

CONDENSED REFERENCE CATALOG



RESISTORS | TERMINATIONS | ATTENUATORS | CABLE ASSEMBLIES
surface mount | flange mount | coaxial



PASSIVE POWER SOLUTIONS



TERMINATIONS

We offer a full line of high power terminations including tab & cover, flange mounted, threaded, stripline flange, pill, coaxial and coaxial remote terminations (CRT). Our tuned circuit chip designs deliver the lowest VSWR while extending frequency ranges for broadband applications. Some designs are capable of handling power up to 1KW and frequencies up to 26.5 GHz.



ATTENUATORS

Our attenuators are ideal for use in many high power applications and available in several package styles including: chip, tab & cover, flange mounted and coaxial models. Various designs handle input powers from 0.5 to 400W and cover frequencies up to 18 GHz. Typical values are available from 0dB to 30dB in 1dB increments. Custom designs and values are available upon request.



RESISTORS

We provide a full array of resistor packages that include surface mount chips, tab & cover, flange mounted and rod types. Power handling up to 1KW. Many standard designs offer tuning to minimize parasitic capacitance. These devices can be supplied in a wide range of resistance values, typically from 1 ohm to 1K ohms. Also available are resistance cards using Fiberglass, Mylar, Kapton & Mica substrates and can be supplied in resistance values up to 1,000 ohms per square.



SIGNAL DISTRIBUTION

Our HybriX brand of signal processing components is comprised of hybrid couplers, directional couplers, 2-, 3-, 4-way power dividers, crossovers and DC blocks. These components are all surface mountable except for the DC block, which is available in an SMA package. The SMT devices provide the highest amount of power in the smallest package available.



DESIGN KITS

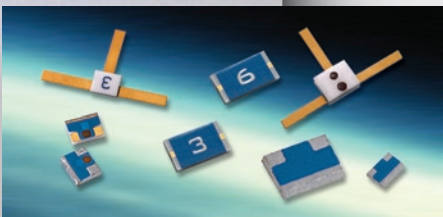
EMC Technology and Florida RF Labs offer many standard design kits that are ideal for your prototyping requirements. Design kits are available for temperature variable attenuators (TVA), fixed attenuators, terminations, resistors, equalizers & SMT couplers. We can also customize kits to meet your specific electrical and mechanical requirements.

CUSTOM ENGINEERED SOLUTIONS



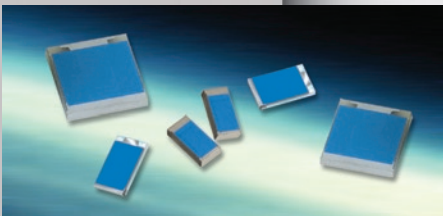
TEMPERATURE VARIABLE ATTENUATORS – THERMOPAD®

Several varieties of our very popular Thermopads are available in many dB values and with various temperature curves. Thermopads compensate for gain variation over temperature. They are available in planar, SMT and wire bondable chip mounting styles. They can also be supplied in a convenient SMA coaxial package. This product line covers frequency bands from DC to 36 GHz. Hi-rel & custom versions also available upon request.



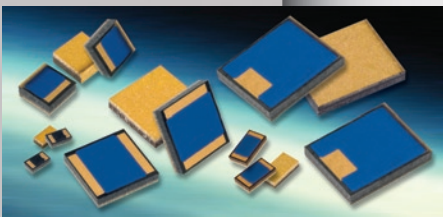
FIXED ATTENUATORS

Available in 0.1 to 20W versions, covering DC to 36 GHz applications and offered in 0 to 20 dB values. All package sizes are available in an SMT, wire bondable gold terminals, tabbed configurations, and full ground plane chip mountings. Also available in an SMA package. Custom dB values, tight tolerance, 1/2 dB steps and Hi-rel versions also offered.



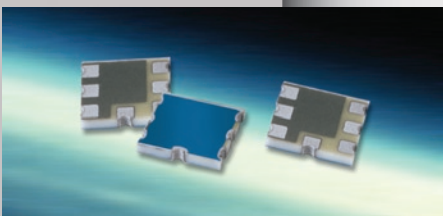
HIGH POWER & SMT TERMINATIONS

High Power, full ground plane used for power filter/combiners and isolators as well as PCB mount, pick & place ready SMT terminations are available for DC to 26.5 GHz applications. Both tin/lead and RoHS compliant versions are offered using Alumina, BeO, and Aluminum Nitride substrates for almost all styles and sizes, handling as much as 250W.



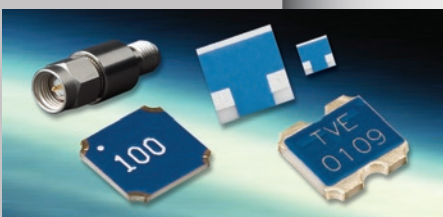
ULTRA HIGH POWER TERMINATIONS AND RESISTORS ON DIAMOND

EMC offers terminations and resistors covering DC to 18 GHz applications in extremely small yet very high power chip packages. They are excellent for use where size, frequency response and power are critical. Since they are manufactured using a proprietary total thin film process they are also excellent for high reliability and peak power applications. Available in various package sizes, from 0402 to 1310, some handling as much as 150 CW.



POWER SENSING TERMINATIONS (PST) – SMART LOAD®

True RMS power detection from DC to 6 GHz. The Smart Load can be used in closed loop applications for power and fault detection as well as in feedback loops as a VSWR detector. Three varieties are available with different response times and sensitivity levels.



FREQUENCY EQUALIZERS

Chip and Coaxial Frequency Equalizers offer frequency slope correction from 500 MHz to 18 GHz in multiple frequency bands and with 1-4 dB of compensation. In addition, they can be custom designed to provide temperature and frequency compensation in the same passive chip. These are available in SMT, wire bondable and SMA package styles.

CABLE ASSEMBLY SOLUTIONS



LAB FLEX® CABLE ASSEMBLIES

A complete line of specialized cables that offer high velocity, low loss dielectrics that provide up to 40% less loss than conventional cable types. Custom braids provide superior mechanical strength and shielding greater than 90 dB. All connectors have all stainless steel construction and are also watertight. Assemblies are available with various protective coverings for use in the most demanding environments. These cost-effective, high performance cables are available with most standard connector interfaces for use up to 50 GHz. We offer phase matching, group delay or absolute electrical lengths as needed.



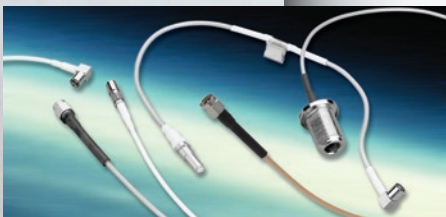
SEMI-RIGID CABLE ASSEMBLIES

Semi-Rigid cable offers the best shielding performance of all cables offered. They are typically formed to customer specifications and are ready to install. Space-qualified cables can be manufactured, tested and documented to your specifications. Unformed assemblies can be provided for final shaping at the installation site (proper forming tools are required.) Low loss versions are also available. These can be supplied with either copper or aluminum jackets. Pre-conditioning is standard. Popular outer diameters are: .047", .085", and .141". Others available upon request.



CONFORMABLE® CABLE ASSEMBLIES

Our Conformable® BJ cable family offers the option of a hand-formable replacement to Semi-Rigid cable with only a slight isolation and insertion loss penalty. Florida RF Labs' hand-formable assemblies include a metal foil under the copper-tin composite shield for added connector attachment strength and improved isolation. Available in .047", .085" and .141" diameters. Additional protective jackets can also be supplied as needed.



STANDARD FLEXIBLE CABLE ASSEMBLIES

This group of cables includes familiar RG cables that have been superseded with MIL-C-17 numbers and alternative custom cables with improved electrical performance over standard M17 versions. These cables have been grouped by outside diameter. All military cables supplied by Florida RF Labs are purchased to the MIL-C-17 specification and no longer carry the RG designation. For example, RG316 has been replaced by M17/113-RG316.



SPECIALTY CABLE ASSEMBLIES

The Specialty Family of cables includes a variety of unique application products. It includes the Mini Flex types which are flexible alternatives to semi-rigid & semi-flexible cables. Also included is our K-Jumper, which is a cost-effective/high frequency interconnect assembly. We also design and manufacture delay lines and baluns (or impedance transformers) to meet your specific applications.

CAPABILITIES



Beyond our extensive list of products, we also offer many solution-based capabilities, shown below.

Whether your challenges are related to electrical performance, process, manufacturing or purely mechanical, we can help you solve them.

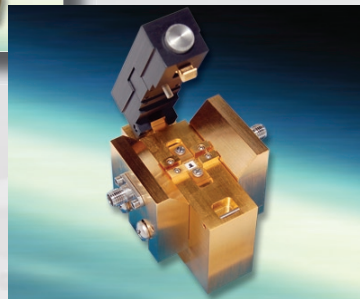
CABLE ASSEMBLIES

**Solution Engineering
(Electrical & Mechanical)**
Applications to 65 GHz
Phase matching (Pairs & Sets)
Absolute electrical length
Phase offsets
Space Qualified assemblies
Custom pre-conditioning
Solder joint x-ray
Ruggedized "Battlefield" construction
Custom interfaces
Custom marking
Plenum assemblies

RF COMPONENTS

**Custom Engineered
Solutions**
Applications to 40 GHz
Thick & thin film technologies
Hi-Rel testing
Serialized data
Custom lead forming
Welded leads
Pre-tinning
Performance tuning
Modeling data
Odd impedances
Low capacitance designs
Peak power designs
Integrated passive components
Custom design kits
RoHS compliance available
Laser marking

All products offer quick-turn custom solutions to meet your tough electrical and mechanical requirements.





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