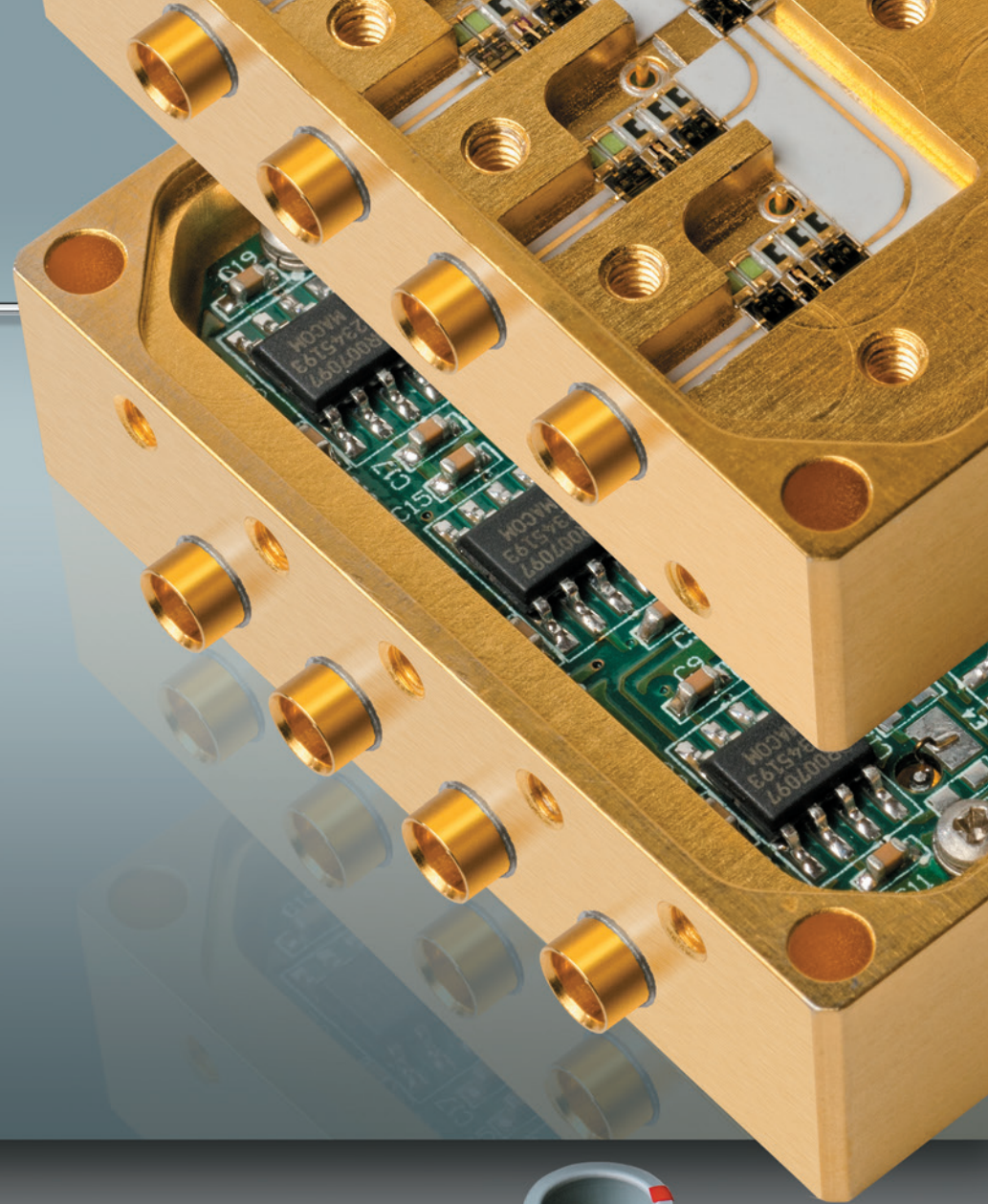




Get the Edge

Full-service RF/Microwave and PCB Assembly



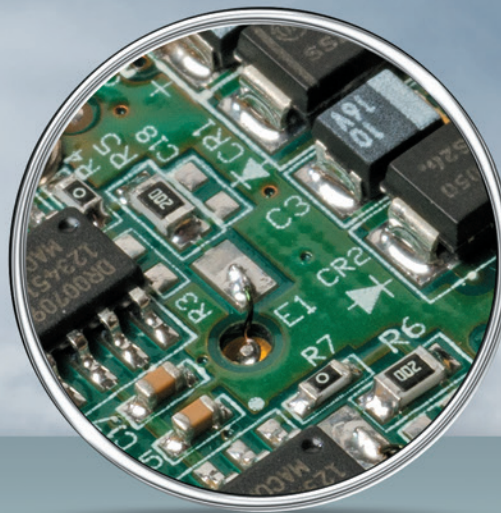
Leverage our expert services and high-quality supplies when the market just won't wait.

With a focus on smoothing out the procurement process for buyers and engineering teams alike, SemiGen offers a full-circle procurement chain like no other. It includes a suite of expert design, assembly, test, and repair services, as well as first-rate tools, materials and devices for all your low- and high-volume manufacturing requirements. Review our suite of services and supplies today and leverage us wherever and whenever you need us. To place a request for a quote for services and diodes, and to shop for and place orders for bonding supplies, please visit our website at www.SemiGen.net.



RF/Microwave Assembly

SemiGen is vastly experienced in the manufacturing of RF, microwave, and millimeter-wave circuits and assemblies, with particular expertise in mixed RF/digital assembly—including microcontrollers.



Automated PCB Assembly

For high-mix, low- to medium-volume printed circuit board assembly (PCBA) SemiGen is your machine of efficiency.



Testing

As a true full-service supplier, SemiGen is dedicated to providing turnkey electrical and quality testing of your RF/microwave hybrids and components up through 50 GHz in our in-house test lab.



Design Services

As the RF/microwave landscape is shifting towards more integrated assemblies, or super-components, you need a business partner that can assist when you're presented with design challenges and when things come back from the field.



RF Supply Center

You asked, we listened. Located adjacent to the SemiGen manufacturing center, our new RF Supply Center offers you just-in-time delivery of our own high-quality diodes and passive devices, custom laser-cut epoxy pre-forms, and the most-often-used conductive and non-conductive epoxies, bonding wire and ribbon, and wire-bonding tools.

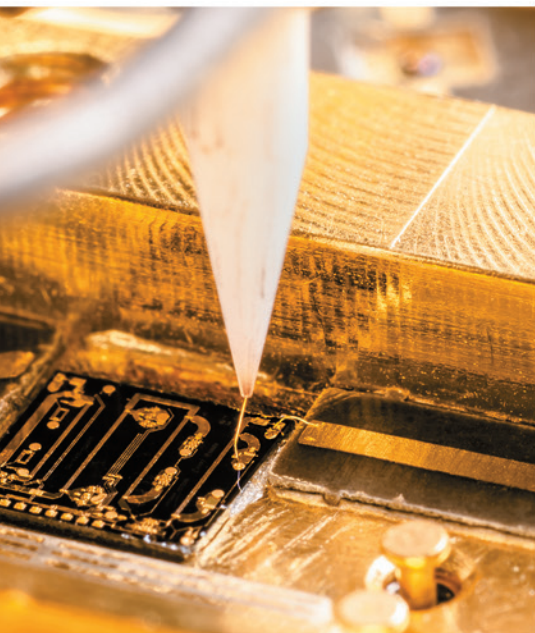


RF and digital assembly expertise you can rely on.



SemiGen is vastly experienced in the manufacturing of RF, microwave, and millimeter-wave circuits and assemblies, with particular expertise in mixed RF/digital assembly—including microcontrollers. Our dedicated team of highly trained and certified assemblers are experts in advanced thermo compression, ultrasonic, ball-bonding, and hand-assembly techniques. For precision assembly our automatic bonding and die attach equipment is trusted by leading brands when component position, loop height, and spacing are critical to performance.

In addition to RF/microwave assembly, SemiGen is also experienced in producing industrial transducers, encoders, and control boards; medical sensors and instrumentation boards; and optoelectronic LED assemblies, receivers, and drivers.

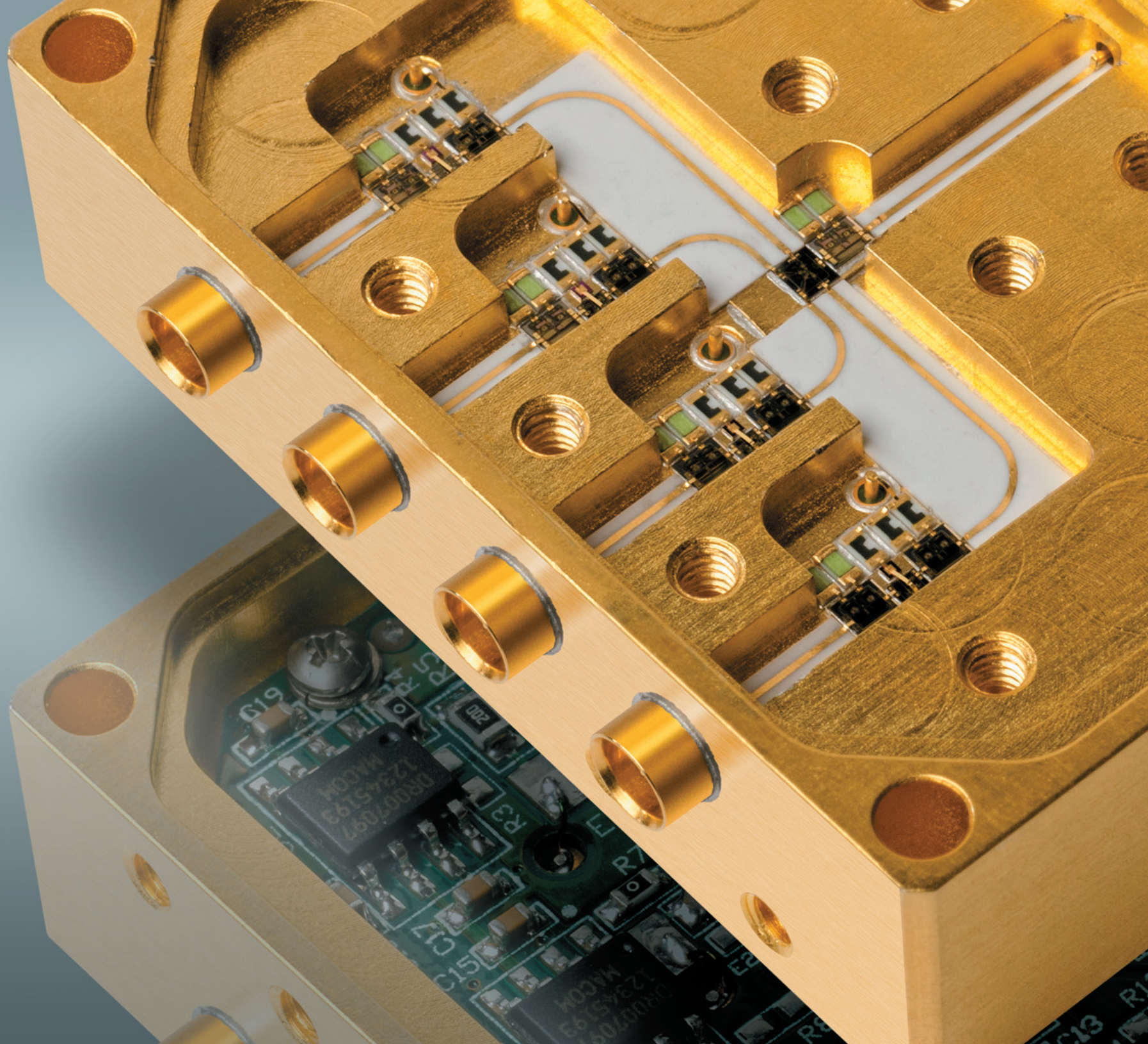


Standard Services:

- Die attachment (epoxy or solder)
- Wire bonding (gold and aluminum wire)
- Ribbon bonding
- Coil winding and tacking
- Beam lead diode attachment
- Feedthru installation
- Board installation (epoxy, solder, screw-down)
- Hand soldering
- Surface mounting
- Epoxy encapsulation

We Assemble:

- Amplifiers
- Attenuators
- Detectors
- Diodes
- Drivers (chip/wire)
- Duplexers
- FETs
- Filters
- Mixers
- Multi-function assemblies
- Optical components
- Oscillators
- Power supplies
- Receivers
- Sensors
- Switches
- Transistors
- Transmitters
- Up/downconverters





Test Parameters:

Isolation
Insertion loss
Gain
Noise figure
VSWR
Phase and phase tracking
IP3
Switching speed
Various power testing
Lifetime
Series resistance
DC electricals VF, VB, CT, IR
Bond-pull testing and die-shear
Failure analysis of diodes

Repair Services:

Repair and upgrade of field returns
Repair of legacy military hardware
Redesign of legacy military hardware

With testing capabilities through 50 GHz, your orders will come ready to ship.

As a true full-service supplier, SemiGen is dedicated to providing turnkey electrical and quality testing of your RF/microwave hybrids and components up to 50 GHz in our in-house test lab. We also provide final inspection and test reports with Certificate of Compliance, as well as full tuning to your requirements. Typical tuning methods include stub tuning, impedance-matching, capacitive, and inductive.

Semiconductor Up-Screening

SemiGen also offers complete semiconductor up-screening for all commercial parts that need to be certified to military specifications. We have experience with screening to Class H, Class K, MIL-PRF-38534, MIL-STD-750, MIL-STD-883 and all JAN, JANTX, JANTXV specifications.

RF Module Repair and Troubleshooting

Having trouble with a component? Not sure what your failure mode is? Look to SemiGen to solve these problems by providing expert repair services of products like attenuators, filters, oscillators, gain controllers, switches or amplifiers by reverse engineering the problem and in some cases sourcing obsolete parts and returning your unit to full functionality.



SMT Assembly Capabilities:

High-mix automated PCBA

Manual through-hole

Leadless

Fine pitch

VGA/BGA

Micro BGA

QFP

LIDS

Diverse passive components

Large boards up to 44" x 32"
and 1/2" thick

Odd-shaped boards

Intelligent Surface Impact
Control (ISIC)

Lead-free

Design services

Quick-turn prototypes

The expert PCB assembly approach you need, especially when the mix includes a VGA.

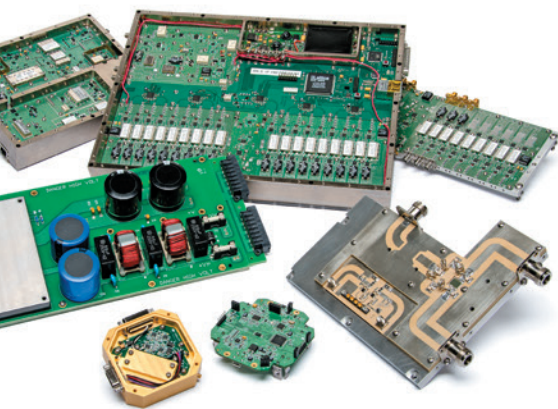
For high-mix, low- to medium-volume printed circuit board assembly (PCBA) SemiGen is your machine of efficiency. We help manufacturers of military electronics, commercial products, and medical instrumentation with their leadless, fine-pitch, BGA, and QFP assembly requirements by using our team of certified J-STD-001 and IPC 610 assemblers, two fully automated, surface-mount MYDATA machines and high-temperature multizoned reflow ovens. We're proficient in VGA placement and also offer additional through-hole manufacturing capabilities to support your unique challenges. You can rest assured that whatever your requirements are, your boards will be delivered with the utmost quality and care.

A Full Range of Automated Component Handling

SemiGen's automated PCB line can handle and place a full range of components on virtually any board. This includes everything from 00105 and CSP/FC components to complicated BGA and QFP types. With the trend towards miniaturization and odd-shaped components, it's essential to have a partner with an all-in-one machine, and more importantly, the experienced staff to run it.



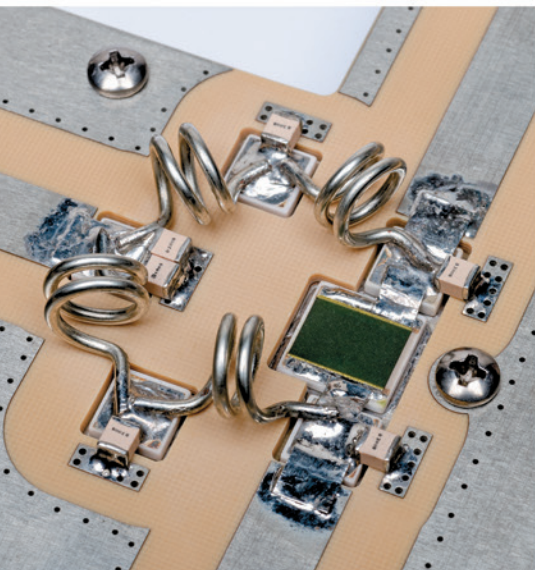
We're here for you from beginning to end.



As the RF/microwave landscape is shifting towards more integrated assemblies, or super-components, you need a business partner that can assist when you're presented with design challenges. Enter SemiGen/SWT, SemiGen's unique RF/microwave, and digital design services offered in collaboration with the microwave engineering experts at Saltwhistle Technologies. Not only can SemiGen/SWT help you with your unique RF and digital engineering challenges, we can help you from writing the spec, to manufacturing the first prototype, through redesign and qualification, and eventually through full-volume assembly of your most complex, integrated assemblies.

Lean on the SemiGen/SWT design team when maximum system performance at the lowest cost is a key driver of your next design. We're experienced in designing and integrating everything from amplifiers, attenuators, switches, oscillators, synthesizers, filters, couplers, mixers, and more into one cohesive module complete with digital microcontroller circuitry.

As an added plus, our phased approach to payments is based on milestones, so you know exactly where you are financially and when you can expect each stage of development to be complete.

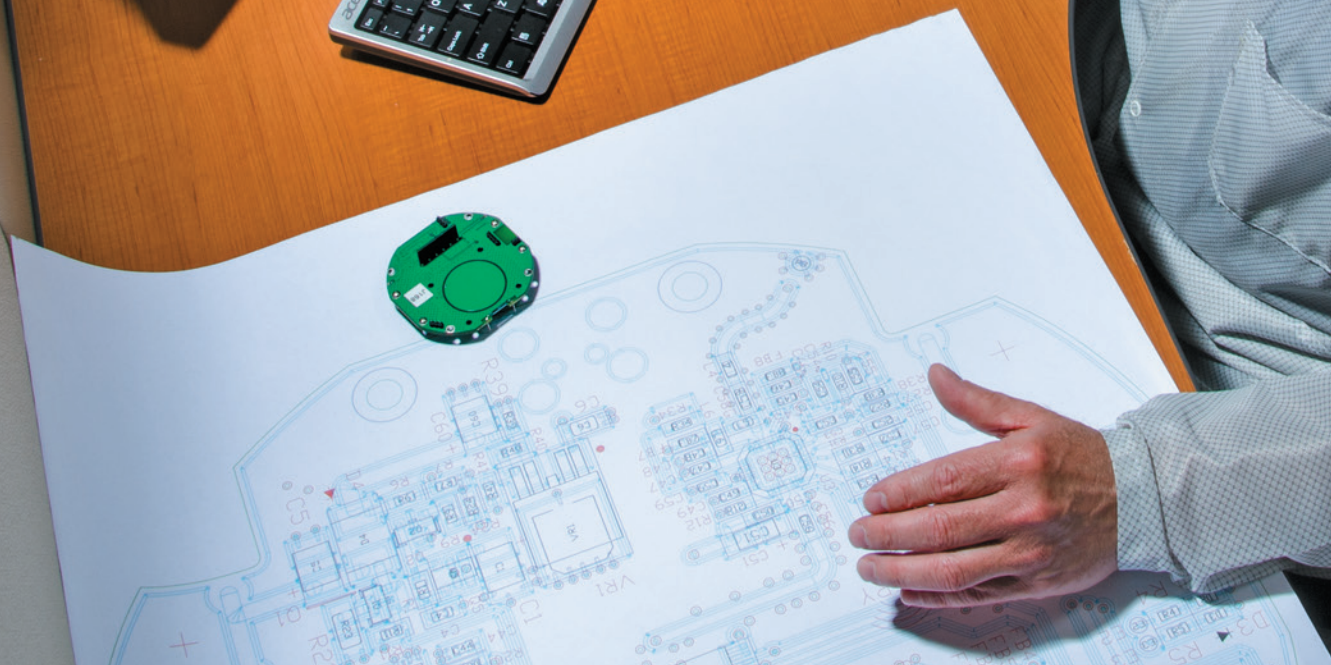


Design of RF/Microwave Assemblies:

- Receivers
- Transmitters/exciters
- Frequency synthesizers
- Frequency converters
- Frequency multipliers
- Microwave switched filters
- Millimeter-wave switches
- High-power pulsed-power amplifiers
- High-power combiners and directional couplers
- Low-cost radar sensors

Engineering Services:

- Rapid RF prototyping
- RF and microwave mechanical packaging
- RF and microwave circuit board design
- RF component testing services
- ATE software development



920



ISO 9001:2008
REGISTERED

ITAR
REGISTERED

A fully accredited facility and quality-minded, expertly trained personnel.

All work at SemiGen is performed in a clean and controlled environment. Our RF/microwave products and diodes are built in a class 10,000 cleanroom environment. We are deeply experienced at meeting the stringent quality requirements of the RF/microwave, telecom, EW, defense, military, homeland security, optical, and medical electronics industries.

SemiGen is an ISO 9001-2008 certified company. We are also ITAR registered and comply with MIL-STD-883, MIL-STD-19500, MIL-PRF-38534, and MIL-STD-750, Class H and K. All employees are trained to these MIL-STD quality requirements and many are J-STD-001 certified.

Our ISO quality system and team of dedicated professionals ensure your products are designed, assembled and tested to the latest requirements and with the utmost quality at all times.



Easing the pain of diode procurement and the hunt for bonding supplies.

You asked, we listened. Located within the SemiGen manufacturing floor, our new RF Supply Center offers you just-in-time delivery of our own fabricated, high-quality diodes and passive devices, custom laser-cut epoxy preforms, epoxies, pastes and the most often used wire bonding tools and materials. You can have them shipped to you for your own use or order them for your kits here on our floor. Either way, they're here to help you fit one more piece of the puzzle together. Whether it is a PIN diode, chip capacitor or conductive epoxy, SemiGen completes your supply chain needs.

Our diodes and passive devices are our own proprietary, high quality designs and they are fabricated in the United States using a qualified foundry partner. In addition, our supply center carries the most popular gold wire and ribbon, film adhesives, encapsulants, epoxy pastes, and bonding tools from the world's leading suppliers.

Diodes:

SemiGen limiter diodes

SemiGen PIN diodes

SemiGen capacitors

SemiGen resistors

SemiGen attenuator pads

Bonding Supplies:

Custom laser-cut epoxy pre-forms

Ablestik conductive and non-conductive pastes and films

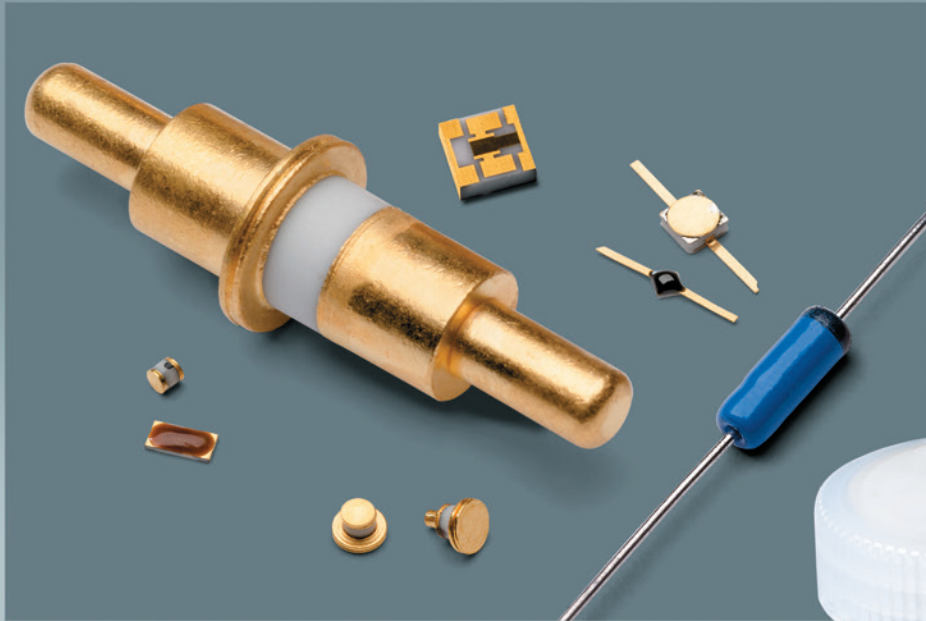
Epoxy Technology conductive paste

Hysol encapsulants and glop tops

Semiconductor Packaging Materials bonding wire and ribbon

Gaiser/Coorstek tungsten wire, unplugging probes, ball-bonding capillaries, wedge tools, waffle-tacking tools

RF Supply Center



PIN Diodes

The SemiGen SGP7000 series of PIN Diodes are processed with a high-resistivity epi that have intrinsic layers that range in thickness from 4 micron to 200 micron depending on performance specifications. These devices are typically manufactured with either a robust thermal-oxide passivation or ceramic glass for durable high-power applications. These diodes are made with a grown junction P++ layer that yields abrupt junction structures that provide low punch through voltages and minimize autodoping. They are available as chips or in your choice of packages.

Features:

- Low Capacitance and Resistance
- Easily Bondable with our F.A.C. Mesas
- High Reliability

Applications:

For use in low- to high-power switch, attenuator, duplexer and phase-shifting applications from 2 to 20 GHz.

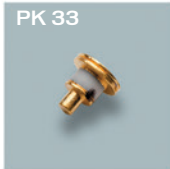
High-Voltage PINs					
Vb 10 μ A Volts MIN	CT V=100 V F = 1 MHz pf MAX	TL = 10 mA μ sec MIN	RS @ 100 mA, F = 100 MHz Ohms MAX	Thermal Resistance (C/W) Typical	Part Number
1000	0.10	1.00	1.50	30.00	SGP7070
1000	0.25	2.00	1.20	25.00	SGP7071
1000	0.50	3.00	1.00	20.00	SGP7072
1000	0.75	3.50	0.80	10.00	SGP7073
1000	1.30	4.00	0.40	8.00	SGP7074
1000	2.50	4.50	0.35	5.00	SGP7075

Medium-Power General-Purpose PINs							
Vb 10 μ A Volts MIN	Cj-10 MAX (PF)	TL TYP (nS)	Δ jc MAX deg C/W	TS, MAX NS	RS @ 75 mA OHMS MAX	RS @ 20mA OHMS TYP	Part Number
200	0.03	400	65	20	2.60	3.50	SGP7040
200	0.07	400	60	20	1.50	2.20	SGP7041
200	0.10	400	55	20	1.30	2.00	SGP7042
200	0.15	400	50	20	1.00	1.90	SGP7043
200	0.20	400	45	20	0.80	1.70	SGP7044
200	0.30	400	40	20	0.70	1.40	SGP7045
200	0.50	400	20	20	0.60	1.20	SGP7046
200	0.03	600	60	25	2.60	3.50	SGP7047
200	0.07	600	55	25	1.60	3.20	SGP7048
200	0.10	600	50	25	1.20	2.00	SGP7049
200	1.50	600	45	25	0.90	1.90	SGP7050
200	0.20	600	40	25	0.80	1.70	SGP7051
200	0.30	600	35	25	0.70	1.40	SGP7052
200	0.50	600	15	25	0.60	1.20	SGP7053

High-Power Switching and Attenuation PINs							
Vb 10 μ A Volts MIN	Cj-10 MAX (PF)	TL TYP (μ S)	Rs @ 1 mA MAX (Ohms)	Rs @ 10 mA MAX (Ohms)	Rs @ 100 mA MAX (Ohms)	ϕ jc MAX deg C/W	Part Number
250	0.05	1.00	25.00	10.00	2.00	20.00	SGP7060
250	0.08	1.00	20.00	8.00	1.50	20.00	SGP7061
250	0.10	1.00	15.00	6.00	1.20	20.00	SGP7062
250	0.20	1.00	8.00	3.50	1.00	15.00	SGP7063
250	0.30	1.50	6.00	2.00	0.80	15.00	SGP7064
500	0.08	1.50	40.00	8.00	1.50	15.00	SGP7065
500	0.10	1.50	15.00	5.00	1.20	15.00	SGP7066
500	0.20	1.50	10.00	4.00	1.00	12.00	SGP7067
500	0.30	2.00	8.00	3.50	0.80	10.00	SGP7068
500	0.50	2.00	6.00	2.00	0.70	10.00	SGP7069

Ultra-Fast Switching PINs							
Vb 10 μ A Volts MIN	Cj-10 MAX (PF)	TL TYP (nS)	ϕ jc MAX deg C/W	TS. MAX NS	RS @ 50 mA OHMS MAX	RS @ 10mA OHMS TYP	Part Number
25	0.10	10	60	1.5	0.70	1.00	SGP7010
25	0.15	10	50	1.5	0.55	0.80	SGP7011
25	0.20	10	40	1.5	0.45	0.70	SGP7012
25	0.25	10	35	1.5	0.40	0.60	SGP7013

Fast-Switching, Low-Power PINs							
Vb 10 μ A Volts MIN	Cj-10 MAX (PF)	TL TYP (nS)	ϕ jc MAX deg C/W	TS. MAX NS	RS @ 75 mA OHMS MAX	RS @ 20mA OHMS TYP	Part Number
70	0.05	60	80	5	0.90	1.20	SGP7020
70	0.10	60	70	5	0.70	1.00	SGP7021
70	0.15	60	60	5	0.60	0.90	SGP7022
70	0.20	60	55	5	0.50	0.70	SGP7023
70	0.25	60	50	5	0.45	0.50	SGP7024
100	0.03	100	90	10	1.20	1.90	SGP7025
100	0.07	100	80	10	0.90	1.50	SGP7026
100	0.10	100	70	10	0.70	1.20	SGP7027
100	0.15	100	60	10	0.60	1.00	SGP7028
100	0.20	100	55	10	0.50	0.90	SGP7029
100	0.30	100	50	15	0.45	0.80	SGP7030
200	0.03	225	90	15	1.90	3.00	SGP7031
200	0.07	225	80	15	1.20	2.20	SGP7032
200	0.10	225	70	15	0.90	1.60	SGP7033
200	0.15	225	60	15	0.80	1.00	SGP7034
200	0.20	225	55	15	0.70	0.80	SGP7035
200	0.30	225	50	15	0.60	0.70	SGP7036



Limiter Diodes

The SemiGen SLP7100 series of Limiter Diodes are processed with a high-resistivity epi that have thin intrinsic layers. These devices are typically in the 2 to 20 micron range of epi thickness and can be gold doped to achieve specific performance goals. These diodes are used in passive or active limiter designs in the 100 MHz to 30 GHz frequency ranges. They are ideal for use in high-power applications and can be supplied in chip form or in your choice of packages below.

Features:

- Low Capacitance and Resistance
- Easily Bondable
- Low Loss
- Fast Turn-on Time

Applications:

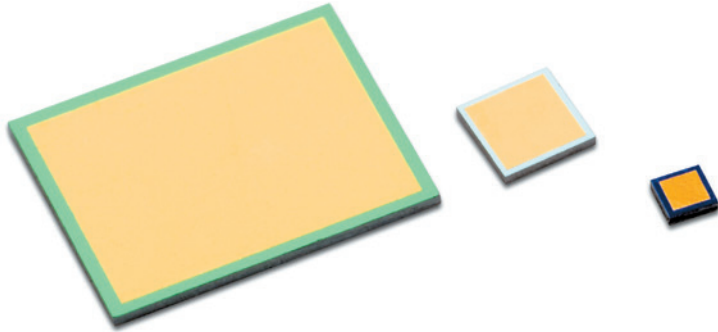
For use in waveguide, stripline, coax or microstrip in single- or multi-chip devices depending on power handling and performance goals.

V _b TYP (V)	C _{j0} TYP (pf)	C _{j6} MAX (pf)	R _s Typ @ 10 mA (Ω)	R _s Typ @ 1 mA (Ω)	TL TYP (nS)	Max Thermal Resistance (°C/W)	Max Peak Pin @ 1.0 Ωs (dBm)	Typical Threshold (dB)	Leakage P out TYP (dBm)	Insertion Loss TYP (dB)	CW Pin MAX (W)	Part Number
15-30	0.12	0.10	2.00	4.00	5	120	+47	+7	+19	0.10	2.00	SLP7130
15-30	0.20	0.15	1.50	3.00	5	80	+50	+7	+22	0.10	3.00	SLP7131
20-45	0.20	0.15	1.50	5.00	5	100	+50	+10	+22	0.10	2.00	SLP7100
20-45	0.50	0.30	1.20	4.50	10	80	+53	+10	+24	0.20	3.00	SLP7101
20-45	0.70	0.50	1.00	4.00	10	55	+56	+10	+25	0.20	4.00	SLP7102
30-60	0.12	0.10	2.00	4.00	7	100	+47	+12	+24	0.10	3.00	SLP7140
30-60	0.20	0.15	1.50	4.00	7	70	+50	+12	+27	0.10	4.00	SLP7141
45-75	0.20	0.15	1.50	4.00	10	80	+53	+15	+27	0.10	3.00	SLP7110
45-75	0.50	0.30	1.20	3.50	15	60	+56	+15	+29	0.20	4.00	SLP7111
45-75	0.70	0.50	1.00	3.00	20	40	+59	+15	+31	0.20	5.00	SLP7112
120-180	0.20	0.15	1.50	3.50	50	40	+60	+20	+39	0.10	5.00	SLP7120
120-180	0.60	0.30	1.00	3.00	50	20	+63	+20	+41	0.20	1.00	SLP7121
120-180	0.80	0.50	0.50	3.00	100	15	+66	+20	+44	0.20	1.00	SLP7122



Chip Capacitors

The SemiGen 8000 and 8100 series of Chip Capacitors are available in a wide variety of capacitance ranges and sizes. They are made with prime starting material and consist of an Oxide/Nitride layer that provides low dielectric loss and high standoff voltage. These products are available in chip form only.



Features:

- Very High Q
- Low Temperature Coefficients
- Low Dissipation Factor
- Long-Term Stability
- Gold Contacts Front and Back
- Die as Thin as 3 mils for Limiting Inductance

Applications:

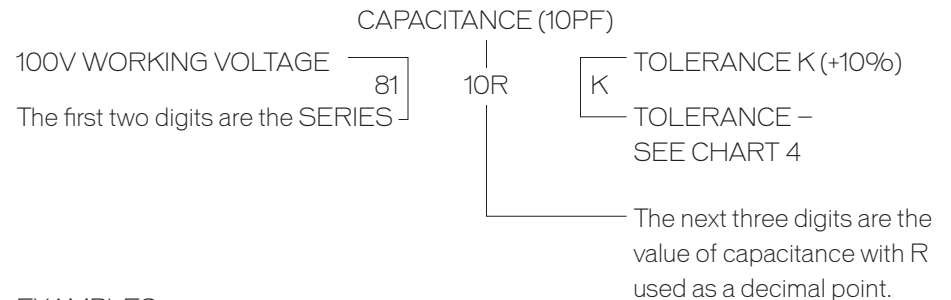
For use in applications that require DC protection, RF bypassing or fixed tuning of amplifiers, oscillators, switches, filters and multipliers.

HOW TO ORDER:

- Go to 8100 Series chart.
Select capacitance range required.
Check CHIP size for compatibility with your circuit.
- Go to 8000 Series chart for smaller chip size with lower working voltage.
- Specify part number.

8100 Series Capacitors, Working Voltage >100V		
Capacitance Range	Chip Size (+/- .002") Dim A x Dim B x Dim C	Type
0.1 pf thru 1.9 pf	.010" x .010" x .005"	810R1 thru 811R9
2.0 pf thru 9.9 pf	.015" x .015" x .005"	812R0 thru 819R9
10.0 pf thru 29.0 pf	.020" x .020" x .006"	8110R thru 8129R
30.0 pf thru 49.0 pf	.030" x .030" x .006"	8130R thru 8149R
50.0 pf thru 99.0 pf	.040" x .040" x .008"	8150R thru 8199R
100 pf thru 199 pf	.050" x .050" x .008"	81100 thru 81199
200 pf thru 399 pf	.070" x .070" x .008"	81200 thru 81399

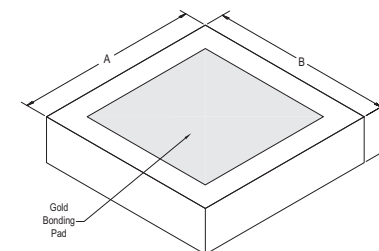
8000 Series Capacitors, Working Voltage >50V		
Capacitance Range	Chip Size (+/- .002") Dim A x Dim B x Dim C	Type
2.0 pf thru 10.0 pf	.010" x .010" x .005"	802R0 thru 8010R
10.0 pf thru 29.0 pf	.015" x .015" x .005"	8010R thru 8029R
30.0 pf thru 49.0 pf	.020" x .020" x .006"	8030R thru 8049R
50.0 pf thru 99.0 pf	.030" x .030" x .006"	8050R thru 8099R
100 pf thru 199 pf	.040" x .040" x .008"	80100 thru 80199
200 pf thru 399 pf	.050" x .050" x .008"	80200 thru 80399
400 pf thru 600 pf	.070" x .070" x .008"	80400 thru 80600



EXAMPLES:

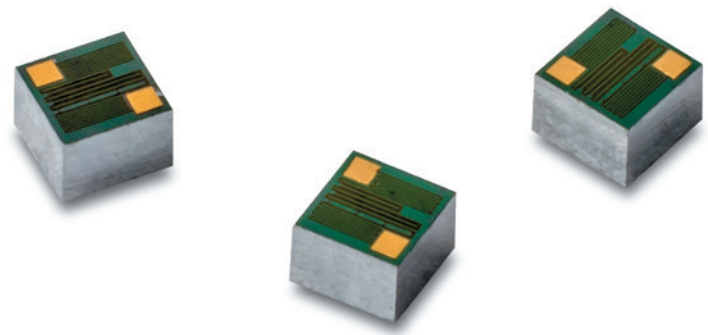
8110RK = > 100 WVDC 10 pF + 10% with a .020" CHIP SIZE.

802ROJ = > 50 WVDC 2.0 pF + 5% with a .010" CHIP SIZE



Thin Film Resistors

SemiGen Tantalum Nitride Resistor Chips offer low noise and outstanding TCR in a wide selection of values. The high-quality starting material combined with a controlled trimming process enable high-reliability devices with very low tolerances. These are available in chip form.



Features:

- Low TCR
- Compact Chip Size
- Low Noise
- Tolerances of 0.1% or Greater

Applications:

For use in all microwave hybrid and specialized microwave assemblies.

Parameter	Test Condition	Value	Condition
TCR	-55° C to +125° C	+/-150 ppm/ °C	MAX
OPERATING VOLTAGE	-55° C to +125° C	100 Vdc	MAX
POWER RATING (Rtotal)	@ 70° C derate linearly to zero @ 150° C	250 mW	MAX
THERMAL SHOCK	METHOD 107 MIL-STD-202	+/-0.5% @ ΔR	MAX
HIGH TEMP EXPOSURE	100 hrs @ 150° C	+/-0.25% @ ΔR	MAX
MOISTURE RESISTANCE	METHOD 106 MIL-STD-202	+/-0.5% @ ΔR	MAX
LIFE	METHOD 108 MIL-STD-202	+/-0.5% @ ΔR	MAX
NOISE	METHOD 308 MIL-STD-202	20dB	MAX
INSULATION RESISTANCE	@ 25° C	1 X 10 ¹² Ohms	MAX

EXAMPLE A: SG0202 TC S T 5000 FB is a 20 x 20 silicon top contact 500 ohm 1% bare-back tantalum resistor.

EXAMPLE B: SG0202 TC S T 50R0 FGB is a 20 x 20 silicon top contact 50 ohm 1% gold-back tantalum resistor.

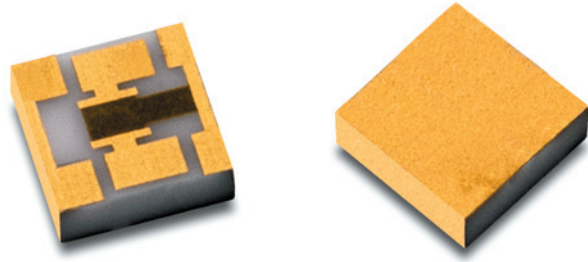
Silicon Mechanical Specifications:

- Substrate:** Silicon .010"/+/- .002"
Isolation Layer: 10,000Å min. SiO₂
Backside: Lapped Silicon. (Au plated optional)
Front Metal: 10,000Å Au min.
Pad Size: .004" min.

PREFIX	SERIES (die size)	CONFIGURATION	MATERIAL	RESISTIVE FILM	VALUE	TOLERANCE	OPTION
SG	0202	TC (TOP CONTACT)	S (SILICON)	T (TANTALUM NITRIDE)	XXXX 1ST 3 DIGITS ARE SIGNIFICANT. LAST DIGIT IS THE NUMBER OF TRAILING ZEROS. "R" IS DECIMAL POINT WHEN REQUIRED.	B = .1%	B (BARE BACK)
	0202	BC (BOTTOM CONTACT)	A (ALUMINA)	N (NICHROME)		D = .5%	GB (GOLD BACK)
	0303	CT (CENTER TAP)				F = 1%	
	0303 & 0404	MT (MULTI-TAP)				G = 2%	
						J = 5%	
						K = 10%	

Fixed Attenuator Pads

SemiGen Fixed Attenuator Pads are built on alumina nitride providing greater thermal conductivity and performance. Our advanced thin-film technology allows our parts to have full side wraps for SMT installation and a complete grounding backside for ease in attachment, as no ground bonding is required. Top side contacts for the input and output make these ideal for standard RF/microwave assembly techniques. Custom values are easy to fabricate and design allowing users to design in a specific value of choice.

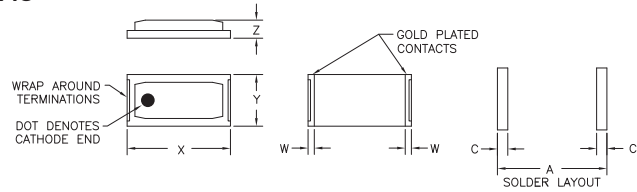


Features:

- Medium- to High-Power Handling 1W to 5W CW
- Flat Response from DC to 50 GHz
- Return Loss >18dB DC to 14 GHz
- Return Loss >16dB 15Ghz to 50 GHz
- Temp Stable TCR <100 PPM
- Chip Size .030" X .030" on most all designs

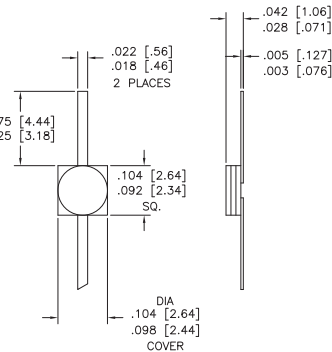
Part Number	Value (dB)	IL (dB)	RL (dB)
SFAP-1db	1	+/- .20	>18
SFAP-2db	2	+/- .20	>18
SFAP-3db	3	+/- .20	>18
SFAP-4db	4	+/- .20	>18
SFAP-5db	5	+/- .20	>18
SFAP-6db	6	+/- .25	>18
SFAP-7db	7	+/- .25	>18
SFAP-8db	8	+/- .25	>18
SFAP-9db	9	+/- .25	>18
SFAP-10db	10	+/- .25	>18
SFAP-11db	11	+/- .30	>18
SFAP-12db	12	+/- .30	>18
SFAP-13db	13	+/- .30	>18
SFAP-14db	14	+/- .30	>18
SFAP-15db	15	+/- .30	>18
SFAP-16db	16	+/- .40	>18
SFAP-17db	17	+/- .40	>18
SFAP-18db	18	+/- .40	>18
SFAP-19db	19	+/- .40	>18
SFAP-20db	20	+/- .40	>18
SFAP-21db	21	+/- .50	>18
SFAP-22db	22	+/- .50	>18
SFAP-23db	23	+/- .50	>18
SFAP-24db	24	+/- .50	>18
SFAP-25db	25	+/- .50	>18
SFAP-26db	26	+/- .60	>18
SFAP-27db	27	+/- .60	>18
SFAP-28db	28	+/- .60	>18
SFAP-29db	29	+/- .60	>18
SFAP-30db	30	+/- .60	>18
SFAP-35db	35	+/- .70	>18
SFAP-40db	40	+/- .80	>18
SFAP-50db	50	+/- 1.0	>18
SFAP-75db	75	+/- 1.50	>18
SFAP-100db	100	+/- 2.00	>18

PK 19

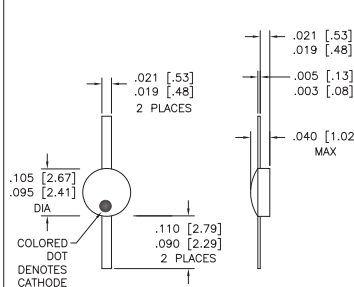


PKG STYLE	DIMENSION				SOLDER LAYOUT TYP			PACKAGE CP AND LP
	W DIM	X DIM	Y DIM	Z DIM	A	B	C	
PK19-1	12 (.304)	60 (1.52)	40 (1.01)	30 (.762)	72 (1.83)	40 (1.01)	20 (.508)	.09pF 35 nH
PK19-2	12 (.304)	75 (1.91)	50 (1.27)	35 (.889)	87 (2.21)	70 (1.78)	20 (.508)	.11pF .4 nH
PK19-3	12 (.304)	100 (2.54)	50 (1.27)	35 (.889)	112 (2.84)	70 (1.78)	20 (.508)	.14pF .4 nH
PK19-4	12 (.304)	120 (3.05)	60 (1.52)	35 (.889)	132 (3.35)	80 (2.03)	20 (.508)	.09pF .4 nH
PK19-5	12 (.304)	200 (5.08)	100 (2.54)	35 (.889)	212 (5.38)	120 (3.05)	20 (.508)	.09pF 5 nH
PK19-6	10 (.254)	40 (1.01)	20 (.508)	30 (.762)	50 (1.27)	30 (.762)	15 (.381)	.06pF 35 nH
PK19-7	10 (.254)	60 (1.52)	20 (.508)	30 (.762)	70 (1.78)	30 (.762)	15 (.381)	.08pF 35 nH
TOL ±	2.0 (.051)	3.0 (.076)	3.0 (.076)	MAX.	NOM.	NOM.	NOM.	NOM.

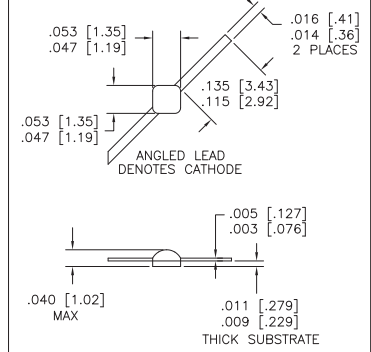
PK 20



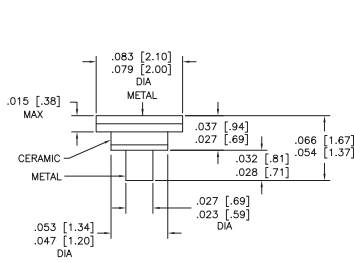
PK 25



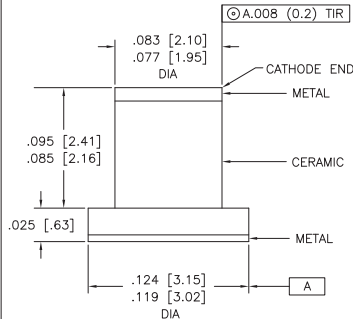
PK 28



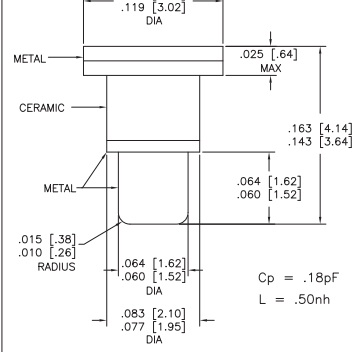
PK 33



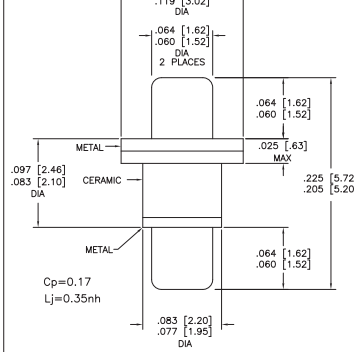
PK 35



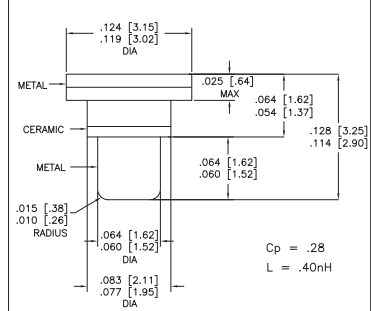
PK 36



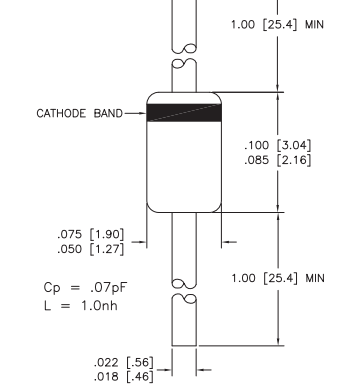
PK 37



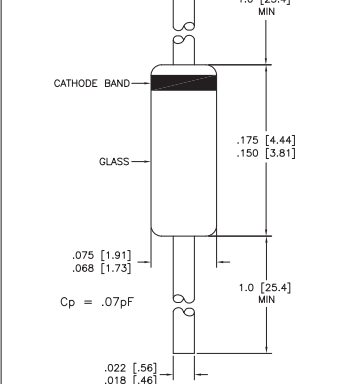
PK38



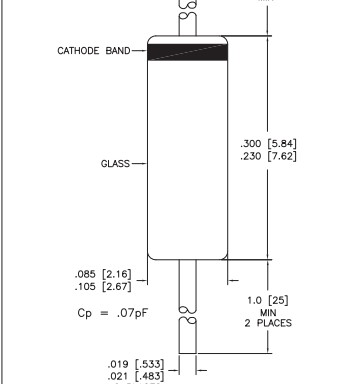
PK 65



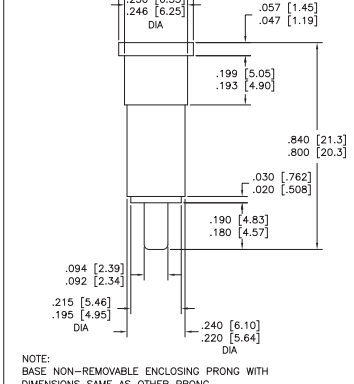
PK 75



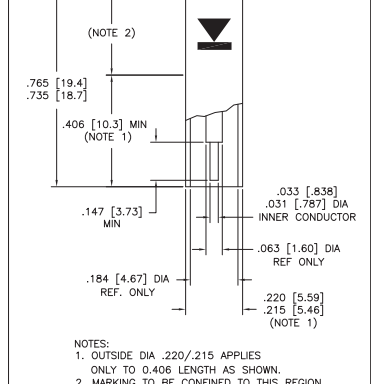
PK 85



PK 100



PK 102



Ordering Information

To Order Services:

To submit a request for quotation for services, please call our sales team directly at **603-624-8311** or use our easy RFQ submittal form on our website at **www.semigen.net/contact**.

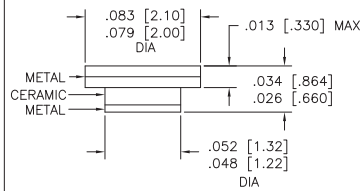
To place purchase orders for services, please send to **sales@semigen.net** or fax to **603-624-8312**.

To Order RF Supplies:

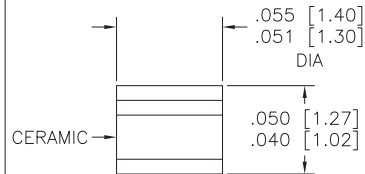
To submit a request for quotation for semiconductor devices please call our sales team directly at **603-624-8311** or use our RF Supply Center RFQ submittal form on our website at **www.semigen.net/RFSupplyCenter**.

To place orders of three pieces or less of RF bonding tools and supplies, please visit our e-commerce site at **www.semigen.net/RFSupplycenter**. To place wholesale orders of greater than three pieces, please call our sales team directly at **603-624-8311**.

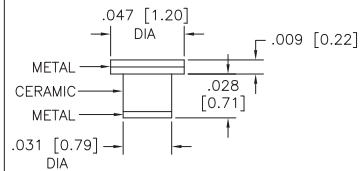
PK 31



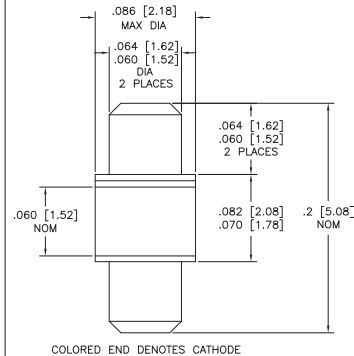
PK 32



PK 43

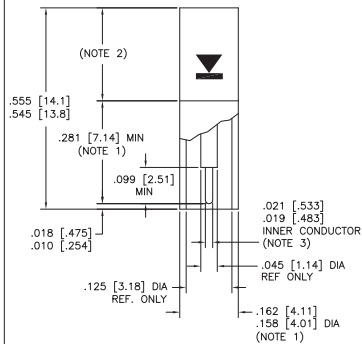


PK 50



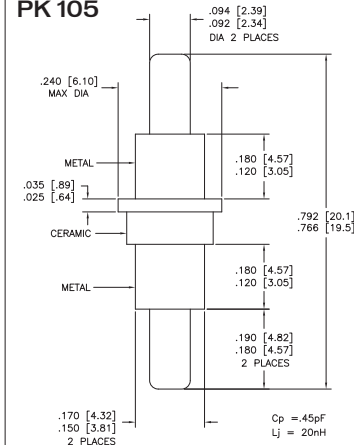
COLORED END DENOTES CATHODE

PK 103



- NOTES:
1. OUTSIDE DIA .180 APPLIES ONLY TO .281 LENGTH AS SHOWN.
 2. MARKING TO BE CONFINED TO THIS REGION.
 3. SPACE FOR MATCHING TRANSFORMER (WHEN USED).

PK 105



Cp = .45pF
Lj = 20nH

www.semigen.net



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