



*The Source for Passive  
Microwave Devices*



STAR MICROWAVE, INC.



*Isolators & Circulators*



**Your Source for Passive Microwave Devices**

In our effort to answer the immediate need of high-quality, high-volume and competitive pricing for the global market, Star Microwave, Inc. was conceived in 2003 by RF and microwave engineers who bring together over 50 years of design experience.

Located in San Jose, California, Star Microwave is strategically positioned in the center of “Silicon Valley.” Along with its vast resources of technical and mechanical expertise, Star Microwave is well positioned to provide complete interactive customer service and total satisfaction with its products.

**Military and Commercial Markets**

Our components are designed and produced for a wide range of applications from military and commercial programs to specific designs for high-reliability requirements including:

- ★ **Test Equipment**
- ★ **Wireless Communications**
- ★ **Satellite Communications (SATCOM)**
- ★ **Simulation Systems**
- ★ **Missile Systems**
- ★ **Jammers for Radar & IEDs**
- ★ **Radar Systems**
- ★ **EW: ECM, ECCM & ESM**

With many years of combined experience, Star Microwave’s product capability ranges in frequency coverage from 150 MHz to 26.56 GHz, including all common telecommunications bands. Our engineering staff is well qualified to design ferrite devices to meet your most stringent applications.

**Standard Product Development**

Star Microwave promotes a continuous development program with our standard TL Series of drop-in isolators and circulators with low loss and improved IMD performance. This competence includes extreme low loss of less than 0.15 dB (Typ. 0.12 dB), IMD of less than 82 dBc, from 1.7 – 3.5 GHz in 5% to 10% bandwidth, tested 2 tones at 45 watts (46.6 dBm) each tone.

**Custom Manufactured Products**

Star Microwave’s standard isolator and circulator products can be quickly configured to meet special requirements for that very unique mechanical package or a high-rel device with stringent environmental specifications. By using mature technology and standard construction practices, Star can produce these custom products that cost less, are easy to install and are available in production quantities.

**Specialized Contract Manufacturing**

For companies requiring assistance in design and manufacturing, Star Microwave offers highly focused contract manufacturing services for assembly, tuning and environmental testing of most passive devices. Building to your technical design can be achieved thru timely manufacturing and project management. Contact us today to discuss your specific needs.

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**STAR MICROWAVE, INC.**



# Coaxial Isolators & Circulators



- **Frequency Band:** From 400 MHz to 26.5 GHz
- **Power Handling:** <3.0 GHz: 150 Watts, 3.0–10.0 GHz: 25 Watts, >10.0 GHz: 10 Watts
- **Good Temperature Stability:** Typically -20C to +85C
- **Contact Star Microwave for Custom Designs**

## Coaxial – Standard Bands

Frequency Bands (GHz)	Isolator Model Number	Circulator Model Number	Isolation (dB, Min.)	Insertion Loss (dB, Max.)	VSWR	Package Size (Inch)	Package Outline
0.350–0.380	JSIE0036	JSCE0036	20	0.4	1.25:1	2.25 x 2.25 x 1.00	JS
0.380–0.420	JSIE0040	JSCE0040	20	0.4	1.25:1	2.25 x 2.25 x 1.00	JS
0.400–0.500	JSIE0045	JSCE0045	20	0.4	1.25:1	2.25 x 2.25 x 1.00	JS
0.500–0.600	JSIE0055	JSCE0055	20	0.4	1.25:1	2.25 x 2.25 x 1.00	JS
0.600–0.750	JSIE0067	JSCE0067	20	0.4	1.25:1	2.25 x 2.25 x 1.00	JS
0.700–1.000	JSIE0085	JSCE0085	17	0.5	1.35:1	2.25 x 2.25 x 1.00	JS
0.790–0.960	HSIE0087	HSCE0087	18	0.5	1.30:1	1.25 x 1.25 x 0.75	HS
0.865–0.894	HSIE0088	HSCE0088	23	0.3	1.20:1	1.25 x 1.25 x 0.75	HS
0.890–0.960	HSIE0093	HSCE0093	20	0.4	1.25:1	1.25 x 1.25 x 0.75	HS
0.900–0.943	HSIE0092	HSCE0092	23	0.3	1.20:1	1.25 x 1.25 x 0.75	HS
0.935–0.960	HSIE0095	HSCE0095	23	0.3	1.20:1	1.25 x 1.25 x 0.75	HS
0.950–1.225	HSIE0108	HSCE0108	20	0.5	1.25:1	1.25 x 1.25 x 0.75	HS
1.00–1.200	GSIE0110	GSCE0110	20	0.4	1.22:1	1.00 x 1.00 x 0.50	GS
1.200–1.400	GSIE0130	GSCE0130	20	0.4	1.22:1	1.00 x 1.00 x 0.50	GS
1.400–1.600	GSIE0150	GSCE0150	20	0.4	1.25:1	1.00 x 1.00 x 0.50	GS
1.500–1.800	GSIE0165	GSCE0165	20	0.4	1.25:1	1.00 x 1.00 x 0.50	GS
1.700–2.000	GSIE0185	GSCE0185	20	0.4	1.25:1	1.00 x 1.00 x 0.50	GS
1.700–1.790	GSIE0175	GSCE0175	23	0.3	1.20:1	1.00 x 1.00 x 0.50	GS
1.800–1.880	GSIE0184	GSCE0184	23	0.3	1.20:1	1.00 x 1.00 x 0.50	GS
1.850–1.990	GSIE0192	GSCE0192	20	0.4	1.25:1	1.00 x 1.00 x 0.50	GS
2.000–2.400	GSIE0220	GSCE0220	23	0.3	1.22:1	1.00 x 1.00 x 0.50	GS
2.300–2.700	GSIE0250	GSCE0250	20	0.4	1.22:1	1.00 x 1.00 x 0.50	GS
2.700–2.900	GSIE0280	GSCE0280	20	0.4	1.22:1	1.00 x 1.00 x 0.50	GS
2.800–3.300	ESIE0305	ESCE0305	20	0.4	1.25:1	0.75 x 0.75 x 0.50	ES
3.300–3.900	ESIE0360	ESCE0360	20	0.4	1.25:1	0.75 x 0.75 x 0.50	ES
3.600–4.200	ESIE0390	ESCE0390	25	0.25	1.15:1	0.75 x 0.75 x 0.50	ES
4.000–4.400	ESIE0420	ESCE0420	25	0.4	1.15:1	0.75 x 0.75 x 0.50	ES
4.400–5.000	ESIE0470	ESCE0470	25	0.4	1.15:1	0.75 x 0.75 x 0.50	ES
4.600–5.400	ESIE0500	ESCE0500	25	0.25	1.15:1	0.75 x 0.75 x 0.50	ES
5.000–6.000	ESIE0550	ESCE0550	23	0.4	1.15:1	0.75 x 0.75 x 0.50	ES
5.200–5.400	ESIE0530	ESCE0530	25	0.25	1.12:1	0.75 x 0.75 x 0.50	ES
5.400–5.900	ESIE0565	ESCE0565	25	0.25	1.15:1	0.75 x 0.75 x 0.50	ES
5.800–6.500	ESIE0615	ESCE0615	25	0.25	1.15:1	0.75 x 0.75 x 0.50	ES
6.400–7.200	ESIE0680	ESCE0680	25	0.25	1.15:1	0.75 x 0.75 x 0.50	ES
7.000–8.500	ESIE0775	ESCE0775	25	0.25	1.15:1	0.75 x 0.75 x 0.50	ES
7.700–8.300	DSIE0800	DSCE0800	25	0.4	1.10:1	0.50 x 0.63 x 0.50	DS
8.000–10.000	DSIE0900	DSCE0900	20	0.4	1.25:1	0.50 x 0.63 x 0.50	DS
9.200–10.500	DSIE0985	DSCE0985	23	0.3	1.22:1	0.50 x 0.63 x 0.50	DS
10.000–11.000	DSIE1050	DSCE1050	23	0.3	1.22:1	0.50 x 0.63 x 0.50	DS
10.700–13.300	DSIE1200	DSCE1200	23	0.25	1.15:1	0.50 x 0.63 x 0.50	DS

Notes: Standard option includes SMA or “N” connectors. Contact Star Microwave for other connector options.

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# Coaxial Isolators & Circulators

## Coaxial – Standard Bands (Continued)

Frequency Bands (GHz)	Isolator Model Number	Circulator Model Number	Isolation (dB, Min.)	Insertion Loss (dB, Max.)	VSWR	Package Size (Inch)	Package Outline
11.000–12.000	DSIE1150	DSCE1150	23	0.3	1.22:1	0.50 x 0.63 x 0.50	DS
11.700–12.200	DSIE1195	DSCE1195	25	0.25	1.15:1	0.50 x 0.63 x 0.50	DS
12.000–18.000	DSIE1500	DSCE1500	20	0.5	1.25:1	0.50 x 0.50 x 0.50	DS
12.400–15.000	DSIE1370	DSCE1370	23	0.25	1.15:1	0.50 x 0.63 x 0.50	DS
13.500–14.500	DSIE1400	DSCE1400	23	0.3	1.22:1	0.50 x 0.63 x 0.50	DS
14.500–15.500	DSIE1500	DSCE1500	23	0.3	1.22:1	0.50 x 0.63 x 0.50	DS
15.000–18.000	DSIE1650	DSCE1650	22	0.4	1.20:1	0.50 x 0.63 x 0.50	DS
18.400–19.000	DSIE1870	DSCE1870	23	0.3	1.22:1	0.50 x 0.63 x 0.50	DS
21.200–23.600	DSIE2240	DSCE2240	20	0.5	1.25:1	0.50 x 0.63 x 0.50	DS
24.000–26.500	DSIE2525	DSCE2525	19	0.5	1.25:1	0.50 x 0.63 x 0.50	DS

Notes: Standard option includes SMA or “N” connectors. Contact Star Microwave for other connector options.

- **Frequency Band: From 810 MHz to 26.5 GHz**
- **Power Handling: <10.0 GHz: 25 Watts, >10.0 GHz: 10 Watts**
- **Good Temperature Stability: Typically -20C to +85C**
- **Contact Star Microwave for Custom Designs**

## Coaxial – Broadband

Frequency Bands (GHz)	Isolator Model Number	Circulator Model Number	Isolation (dB, Min.)	Insertion Loss (dB, Max.)	VSWR	Package Size (Inch)	Package Outline
0.810-2.200	JNIU0150	JNCU0150	12	0.9	1.66:1	2.90 x 2.90 x 1.00	JN
1.000–2.200	JNIU0160	JNCU0160	20	0.4	1.22:1	2.90 x 2.90 x 1.00	JN
1.400–2.400	JSIU0190	JSCU0190	18	0.5	1.35:1	2.25 x 2.25 x 1.00	JS
2.000–4.000	ISIU0300	ISCU0300	20	0.5	1.25:1	1.63 x 1.63 x 0.75	IS
2.000–6.000	ISIU0400	ISCU0400	12	1.0	1.65:1	1.65 x 1.65 x 0.50	IS
3.000–6.000	HSIU0450	HSCU0450	18	0.5	1.25:1	1.25 x 1.25 x 0.75	HS
4.000–8.000	ESIU0600	ESCU0600	18	0.5	1.30:1	0.75 x 0.75 x 0.50	ES
6.000–12.400	ESIU0920	ESCU0920	18	0.4	1.25:1	0.75 x 0.75 x 0.50	ES
6.000–18.000	DSIU1200	DSCU1200	13	1.0	1.60:1	0.50 x 0.50 x 0.50	DS
7.000–11.000	ESIU0900	ESCU0900	25	0.4	1.15:1	0.75 x 0.75 x 0.50	ES
8.000–12.400	DSIU1020	DSCU1020	20	0.5	1.25:1	0.50 x 0.50 x 0.50	DS
8.000–16.000	DSIU1200	DSCU1200	20	0.5	1.25:1	0.50 x 0.50 x 0.50	DS
8.000–20.000	DSIU1500	DSCU1500	15	1.0	1.45:1	0.50 x 0.50 x 0.50	DS
10.000–20.000	DSIU1500	DSCU1500	17	0.7	1.35:1	0.50 x 0.50 x 0.50	DS
18.000–26.500	DSIU1500	DSCU1500	18	0.5	1.25:1	0.50 x 0.50 x 0.50	DS

Notes: Standard option includes SMA or “N” connectors. Contact Star Microwave for other connector options.



- **Frequency Band:** From 1.71 GHz to 3.8 GHz
- **Special designs with low insertion loss and IMD**
- **Minimum -85 dBc @ 2 carriers 40W (46.1dBm/Tone)**
- **Rugged Steel housing packages with top magnetic bias**
- **Good Temperature Stability:** Typically -20C to +85C
- **Low power isolators & circulators, sized .75x.75x.30**
- **Contact Star Microwave for custom designs**

**TL Series – Drop-In**

Frequency Bands (GHz)	Isolator Model Number	Circulator Model Number	Isolation (dB, Min.)	Insertion Loss (dB, Max.)		VSWR (Max)	Power (Watts)		Isolator Package* Size (Inch)	Package Outline
				Room	Temp		Fwd	Rev		
1.710–1.800	ETIE0175-X	ETCE0175-X	22	0.17	0.20	1.18:1	250	100	0.75 x 1.00 x 0.30	ET
1.805–1.885	ETIE0185-X	ETCE0185-X	23	0.15	0.18	1.15:1	250	100	0.75 x 1.00 x 0.30	ET
1.930–1990	ETIE0196-X	ETCE0196-X	23	0.14	0.17	1.15:1	250	100	0.75 x 1.00 x 0.30	ET
2.100–2.200	ETIE0215-X	ETCE0215-X	23	0.13	0.15	1.15:1	250	100	0.75 x 1.00 x 0.30	ET
2.300–2.500	ETIE0240-X	ETCE0240-X	22	0.14	0.17	1.18:1	250	100	0.75 x 1.00 x 0.30	ET
2.500–2.700	ETIE0260-X	ETCE0260-X	22	0.14	0.17	1.18:1	150	110	0.75 x 1.00 x 0.30	ET
1.700–2.000	ETIE0185-X	ETCE0185-X	21	0.19	0.21	1.20:1	250	100	0.75 x 1.00 x 0.30	ET
1.920–2.170	ETIE0205-X	ETCE0205-X	21	0.18	0.21	1.20:1	250	100	0.75 x 1.00 x 0.30	ET
2.100–2.400	ETIE0225-X	ETCE0225-X	21	0.18	0.21	1.20:1	250	100	0.75 x 1.00 x 0.30	ET
2.400–2.700	ETIE0255-X	ETCE0255-X	21	0.18	0.21	1.20:1	250	100	0.75 x 1.00 x 0.30	ET
2.700–3.100	ETIE0290-X	ETCE0290-X	21	0.18	0.21	1.20:1	250	100	0.75 x 1.00 x 0.30	ET
3.100–3.500	ETIE0330-X	ETCE0330-X	21	0.18	0.21	1.20:1	150	110	0.75 x 1.00 x 0.30	ET
3.300–3.800	ETIE0355-X	ETCE0355-X	21	0.18	0.21	1.20:1	150	110	0.75 x 1.00 x 0.30	ET

Notes: \* = Circulator package size 0.75 x 0.75 x 0.30 inch





# D Series – Drop-In Isolators & Circulators

- **Frequency Band: From 300 MHz to 20 GHz**
- **Lightweight Aluminum Housings with Samarium Cobalt Magnets**
- **Good Temperature Stability: Typically -20°C to +85° C**
- **Contact Star Microwave for Custom Designs**

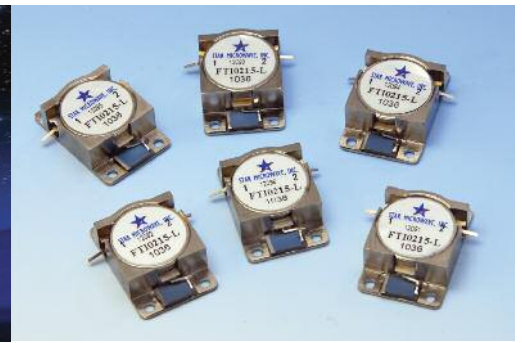
## D Series – Drop-In

Frequency Bands (GHz)	Isolator Model Number	Circulator Model Number	Isolation (dB, Min.)	Insertion Loss (dB, Max.)	VSWR	Power (Watts)		Isolator* Package Size (Inch)	Package Outline
						Fed	Rev		
0.380–0.420	IDIE0040	IDCE0040	21	0.40	1.20:1	250	110	1.50 x 1.80 x 0.30	ID
0.450–0.470	IDIE0046	IDCE0046	22	0.35	1.18:1	250	110	1.50 x 1.80 x 0.30	ID
0.450–0.500	IDIE0048	IDCE0048	21	0.40	1.20:1	250	110	1.50 x 1.80 x 0.30	ID
0.470–0.512	IDIE0049	IDCE0049	21	0.25	1.20:1	250	110	1.50 x 1.80 x 0.30	ID
0.824–0.849	GDIE0084	GDCE0084	23	0.30	1.15:1	250	110	1.00 x 1.25 x 0.26	GD
0.810–0.915	GDIE0086	GDCE0086	22	0.25	1.20:1	250	110	1.00 x 1.25 x 0.26	GD
0.860–0.900	GDIE0088	GDCE0088	23	0.30	1.18:1	250	110	1.00 x 1.25 x 0.26	GD
0.890–0.960	GDIE0092	GDCE0092	21	0.30	1.20:1	250	110	1.00 x 1.25 x 0.26	GD
0.915–0.964	GDIE0094	GDCE0094	23	0.30	1.15:1	250	110	1.00 x 1.25 x 0.26	GD
0.980–1.020	GDIE0100	GDCE0100	20	0.35	1.25:1	250	110	1.00 x 1.25 x 0.26	GD
1.250–1.350	GDIE0130	GDCE0130	22	0.30	1.20:1	250	110	1.00 x 1.25 x 0.26	GD
1.400–1.500	GDIE0145	GDCE0145	22	0.30	1.20:1	250	110	1.00 x 1.25 x 0.26	GD
1.500–1.600	GDIE0155	GDCE0155	22	0.30	1.20:1	250	110	1.00 x 1.25 x 0.26	GD
1.800–2.000	GDIE0190	GDCE0190	22	0.30	1.20:1	250	110	1.00 x 1.25 x 0.26	GD
1.710–1.785	EDIE0175	EDCE0175	22	0.25	1.20:1	150	100	0.75 x 1.00 x 0.20	ED
1.805–1.880	EDIE0184	EDCE0184	23	0.30	1.15:1	150	100	0.75 x 1.00 x 0.20	ED
1.850–1.990	EDIE0192	EDCE0192	21	0.25	1.20:1	150	100	0.75 x 1.00 x 0.20	ED
1.930–1.990	EDIE0196	EDCE0196	23	0.25	1.15:1	150	100	0.75 x 1.00 x 0.20	ED
2.100–2.200	EDIE0215	EDCE0215	23	0.25	1.20:1	150	100	0.75 x 1.00 x 0.20	ED
2.300–2.500	EDIE0240	EDCE0240	23	0.35	1.20:1	150	100	0.75 x 1.00 x 0.20	ED
2.300–2.700	EDIE0250	EDCE0250	21	0.25	1.20:1	150	100	0.75 x 1.00 x 0.20	ED
2.400–2.500	EDIE0245	EDCE0245	23	0.35	1.15:1	150	100	0.75 x 1.00 x 0.20	ED
2.500–2.900	EDIE0270	EDCE0270	21	0.30	1.20:1	150	100	0.75 x 1.00 x 0.20	ED
2.900–3.100	EDIE0300	EDCE0300	22	0.35	1.20:1	150	100	0.75 x 1.00 x 0.20	ED
3.300–3.600	EDIE0345	EDCE0345	22	0.40	1.20:1	150	100	0.75 x 1.00 x 0.20	ED
3.600–4.200	EGIE0390	EGCE0390	21	0.30	1.20:1	50	5	0.75 x 1.00 x 0.20	EG
4.200–4.400	DDIE0430	DDCE0430	23	0.35	1.15:1	50	5	0.50 x 0.575 x 0.15	DD
4.400–5.000	DDIE0470	DDCE0470	22	0.40	1.20:1	50	5	0.50 x 0.575 x 0.15	DD
5.000–6.500	DDIE0575	DDCE0575	21	0.35	1.20:1	50	5	0.50 x 0.575 x 0.15	DD
5.400–5.900	DDIE0565	DDCE0565	23	0.35	1.18:1	50	5	0.50 x 0.575 x 0.15	DD
5.800–6.500	DDIE0615	DDCE0615	21	0.35	1.20:1	50	5	0.50 x 0.575 x 0.15	DD
6.400–7.200	BDIE0680	BDCE0680	21	0.40	1.20:1	30	2	0.35 x 0.475 x 0.15	BD
7.200–8.400	BDIE0780	BDCE0780	21	0.40	1.20:1	30	2	0.35 x 0.475 x 0.15	BD
8.000–11.000	BDIE0950	BDCE0950	20	0.40	1.18:1	30	2	0.35 x 0.475 x 0.15	BD
12.700–14.500	BDIE1360	BDCE1360	21	0.40	1.20:1	30	2	0.35 x 0.475 x 0.15	BD
14.000–16.000	BDIE1500	BDCE1500	21	0.40	1.20:1	30	2	0.35 x 0.475 x 0.15	BD
15.000–18.000	BDIE1650	BDCE1650	20	0.45	1.25:1	30	2	0.35 x 0.475 x 0.15	BD
17.700–19.700	BDIE1870	BDCE1870	20	0.50	1.25:1	30	2	0.35 x 0.475 x 0.15	BD

Notes: \* = See package outline for Circulator dimensions.



# T Series – Drop-In Isolators & Circulators



- **Frequency Band: From 0.79 GHz to 18 GHz**
- **Rugged Steel Housing**
- **Superior Magnetic Shielding**
- **Three standard packages with thru-hole mounting**
- **Good Temperature Stability: Typically -20°C to 85°C**
- **Power Handling: Up to 10 watts; Typical: 5 watts**
- **Contact Star Microwave for custom designs**

## T Series – Drop-In — Standard Bands

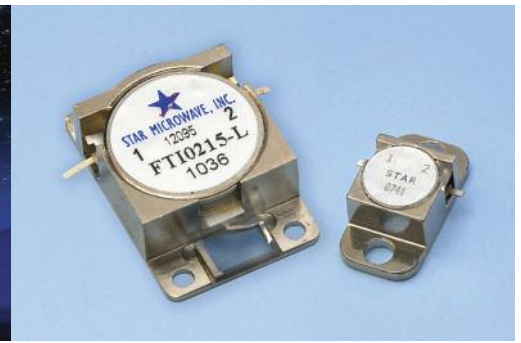
Frequency Bands (GHz)	Isolator Model Number	Circulator Model Number	Isolation (dB, Min.)	Insertion Loss (dB, Max.)	VSWR	Isolator Package* Size (Inch)	Package Outline
0.790–0.860	GTIE0083	GTCE0083	20	0.4	1.25:1	1.00 x 1.00 x 0.30	GT
0.860–0.960	GTIE0091	GTCE0091	20	0.3	1.25:1	1.00 x 1.00 x 0.30	GT
0.890–0.960	GTIE0092	GTCE0092	21	0.3	1.25:1	1.00 x 1.00 x 0.30	GT
0.935–0.960	GTIE0095	GTCE0095	23	0.3	1.15:1	1.00 x 1.00 x 0.30	GT
0.960–1.215	GTIE0108	GTCE0108	19	0.4	1.30:1	1.00 x 1.00 x 0.30	GT
1.200–1.400	GTIE0130	GTCE0130	20	0.3	1.25:1	1.00 x 1.00 x 0.30	GT
1.400–1.600	GTIE0150	GTCE0150	20	0.3	1.25:1	1.00 x 1.00 x 0.30	GT
1.500–1.700	GTIE0160	GTCE0160	20	0.3	1.25:1	1.00 x 1.00 x 0.30	GT
1.600–1.660	GTIE0163	GTCE0163	23	0.3	1.15:1	1.00 x 1.00 x 0.30	GT
1.805–1.880	ETIE0184	ETCE0184	23	0.3	1.15:1	0.75 x 0.75 x 0.30	ET
1.850–1.990	ETIE0192	ETCE0192	20	0.4	1.25:1	0.75 x 0.75 x 0.30	ET
1.950–2.200	ETIE0207	ETCE0207	20	0.3	1.25:1	0.75 x 0.75 x 0.30	ET
2.000–2.300	ETIE0215	ETCE0215	20	0.3	1.25:1	0.75 x 0.75 x 0.30	ET
2.100–2.400	ETIE0225	ETCE0225	20	0.3	1.25:1	0.75 x 0.75 x 0.30	ET
2.300–2.700	ETIE0250	ETCE0250	20	0.3	1.25:1	0.75 x 0.75 x 0.30	ET
2.700–3.100	ETIE0290	ETCE0290	20	0.4	1.25:1	0.75 x 0.75 x 0.30	ET
3.000–3.500	ETIE0325	ETCE0325	20	0.4	1.25:1	0.75 x 0.75 x 0.30	ET
3.300–3.900	ETIE0360	ETCE0360	20	0.4	1.25:1	0.75 x 0.75 x 0.30	ET
3.600–4.200	ETIE0390	ETCE0390	23	0.4	1.15:1	0.75 x 0.75 x 0.30	ET
4.400–5.000	DTIE0470	DTCE0470	20	0.4	1.25:1	0.50 x 0.50 x 0.25	DT
5.400–5.900	DTIE0565	DTCE0565	23	0.4	1.15:1	0.50 x 0.50 x 0.25	DT
5.800–6.500	DTIE0615	DTCE0615	20	0.4	1.25:1	0.50 x 0.50 x 0.25	DT
6.400–7.200	DTIE0680	DTCE0680	20	0.4	1.25:1	0.50 x 0.50 x 0.25	DT
7.100–7.800	DTIE0745	DTCE0745	23	0.4	1.15:1	0.50 x 0.50 x 0.25	DT
7.800–8.500	DTIE0815	DTCE0815	23	0.4	1.15:1	0.50 x 0.50 x 0.25	DT
10.700–13.300	DTIE1200	DTCE1200	20	0.4	1.25:1	0.50 x 0.50 x 0.25	DT
14.000–14.500	DTIE1425	DTCE1425	20	0.4	1.25:1	0.50 x 0.50 x 0.25	DT
14.000–16.000	DTIE1500	DTCE1500	20	0.4	1.25:1	0.50 x 0.50 x 0.25	DT
15.000–17.000	DTIE1600	DTCE1600	20	0.4	1.25:1	0.50 x 0.50 x 0.25	DT
16.000–18.000	DTIE1700	DTCE1700	20	0.4	1.25:1	0.50 x 0.50 x 0.25	DT

Notes: \* = See package outline for Circulator dimensions.

## T Series – Drop-In — Broadband

Frequency Bands (GHz)	Isolator Model Number	Circulator Model Number	Isolation (dB, Min.)	Insertion Loss (dB, Max.)	VSWR	Isolator Package* Size (Inch)	Package Outline
4.000–8.000	DTIU0600	DTCU0600	17	0.7	1.35:1	0.75 x 0.75 x 0.30	DT
6.000–18.000	DTIU1200	DTCU1200	13	1.2	1.00:1	0.50 x 0.50 x 0.25	DT
8.000–12.000	DTIU1000	DTCU1000	20	0.5	1.25:1	0.50 x 0.50 x 0.25	DT
8.000–18.000	DTIU1300	DTCU1300	15	1	1.50:1	0.50 x 0.50 x 0.25	DT

Notes: \* = See package outline for Circulator dimensions.



- **Frequency Band:** From 3.6 GHz to 23.6 GHz
- **Flange Package Mounting**
- **Two Standard Package Sizes**
- **Rugged Steel housing with top bias magnets**
- **Power handling:**  
Typical 10 Watts forward, 1 Watt reverse
- **Good Temperature Stability:** Typically -40°C to +85°C
- **Contact Star Microwave for custom designs**

### TF Series - Drop-In — Standard Bands

Frequency Bands (GHz)	Isolator Model Number	Circulator Model Number	Isolation (dB, Min.)	Insertion Loss (dB, Max.)	VSWR	Isolator Package* Size (Inch)	Package Outline
3.600–4.200	BTFI0390	BTFC0390	18	0.5	1.25:1	0.375 x 0.62 x 0.21	BT
3.700–4.300	BTFI0400	BTFC0400	18	0.5	1.25:1	0.375 x 0.62 x 0.21	BT
4.200–4.400	BTFI0430	BTFC0430	20	0.5	1.25:1	0.375 x 0.62 x 0.21	BT
4.400–5.00	BTFI0470	BTFC0470	20	0.5	1.25:1	0.375 x 0.62 x 0.21	BT
4.700–5.300	BTFI0500	BTFC0500	20	0.4	1.25:1	0.375 x 0.62 x 0.21	BT
5.400–5.900	BTFI0565	BTFC0565	20	0.5	1.25:1	0.375 x 0.62 x 0.21	BT
5.800–6.500	BTFI0615	BTFC0615	20	0.4	1.25:1	0.375 x 0.62 x 0.21	BT
6.400–7.100	BTFI0675	BTFC0675	20	0.5	1.25:1	0.375 x 0.62 x 0.21	BT
7.100–7.800	BTFI0745	BTFC0745	20	0.5	1.25:1	0.375 x 0.62 x 0.21	BT
7.800–8.300	ATFI0805	ATFC0805	20	0.5	1.25:1	0.25 x 0.50 x 0.18	AT
8.300–8.800	ATFI0855	ATFC0855	20	0.4	1.25:1	0.25 x 0.50 x 0.18	AT
9.200–9.700	ATFI0945	ATFC0945	20	0.4	1.25:1	0.25 x 0.50 x 0.18	AT
9.500–10.500	ATFI1000	ATFC1000	20	0.4	1.25:1	0.25 x 0.50 x 0.18	AT
9.700–11.700	ATFI1070	ATFC1070	18	0.5	1.30:1	0.25 x 0.50 x 0.18	AT
10.000–11.000	ATFI1050	ATFC1050	20	0.5	1.25:1	0.25 x 0.50 x 0.18	AT
11.000–12.750	ATFI1187	ATFC1187	18	0.6	1.30:1	0.25 x 0.50 x 0.18	AT
11.200–13.700	ATFI1245	ATFC1245	18	0.5	1.30:1	0.25 x 0.50 x 0.18	AT
11.700–12.300	ATFI1200	ATFC1200	20	0.4	1.25:1	0.25 x 0.50 x 0.18	AT
12.200–12.750	ATFI1247	ATFC1247	20	0.4	1.25:1	0.25 x 0.50 x 0.18	AT
12.750–13.250	ATFI1300	ATFC1300	20	0.4	1.25:1	0.25 x 0.50 x 0.18	AT
13.000–13.600	ATFI1330	ATFC1330	20	0.4	1.25:1	0.25 x 0.50 x 0.18	AT
13.000–14.500	ATFI1375	ATFC1375	20	0.5	1.25:1	0.25 x 0.50 x 0.18	AT
15.000–18.000	ATFI1650	ATFC1650	20	0.6	1.25:1	0.25 x 0.50 x 0.18	AT
16.000–21.000	ATFI1850	ATFC1850	18	0.8	1.30:1	0.25 x 0.50 x 0.18	AT
17.700–19.700	ATFI1870	ATFC1870	20	0.5	1.25:1	0.25 x 0.50 x 0.18	AT
18.000–21.000	ATFI1950	ATFC1950	20	0.7	1.30:1	0.25 x 0.50 x 0.18	AT
21.200–23.600	ATFI2240	ATFC2240	18	0.7	1.30:1	0.25 x 0.50 x 0.18	AT

Notes: \* = See package outline for Circulator dimensions.

### TF Series - Drop-In — Broadband

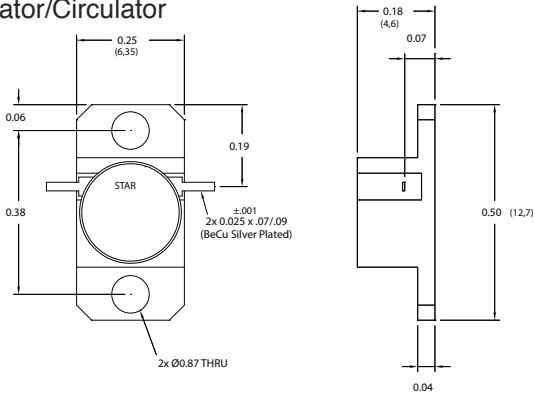
Frequency Bands (GHz)	Isolator Model Number	Circulator Model Number	Isolation (dB, Min.)	Insertion Loss (dB, Max.)	VSWR	Isolator Package Size (Inch)	Package Outline
7.000–11.000	BTFI0900	BTFC0900	18	0.5	1.25:1	0.375 x 0.62 x 0.21	BT
8.000–12.000	BTFI1000	BTFC1000	18	0.5	1.25:1	0.375 x 0.62 x 0.21	BT
10.000–15.000	BTFI1250	BTFC1250	17	0.5	1.25:1	0.375 x 0.62 x 0.21	BT
12.000–18.000	ATFI1500	ATFC1500	17	0.7	1.35:1	0.25 x 0.50 x 0.18	AT

Notes: \* = See package outline for Circulator dimensions.

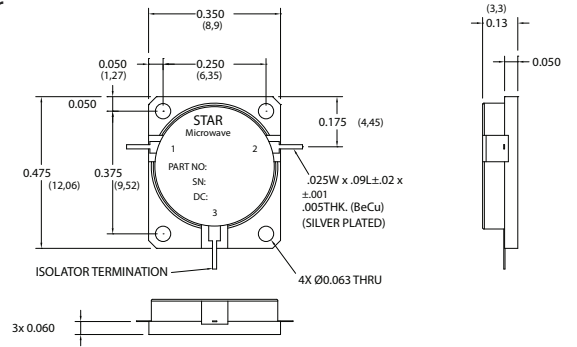




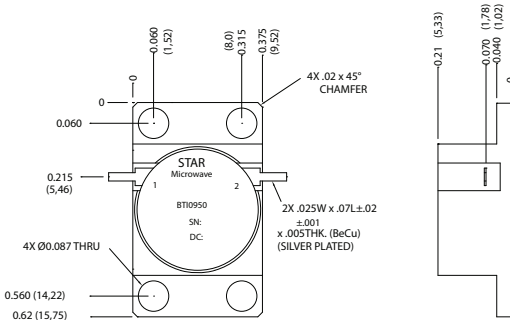
**AT - Isolator/Circulator**



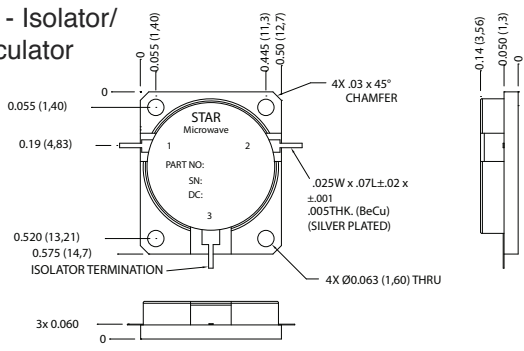
**BD - Isolator/  
Circulator**



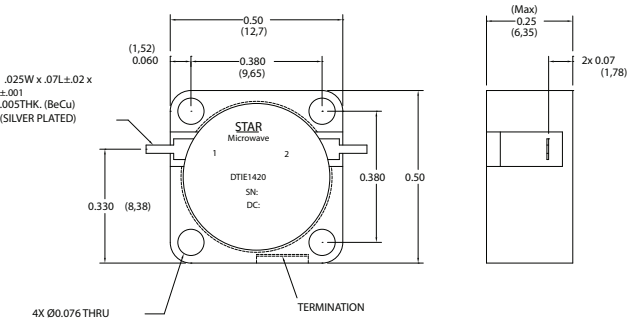
**BT - Isolator/Circulator**



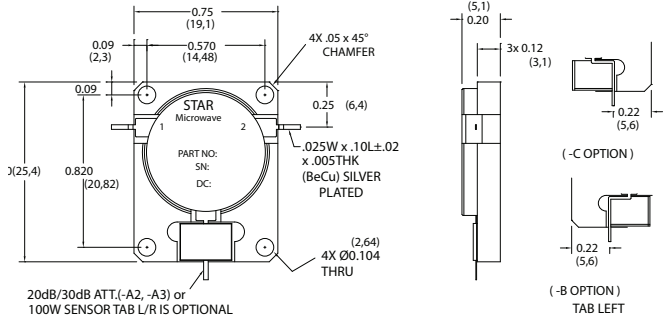
**DD - Isolator/  
Circulator**



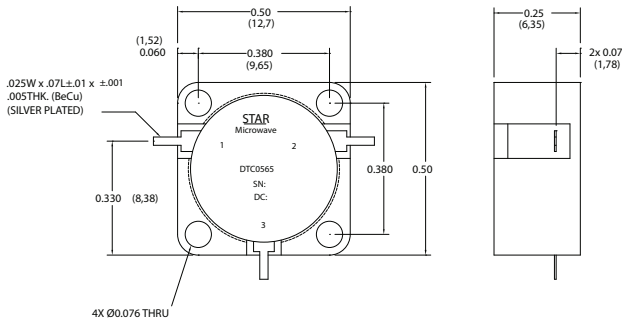
**DT - Isolator**



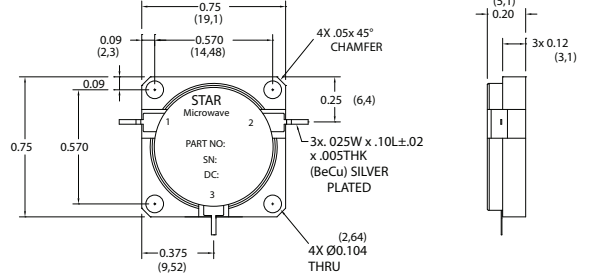
**ED - Isolator**

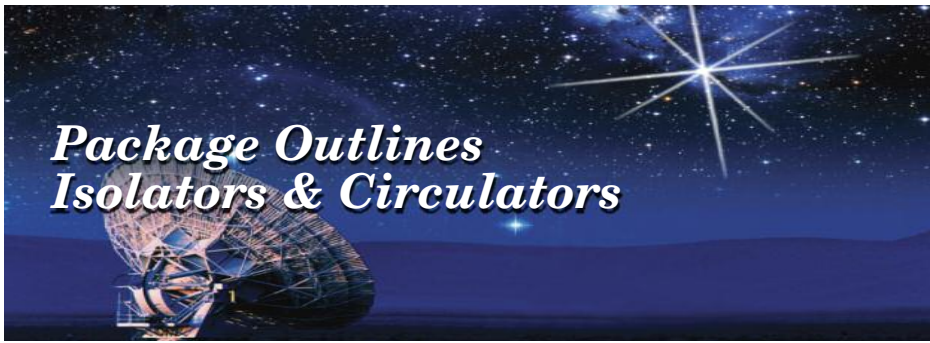


**DT - Circulator**



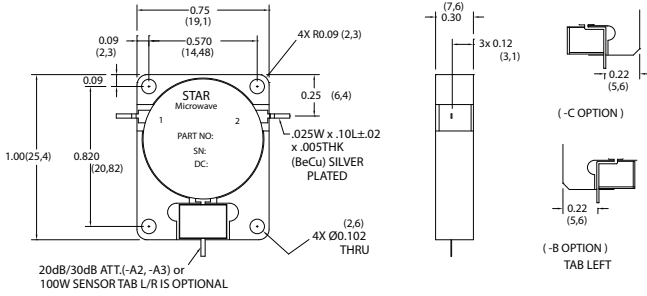
**ED - Circulator**



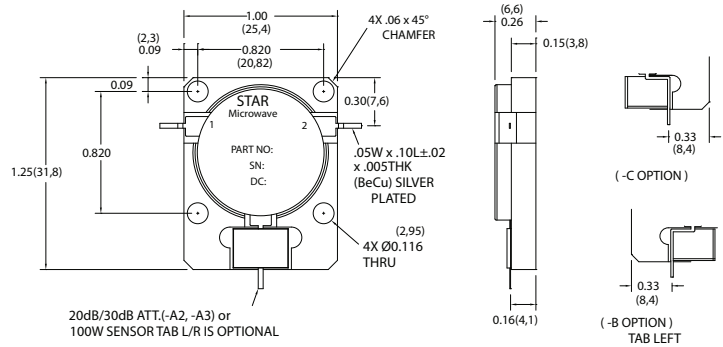


# Package Outlines Isolators & Circulators

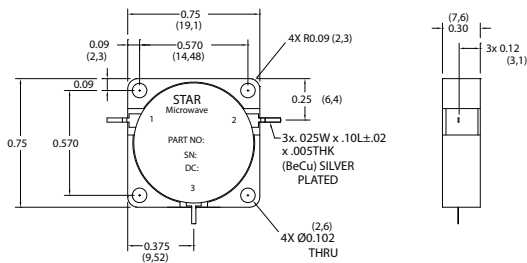
ET - Isolator



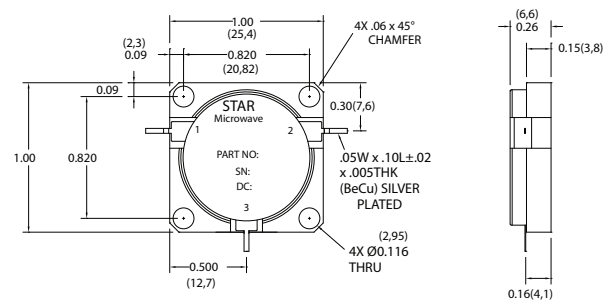
GD - Isolator



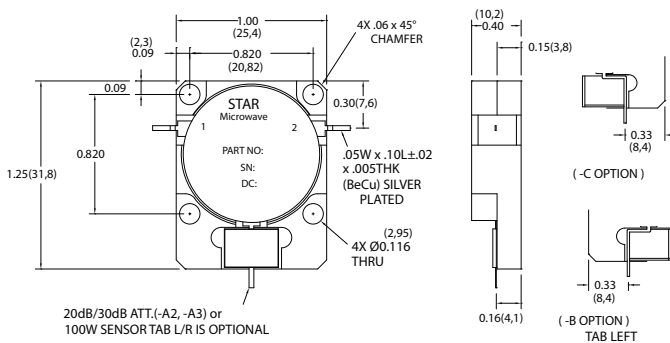
ET - Circulator



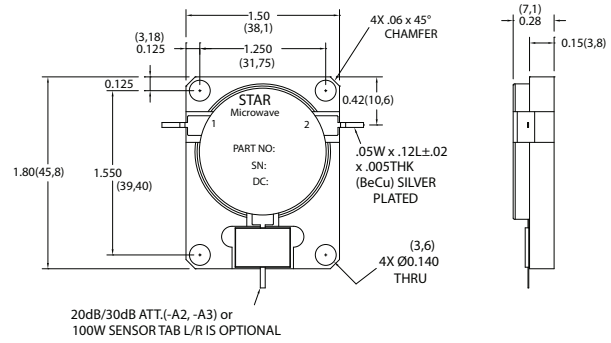
GD - Circulator



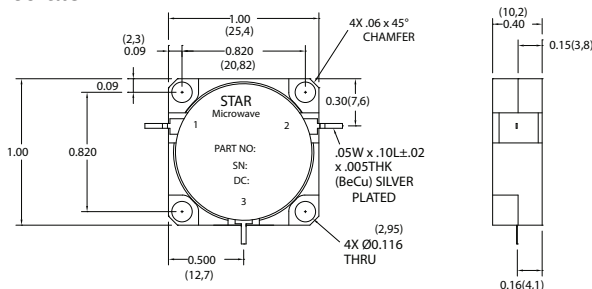
GT - Isolator



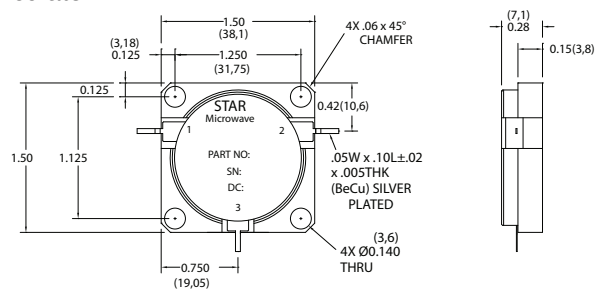
ID - Isolator



GT - Circulator

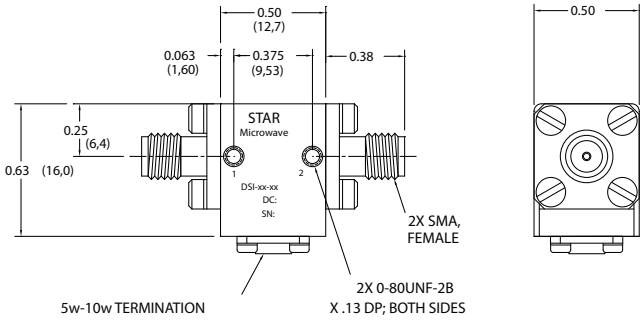


ID - Circulator

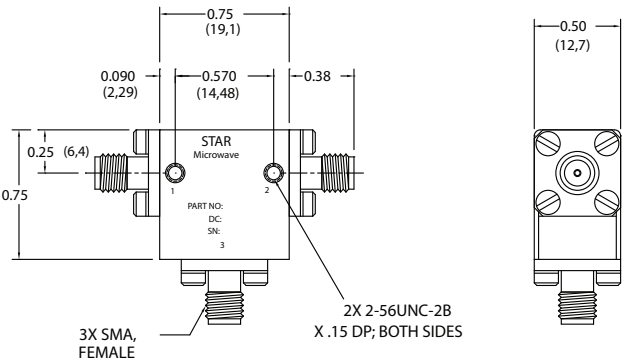




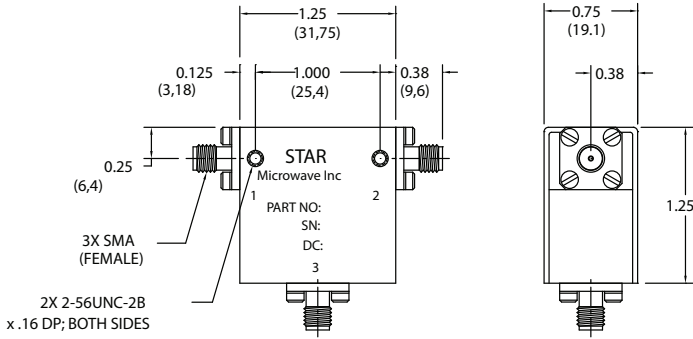
**DS - Coaxial**



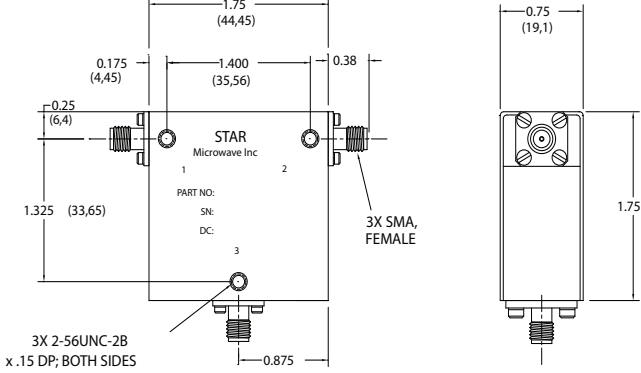
**ES - Coaxial**



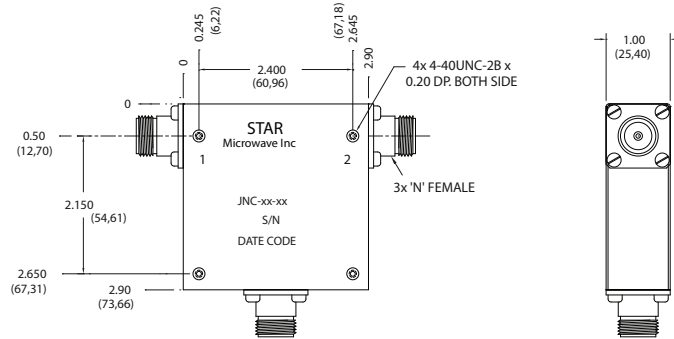
**HS - Coaxial**



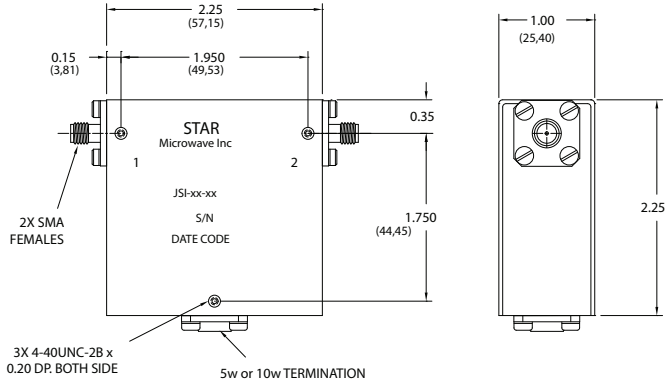
**IS - Coaxial**



**JN - Coaxial**



**JS - Coaxial**





## **The Source for Passive Microwave Devices**

### ***Terms & Conditions***

#### ***Quality Assurance***

All Star Microwave products are designed and manufactured in accordance to MIL-I-45208A. All units are final tested prior to shipment. Individual test data is available upon request with nominal charge.

#### ***Returned Material***

When returning material, call Star Microwave Inc. for an RMA number. If the product is out of warranty, a quotation will be provided for customer approval prior to repair or replacement.

#### ***Specifications***

Star Microwave, Inc. reserves the right to discontinue items and change specifications without notice.

#### ***Warranty***

All devices are covered by a Three Year Warranty that guarantees to the original purchaser that all models are free of defects in material and workmanship. Star Microwave's guarantee is limited to the repair or exchange of the device for three years from the date of original shipment.

#### ***Ordering Information***

All shipments are FOB San Jose, CA. Terms are Net 30 days with approved credit references.



**STAR MICROWAVE, INC.**

## ***Isolators & Circulators***

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***www.starmwi.com***