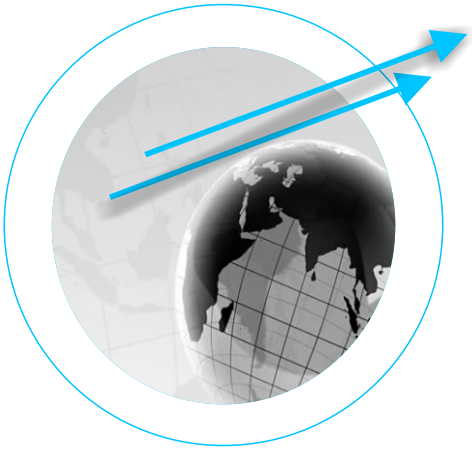
tecnode Solutions

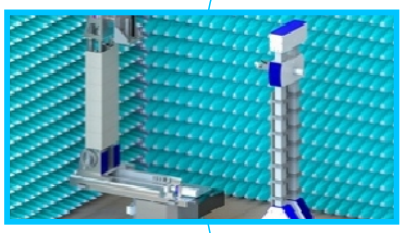
Technology Solutions Enhanced

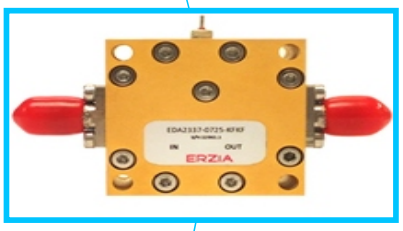


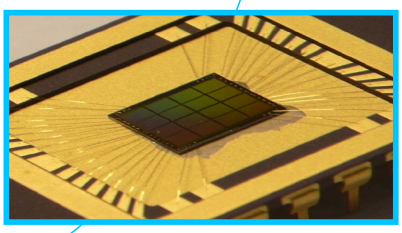


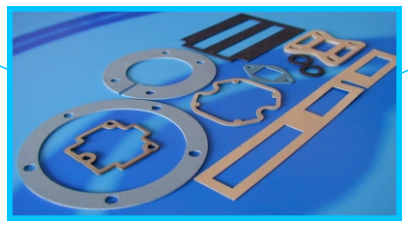












www.tecnode.com

ERZIA TECHNOLOGIES S.L, SPAIN

Microwave & MMW Systems/Space Qualified Systems

Power Amplifiers:
- DC to 96 GHz(upto Wband)
- Psat upto 40dBm
- Gain upto 50dB
- Power supply 5,6,12,28V

Low Noise Amplifiers:
- DC to 96 GHz
- Psat up to 22 dBm
- Gain up to 50dB
- Noise figure<4.5dB
- Power supply 5,12,15,18V

Integrated assemblies(customizing for you):
- RF front ends
- Up/down converters
- Active filter banks
- Active switching matrixes
- RF boxes
- Integrated Control(FPGA or Microcontroller based)
- Complete Receivers/Transmitters
- Applications:Radar/EW/Science/Telecom

AOTF Driver:
- frequency configurations, from 15 to 1000 Mhz
- DDS based signal generation
- Upto 10 W
- Labview based control software

Power Dividers/Combiners:
- Freq 8-40GHz
- High Isolation 15dB

Datalink Systems:
- E-DTL (Detailed Mode)
- E-CDL (Compact Mode)

Datalink Systems

Solid State High Power Systems:
- 1 MHz-6 Ghz, up to 2000 watts

Tell Us Your Requirements We Customize!

Datalink Specification

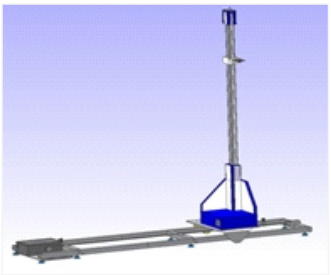
	E-TDL 2000Series	E-DTL 1000Series
Dual Communication Links	✓	✓
Military Drones	✓	
Surveying & Video Broadcasting	✓	✓
SmallUAVs		✓
RF Bands(UHF,L,S)	✓	✓
Microwave Bands(C,Ku)	✓	✓
RF Transmitted Power	Up to 50W	1W(up to 20W)
Coverage	LOS	Up to 100 Km
Maximum Data Rate	20 Mbps	10 Mbps
Encryption	✓	Optional
IP	✓	✓

MATURO GmbH, GERMANY

Antenna Positioning Systems: The antenna positioning systems made by **maturo** are especially designed for antenna measurements in near-field or far-field.The product range includes high-precision linear, azimuth, elevation and polarisation positioning systems. All specifications of our standard products can be modified on customer request.

Turntables

For EMC, Automotive and Radar Cross Section measurement. Use in anechoic chambers or open test sites. Diameters from 0.3 up to 14.0 meters Load capability - 10 kg - 100 tons

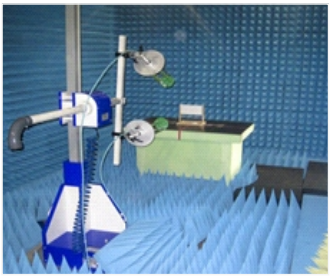


Linear Positioners

The system allows automatic measurements of the field homogeneity according to EN61000-4-3 and IEC61000-4-3, as well as measurement of the RFI power according to CISPR, EN, ANSI, VCCI and VDE standards. The devices are mainly made of plastics with low dielectric constant in order to minimize the influence of these devices to the measurement results.

Dynamometers for EMC / EMI measurements

Free-standing and chassis dynamometers for EMC / EMI For commercial and military vehicles Functional and continuous testing, drive and brake analysis as well as testing of ABS, ESP, etc.

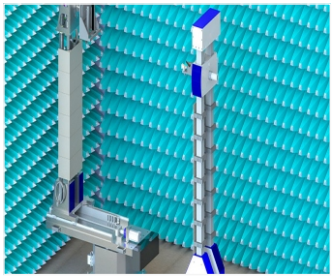


Antenna Masts & Stands

manual, semi- and fully automatic antenna masts and -stands for positioning of antennas. oad capabilities and range of motion are available. Made using high-tensile plastics with low dielectric constant are used for minimum influence of these

Controller

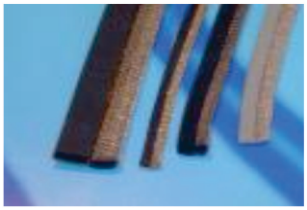
For the operation of our automatic positioning systems. Fully-automatic remote control by measurement software IEEE 488.2 (GPIB) or Ethernet interface.



OTA / CTIA Positioning Systems

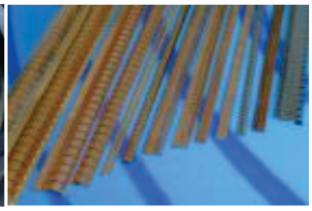
For the smooth and accurate positioning in theta and phi axis. Reliable 3-Dimensional "Over-The-Air" radiation measurements according to all mobile radio, wireless and A-GNSS standards including LTE-MIMO.

SOLIANI EMC, S.R.L, ITALY

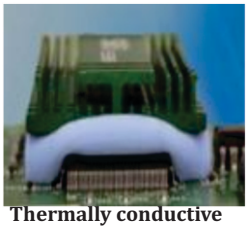

EMI/RFI Shielding gaskets

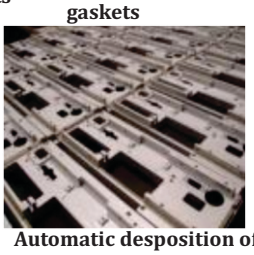
Ip6 / EMI EMC IP 65 Sealed gaskets

EPDM conductive gaskets EMC/NBC


EMI/EMC fingers strips

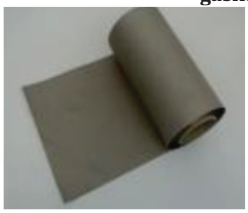
Electrically conductive silicone gaskets


Thermally conductive silicone


Automatic desposition of conductive silicone

Conductive adhesives & sealants

EMC Electrically conductive silicone


Shielding conductive silicone

Conductive Non-Woven

Conductive mask tape EMI/EMC

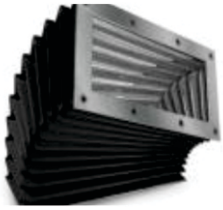
EMI Shielded Windows

Shielded Honeycomb air vent

RF Shielded Doors

Shielded Tent

Shielded Rooms

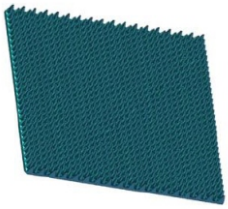

EMI/EMC Shielded bellows

Shielding Cable

Radar Absorbent Materials

RF Protection Suit

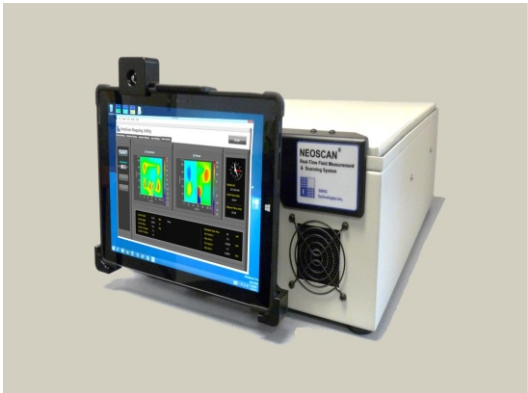
Shielding of Magnetic Fields


Conical Silicone Based Radar Absorbent Material

EMAG TECHNOLOGIES INC,USA

Innovative RF Solutions

Test Solutions

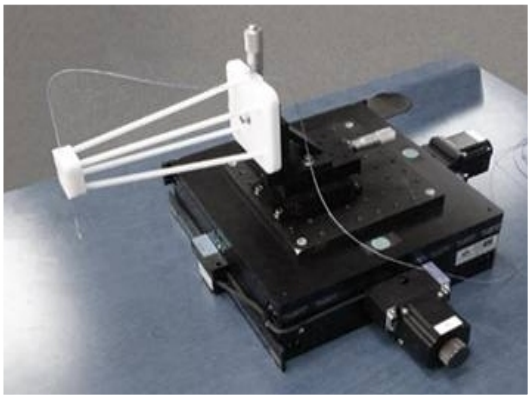


EMAG Technologies Inc. offers the NeoScan family of turnkey field measurement systems. NeoScan systems utilize our unique, patented, electro-optic and magneto-optic probe technologies to detect, sample, measure and scan electric and magnetic fields in a non-invasive manner, while providing a very large operational bandwidth and a very high spatial resolution. NeoScan systems can be used for a variety of RF test and evaluation applications:

Real time non-contact measurement of fields and signals in a variety of a Non-invasive near-field mapping of RF devices, circuits and antennas propagation media.

NeoScan - MSR: Basic NeoScan Field Measurement System.
NeoScan - MAP: NeoScan Field Mapping System.
NeoScan - ANT: NeoScan Compact Antenna Characterization System.
NeoScan - DET: NeoScan Real-Time Field Detection & Capture System.

Field Measurement Systems



EDA Solutions

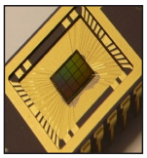
EM.Cube is a modular software environment for modeling and analysis of RF system engineering problems, featuring seven different simulation engines that can solve a large variety of electromagnetic radiation, scattering and propagation problems.

RF.Spice A/D is a comprehensive software tool for analysis and design of analog, digital, mixed-signal, RF circuits and systems, featuring an intuitive but powerful schematic editor, a versatile device manager, and a very large part's database preloaded with thousands of passive, active and RF devices as well as black-box virtual blocks for system simulation.

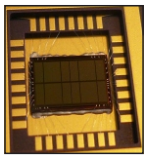
RF.Spice A/D and its "Lite Edition" marketed as B2.Spice A/D

REDCAT DEVICES,ITALY

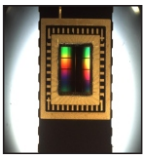
Rad-Hard Components



RC7C1024RHS

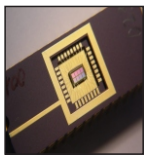


RC7C2048RHMS

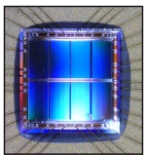


RC7C4096RHMS

RC7C512RHH



RC7C512RHMS



RC7C512RHS

RedCat Devices RC7C SRAM Family has a wide range of rad hard devices spanning from 256Kbit to 4Mbit and from very high TID resistance to basic tolerance to radiations. The core of RC7C SRAM Family devices is the 6T RadTrap memory cell available in three basic formats:

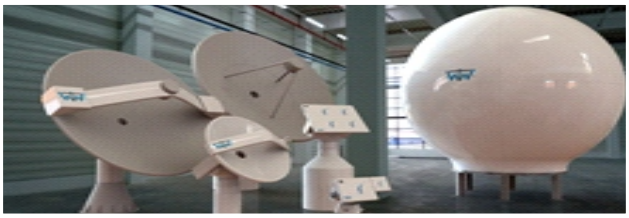
RadTrapH SRAM Cell suitable for High Energy Physics
RadTrapS SRAM Cell suitable for Space applications
RadTrapM SRAM Cell suitable for Basic Radiation Tolerance
RadTrapH SRAM Cell suitable for High Energy Physics

Rad-Hard IP'S

RedCat Devices rad-hard libraries are designed to be used in ASICs for space applications. All cells can be placed by using standard tools such as Cadence or Tanner.

RedCat Devices volatile and non volatile memories are designed specifically to be used in very aggressive environmental conditions. This means aerospace but also terrestrial environment with high temeperature or under mechanical stress. RedCat Devices suite take the best from CMOS selected processes to avoid single event upset coming from high energy ions, protons and, more generally, radiations coming from outside earth environment.

WTW TRACKING ANTENNA, GERMANY



	WTW-LS 20	WTW-C 20	WTW-LSC 20	WTW-LS 26	WTW-LSC 26
Antenna Size	650mm x 390mm	650mm x 390mm	650mm x 390mm	1160mm x 750mm	1160mm x 750mm
Frequency	L-/S-Band	C-Band	L-/S-/C-Band	L-/S-Band	L-/S-/C-Band
Gain, typical	16,0 dBi / 20,0 dBi	20,0 dBi	16,0 dBi / 20,0 dBi / 20,0 dBi	21,0 dBi / 25,0 dBi	21,0 dBi / 25,0 dBi / 24,0 dBi
3dB Beamwidth	26,5° / 16,2°	12,1°	26,5° / 16,2 / 12,1°	16,6° / 10,1°	16,6° / 10,1° / 10,0°
Polarisation	RHCP and LHCP	RHCP and LHCP	RHCP and LHCP	RHCP and LHCP	RHCP and LHCP
Weight	~25kg	~25kg	~29kg	~91kg	~95kg
Azimuth Travel	unlimited	unlimited	unlimited	unlimited	unlimited
Elevation Travel	-5° to 90°	-5° to 90°	-5° to 90°	-5° to 90°	-5° to 90°
Velocity Azimuth	60°/sec	60°/sec	60°/sec	28°/sec	28°/sec
Velocity Elevation	60°/sec	60°/sec	60°/sec	37°/sec	37°/sec
Tracking Mode	Auto, GPS, Slave, Manual	Auto, GPS, Slave, Manual	Auto, GPS, Slave, Manual	Auto, GPS, Slave, Manual	Auto, GPS, Slave, Manual

Planner Single- Dual & Tri-Band Auto Tracking Antennas

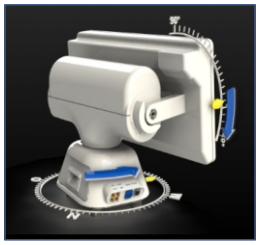
	WTW-LS 26 Parabol	WTW-LS 33 Parabol	WTW-LS 42 Parabol
Antenna Size	1,2m	2,5m	6,3m
Frequency	L-/S-Band	L-/S-Band	L-/S-Band
Gain, typical	22,0 dBi / 26,0 dBi	29,0 dBi / 33 dBi	37,0 dBi / 42,0 dBi
3dB Beamwidth	11,5° / 7,1°	5,7° / 3,4°	2,2° / 1,3
Polarisation	RHCP and LHCP	RHCP and LHCP	RHCP and LHCP
Weight	~120kg	~360kg	
Azimuth Travel	unlimited	unlimited	unlimited
Elevation Travel	-5° to 90°	-5° to 90°	-5° to 90°
Velocity Azimuth	25°/sec	28°/sec	10°/sec
Velocity Elevation	25°/sec	37°/sec	10°/sec
Tracking Mode	Auto, GPS, Slave, Manual	Auto, GPS, Slave, Manual	Auto, GPS, Slave, Manual

Parabolic Antennas

WTW-26 dual axis pedestal

WTW-26 H dual axis pedestal

WTW-26 dual axis telescope mount with Coude path

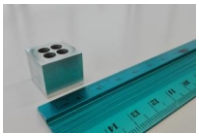


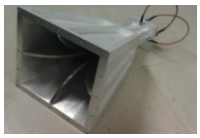
WTW-LSC 20 Dual Channel

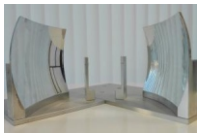
Mobile Telemetery station

ANTERAL, SPAIN

ANTENNAS







Lens Horn Antennas:
- Optimized, high performance design
- 30 db nominal gain at center frequency
- Very compact size
- Low VSWR
- Rectangular input waveguide
- Specific gain values can be requested.

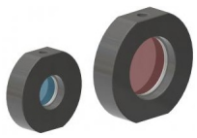
Antenna Arrays:
- From 800 MHZ to 500 GHz
- > 15 dBi gain
- Single or dual polarization
- Custom radiation pattern
- Designed for space, defense and scientific applications·

Ridge Horn Antennas:
- Large bandwidth
- Dual polarization option
- Custom design
- Return loss level·

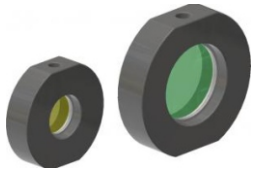
High Gain Antennas:
- From 60 Ghz to 400 GHz
- > 50 dBi gain
- Tailor feedhorns
- Single polarization·
- ·High Data Rate uo to 100Gbps

Near Field Probes:
- From 10 GHz to 750 GHz
- Sharp edged
- One piece aluminium probes
- Long-length probes
- Clamping structures available

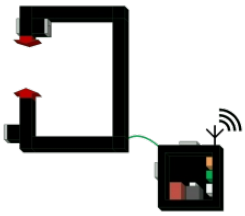
TERAHERTZ TECHNOLOGIES



Band-Stop FSS:
- Low transmittance (<5%) in stop bands
- High transmittance (60-90%) in pass bands
- Custom band stop in the frequency range from 75GHz to 500 GHz
- Very wide fractional bandwidth uo to 70%
- Ultra-low loss flexible and low dielectric constant substrate material



Band-Pass FSS:
- High transmittance(> 85%) in pass bands
- Low transmittance(<5%) in stop bands
- Custom band stop in the frequency range from 75 Ghz to 500 GHZ
- Narrow and wide fractional bandwidth up to 15% and 120% respectively
- Ultra-low loss flexible and low dielectric constant substrate material



Industrial Systems:
We are experts at developing products and measurement systems in the terahertz frequency range, including field polarizers for milimeter and Thz waves. Our Thz measurement systems (custom-designed to meet each client's needs) are made to be able to image and

MEG - MICROWAVE ENGINEERING GROUP, ISRAEL

About Us

MEG, Microwave Engineering Group established in 2011 as a privately owned company that specializes in the R&D and manufacturing of passive RF components and sub-systems.

MEG is a well established company leading the Israeli market with proven capacity and experience in the military Arena

Our products are based on highly advanced Software design tools and excel in the design and manufacturing of unique solutions, made to meet the specific requirements of each customer offering a real edge on the direct competition

NO END USER STATEMENT REQUIREMENT

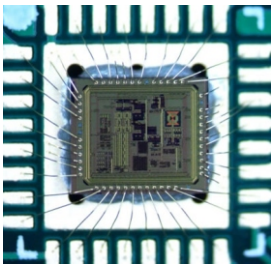
The main specialty of **MEG** is in high frequency high Power product that meets the most restrict Mil. Standards Backed up by **As9100** certification MEG assures high Performing products combined with High level of quality assurance.

The quality of MEG's products makes the man ideal Choice for a variety of applications including military, Commercial, Avionic, Marine and space.

The innovative and highly advanced Israeli technology markets create an abundance of RF products challenges, Those challenges are successfully met by MEG to the complete Satisfaction of its customers.

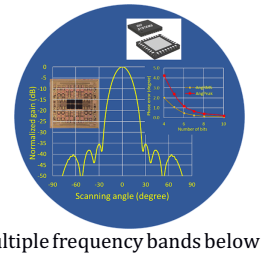
RIO SYSTEMS, ISRAEL/BRAZIL

Rs9023 broad band receiver



- General purpose receiver below 1.8 Ghz
- Applications for GNSS systems
- Applications in satellite and phase arrays

Core Ics



*Available at multiple frequency bands below 11 Ghz

*Available as single and dual-polarized core Ics

*Available at different configurations and MIMO support

TX core IC

RX core IC

TX/RX core IC

*Number of channels

4 and 8 channels

* Core IC customization to frequencies at Ku-band and above

*Phase array calibration

*Behavioral modeling for the core IC and phase arrays

*Measurement automatization

Software for radio interface

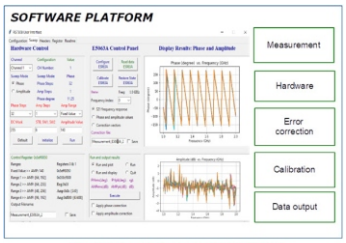
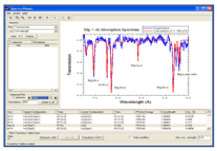


Figure 1. Software platform for automatization and testing

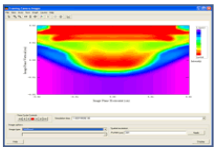
- Signal conditioner for supply modulation
- Echo cancellation and beam forming

PRISM COMPUTATIONAL SCIENCE INC, USA



PrismSPECT

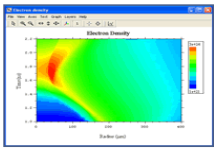
-PrismSPECT is a collisional-radiative spectral analysis code
-designed to simulate the atomic and radiative properties of laboratory & astrophysical plasmas



SPECT3D

-SPECT3D is a multi-D collisional-radiative spectral analysis code

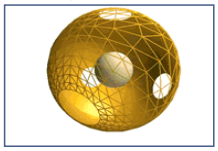
-SPECT3D computes spectral properties (emission and absorption) and ionization properties for LTE and non-LTE plasmas.



HELIOS

-HELIOS is a 1-D radiation hydrodynamics code

-designed to study the hydrodynamic evolution of radiating plasmas

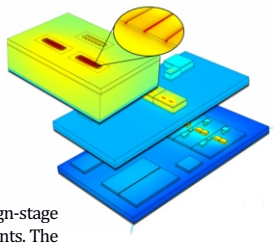


VisRad

-VISRAD is a 3-D thermal radiation and CAD code

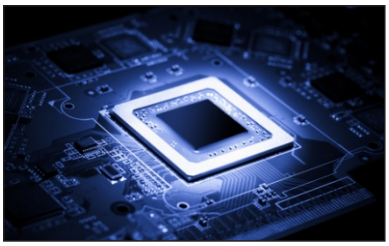
-simulates the reflection, emission and absorption of light radiation throughout a complex system of surfaces.

CAPSYM INC, USA



SYMMIC is a software package for design-stage thermal analysis of high power RF components. The easy-to-use simulator facilitates detailed analysis of heating in Field Effect Transistors(FETs) and Monolithic Microwave Integrated Circuits(MMICs). Packaging of MMICs into radar and communication systems can be further analyzed to determine the impact of subsystem design on peak junction temperatures within individual FETs. SYMMIC is a transformative tool enabling transistor, circuit and packaging designers to obtain optimal performance and reliability in next-generation RF and power systems. Contact us for pricing and details.

LORENTZ SOLUTION,USA



Electromagnetic Design Platform

Lorentz Solution's PeakView™ is an innovative electromagnetic design platform for high speed analog and RFIC design and analysis. PeakView™ products are assimilated into the Virtuoso® environment, Laker™ layout editor, and customary RC extraction flows, providing designers with a familiar IC design experience.

PeakView

PeakView EMD™ is a fast, 3D, full-wave and high-precision electromagnetic solver for on-chip passive device synthesis.

PeakView

PeakView's LEM™ solution provides users with a fast, easy to use, 3D EM modeling capability from within their design environment.

PeakView

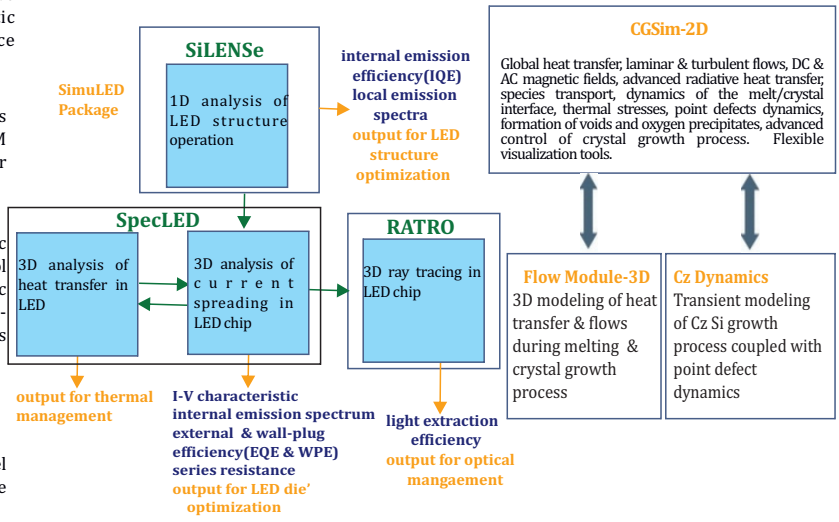
PeakView™ HFD™ is an electromagnetic and parasitic inductance extraction tool for evaluating the electromagnetic behavior of critical signal paths in high-speed designs for advanced process nodes.

PkPCB™

We have developed a user-friendly, novel utility PkPCB™ equipped for IC, package

STR GROUP-SOFT-IMPACT LTD,RUSSIA

EDA TOOLS for simulation and optimization of crystal growth techniques and for modeling of semiconductor based devices.



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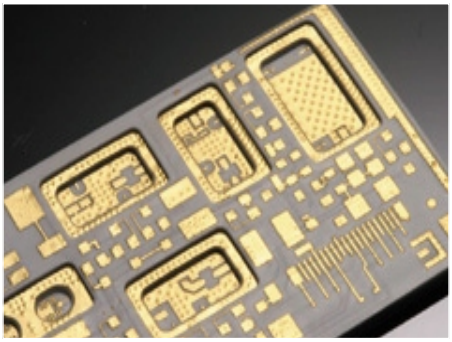
- Waveguide Bandpass Filters

HIRAI SK CORPORATION, JAPAN

LTCC Process



Advantageous Substrate Technology for Module Miniaturization

- Glass-ceramics are fired under 1000 degrees, therefore Ag, AgPd and Au can be used as co-fired inner conductor.
- In addition, the signal delay becomes shorter due to low dielectric constant which is lower than Alumina substrates.
- Because thermal expansion coefficient of LTCC is similar to silicon, it is easy to bond die directly to the pad or to be connected flip chip.

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