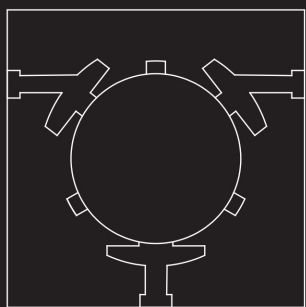
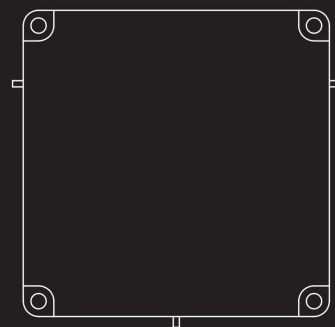


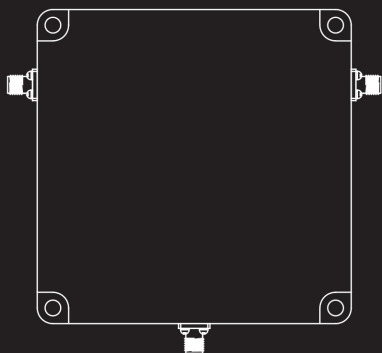
Contents



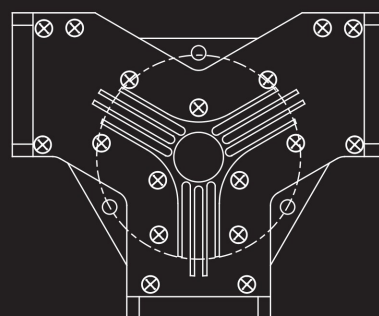
01 Microstrip 13~21



02 Drop-in 22~30



03 Coaxial 31~37



04 Waveguide 38~43

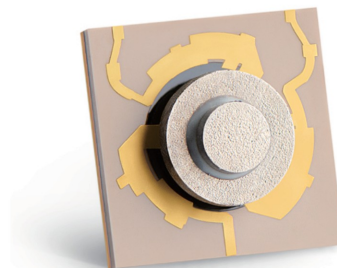
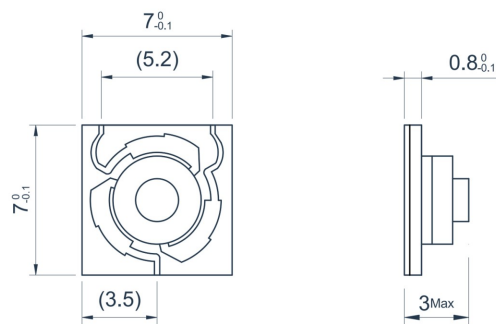
■ Microstrip Product



- Frequency range: 2GHz-43.5GHz
- The relative advantages of microstrip circulators and isolators are small size, light weight, small spatial discontinuity when integrated with microstrip circuits, and easy 50 Ω bridge connection (high connection reliability). Its relative disadvantages are low power capacity and poor immunity to electromagnetic interference.

Microstrip Circulator

C/X/Ku Band 6.0~18.0Ghz



Typical Performance Curve

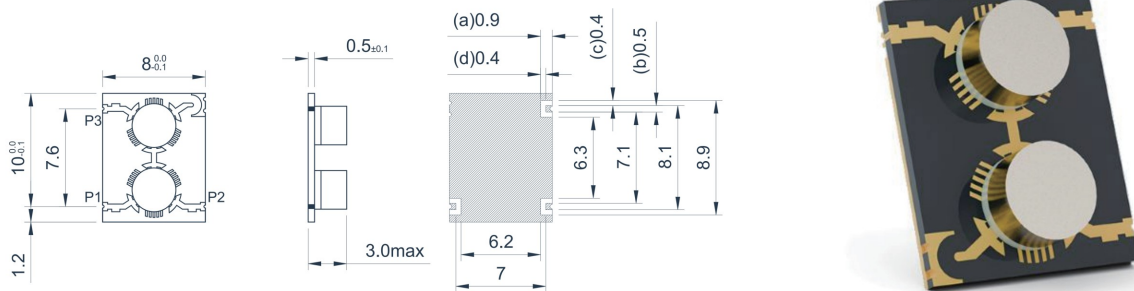


Electrical Performance Table

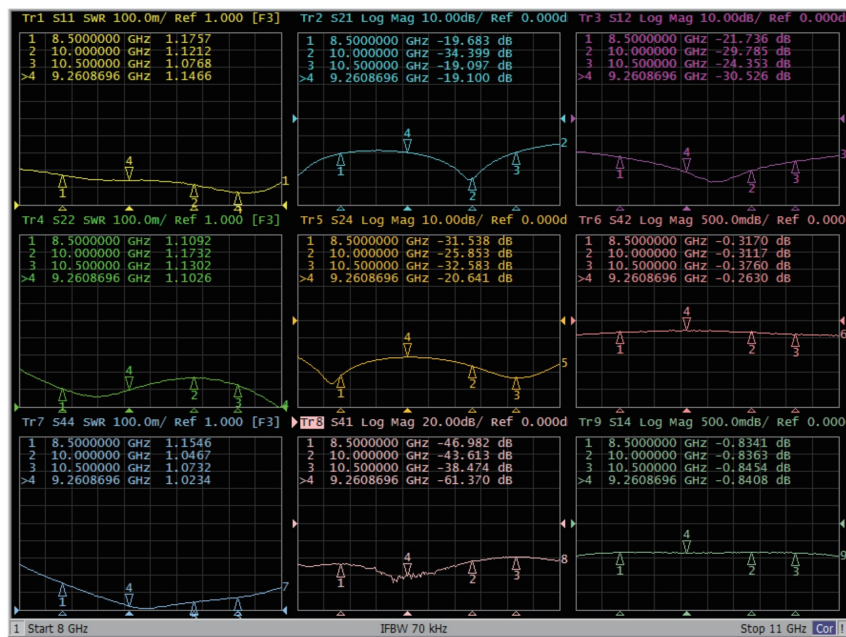
Model	Frequency (GHz)	BW Max	Insertion loss(dB) Max	Isolation (dB)Min	VSWR Max	Operating temperature (°C)	PK/CW (Watt)	Size(mm) L × W × H	Direction	Shape
HMCYA60T180G-B	C/X/Ku Band(6.0~18.0)	Full	1.2	11	1.65	-55~+85°C	20/10	7×7×3	CW / CCW	T/Y

Dual-Junction Microstrip Circulator

X Band 8.5~10.5GHz



Typical Performance Curve

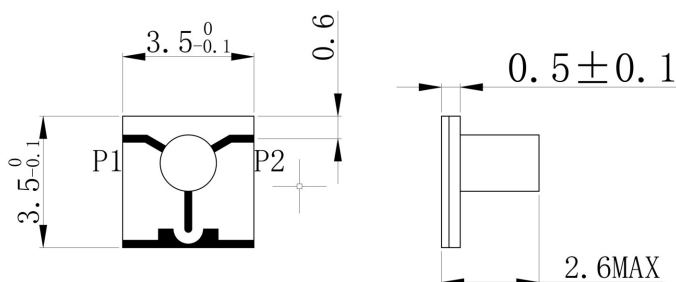


Electrical Performance Table

Model	Frequency (GHz)	BW Max	Insertion loss(dB)Max	Isolation (dB)Min	VSWR Max	Operating temperature (°C)	PK/CW/RP (Watt)	Size(mm)	Direction
HMDYA85T105G	8.5~10.5	Full	0.5(P1-P2)	20.0(P2-P1)	1.25	-55~+85	20/10/3	10×8×3	Clockwise
			0.9(P2-P3)	30.0(P3-P2)					

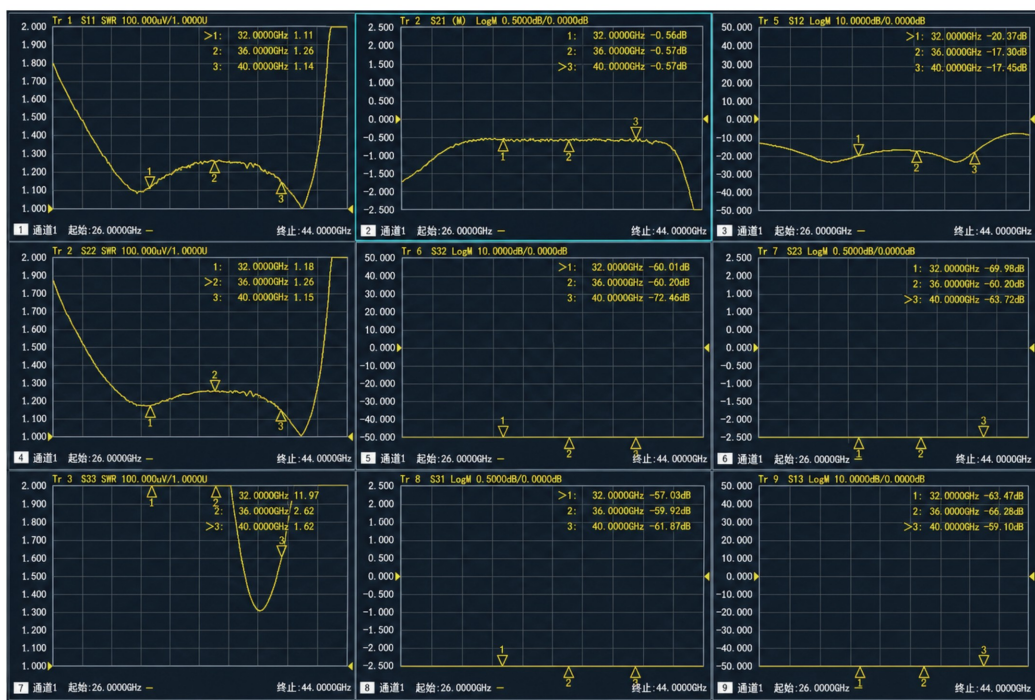
Microstrip Isolator

Ka Band 32~40GHz



The primary advantage of Microstrip Isolators is their compact size, although they have a lower power handling capacity compared to Drop-In Coaxial Waveguide Isolator. Below are Ka-band Microstrip Isolators with Y-shaped ports, allowing for a compact arrangement of T/R circuits. Customization of frequency bands, dimensions, and ports is available according to your requirements.

Typical Performance Curve



Electrical Performance Table

Model	Frequency (GHz)	BW Max	Insertion loss(dB) Max	Isolation (dB) Min	VSWR Max	Operating temperature (°C)	PK/CW (Watt)	Size(mm) L × W × H	Direction	Shape
HMITA320T400G	Ka Band(32.0~40.0)	Full	1	14	1.4	-55~+85°C	5/2/1	4.5×3.5×3.5	CW / CCW	T/Y

Microstrip Product**Typical Microstrip Circulator**

Model	Frequency (GHz)	BW Max	Insertion loss(dB)Max	Isolation (dB)Min	VSWR Max	Operating temperature (°C)	PK/CW (Watt)	Size(mm) L × W × H	Direction	Shape
HMCTA27T35G	S Band(2.7~3.5)	Full	0.6	18	1.3	-55~+85℃	20/10	14×14×4.5	CW / CCW	T/Y
HMCTA28T36G	S Band(2.8~3.6)	Full	0.6	18	1.3	-55~+85℃	20/10	14×14×4.5	CW / CCW	T/Y
HMCTA29T32G	S Band(2.9~3.2)	Full	0.6	18	1.3	-55~+85℃	20/10	14×14×4.5	CW / CCW	T/Y
HMCTA30T40G	S Band(3.0~4.0)	Full	0.6	18	1.3	-55~+85℃	20/10	14×14×4.5	CW / CCW	T/Y
HMCTA35T45G	S Band(3.5~4.5)	Full	0.6	18	1.3	-55~+85℃	20/10	12×12×4	CW / CCW	T/Y
HMCTA37T39G	S Band(3.7~3.9)	Full	0.5	20	1.25	-55~+85℃	20/10	12×12×4	CW / CCW	T/Y
HMCTA40T50G	C Band(4.0~5.0)	Full	0.5	20	1.25	-55~+85℃	20/10	12×12×4	CW / CCW	T/Y
HMCTA48T54G	C Band(4.8~5.4)	Full	0.5	20	1.25	-55~+85℃	20/10	10×10×3.5	CW / CCW	T/Y
HMCTA50T80G	C Band(5.0~8.0)	Full	0.6	18	1.3	-55~+85℃	20/10	10×10×3.5	CW / CCW	T/Y
HMCTA50T60G	C Band(5.0~6.0)	Full	0.5	20	1.25	-55~+85℃	20/10	9×9×4.5	CW / CCW	T/Y
HMCTA70T95G	C Band(7.0~9.5)	Full	0.6	17	1.35	-55~+85℃	20/10	7×7×3	CW / CCW	T/Y
HMCTA75T95G	C Band(7.5~9.5)	Full	0.5	18	1.3	-55~+85℃	20/10	7×7×3	CW / CCW	T/Y
HMCTA80T120G	X Band(8.0~12.0)	Full	0.6	16	1.35	-55~+85℃	20/10	6×6×3	CW / CCW	T/Y
HMCTA85T105G	X Band(8.5~10.5)	Full	0.5	20	1.25	-55~+85℃	20/10	6×6×3	CW / CCW	T/Y
HMCTA90T120G	X Band(9.0~12.0)	Full	0.5	20	1.25	-55~+85℃	20/10	6×6×3	CW / CCW	T/Y
HMCTA110T130G	X Band(11.0~13.0)	Full	0.5	20	1.25	-55~+85℃	20/10	6×6×3	CW / CCW	T/Y
HMCTA120T150G	Ku Band(12.0~15.0)	Full	0.5	20	1.25	-55~+85℃	20/10	6×6×3	CW / CCW	T/Y
HMCTA120T180G	Ku Band(12.0~18.0)	Full	0.7	16	1.4	-55~+85℃	20/10	6×6×3	CW / CCW	T/Y
HMCTA140T160G	Ku Band(14.0~16.0)	Full	0.5	20	1.25	-55~+85℃	20/10	5×5×2.5	CW / CCW	T/Y
HMCTA160T180G	Ku Band(16.0~18.0)	Full	0.5	20	1.25	-55~+85℃	20/10	5×5×2.5	CW / CCW	T/Y
HMCTA140T180G	Ku Band(14.0~18.0)	Full	0.5	20	1.25	-55~+85℃	20/10	5×5×2.5	CW / CCW	T/Y
HMCTA150T200G	Ku Band(15.0~20.0)	Full	0.6	18	1.3	-55~+85℃	20/10	5×5×2.5	CW / CCW	T/Y
HMCTA180T220G	K Band(18.0~22.0)	Full	0.5	20	1.25	-55~+85℃	15/5	4.5×4.5×3	CW / CCW	T/Y
HMCTA180T240G	K Band(18.0~24.0)	Full	0.6	18	1.3	-55~+85℃	15/5	4.5×4.5×3	CW / CCW	T/Y
HMCTA240T280G	K Band(24.0~28.0)	Full	0.7	18	1.3	-55~+85℃	15/5	4.5×4.5×3	CW / CCW	T/Y
HMCTA270T315G	Ka Band(27.0~31.5)	Full	0.7	18	1.35	-55~+85℃	10/5	4×4×3.0	CW / CCW	T/Y
HMCTA280T320G	Ka Band(28.0~32.0)	Full	0.7	18	1.35	-55~+85℃	10/5	3.5×3.5×3.5	CW / CCW	T/Y
HMCTA330T370G	Ka Band(33.0~37.0)	Full	0.8	18	1.35	-55~+85℃	10/5	3.5×3.5×3.5	CW / CCW	T/Y
HMCTA320T380G	Ka Band(32.0~38.0)	Full	0.8	16	1.4	-55~+85℃	10/5	3.5×3.5×3.5	CW / CCW	T/Y
HMCTA320T400G	Ka Band(32.0~40.0)	Full	1	14	1.4	-55~+85℃	10/5	3.5×3.5×3.5	CW / CCW	T/Y
HMCTA380T400G	Ka Band(38.0~40.0)	Full	0.7	18	1.35	-55~+85℃	10/5	3.5×3.5×3.5	CW / CCW	T/Y

Microstrip Product**Broadband Microstrip Circulator**

Model	Frequency (GHz)	BW Max	Insertion loss(dB)Max	Isolation (dB)Min	VSWR Max	Operating temperature (℃)	PK/CW (Watt)	Size(mm) L × W × H	Direction	Shape
HMCTA20T60G-B	S Band(2.0~6.0)	Full	1.2(1.4)	11(10)	1.7	-55~+85℃	40/20	15×15×4.5	CW / CCW	T/Y
HMCTA50T130G-B	C/X/Ku Band(5.0~13.0)	Full	1	12	1.5	-55~+85℃	20/10	7×7×3	CW / CCW	T/Y
HMCTA60T180G-B	C/X/Ku Band(6.0~18.0)	Full	1.2	11	1.65	-55~+85℃	20/10	7×7×3	CW / CCW	T/Y
HMCTA70T130G-B	C/X/Ku Band(7.0~13.0)	Full	0.7	18	1.3	-55~+85℃	20/10	6.5×6.5×3	CW / CCW	T/Y
HMCTA100T190G-B	Ku/K Band(10.0~19.0)	Full	1	14	1.45	-55~+85℃	20/10	6×6×3.0	CW / CCW	T/Y
HMCTA80T180G-B	X/Ku Band(8.0~18.0)	Full	0.9	13	1.5	-55~+85℃	20/10	5.5×5.5×3.5	CW / CCW	T/Y
HMCTA180T265G-B	K Band(18.0~26.5)	Full	0.6	17	1.35	-55~+85℃	20/10	4.5×4.5×3.0	CW / CCW	T/Y

Miniaturized Microstrip Circulator

Model	Frequency (GHz)	BW Max	Insertion loss(dB)Max	Isolation (dB)Min	VSWR Max	Operating temperature (℃)	PK/CW (Watt)	Size(mm) L × W × H	Direction	Shape
HMCTA50T60G-M	C Band(5.0~6.0)	Full	0.6	18	1.3	-55~+85℃	10/2.5	6.5×6.5×4	CW / CCW	T/Y
HMCTA80T120G-M	X Band(8.0~12.0)	Full	0.9	15	1.4	-55~+85℃	20/5	4.5×4×2.5	CW / CCW	T/Y
HMCTA150T170G-M	Ku Band(15.0~17.0)	Full	0.5	20	1.2	-55~+85℃	20/5	3.5×3.5×1.7	CW / CCW	T/Y
HMCTA330T370G-M	Ka Band(32.0~40.0)	Full	0.8	18	1.35	-55~+85℃	5/2	3.0×3.0×2.7	CW / CCW	T/Y

High Power Microstrip Circulator

Model	Frequency (GHz)	BW Max	Insertion loss(dB)Max	Isolation (dB)Min	VSWR Max	Operating temperature (℃)	PK/CW (Watt)	Size(mm) L × W × H	Direction	Shape
HMCTA50T60G-H	C Band(5.0~6.0)	Full	0.5	20	1.25	-55~+85℃	100/30	10×10×3.5	CW / CCW	T/Y
HMCTA90T100G-H	X Band(9.0~10.0)	Full	0.5	20	1.25	-55~+85℃	100/20	6×6×3.0	CW / CCW	T/Y
HMCTA85T105G-H	X Band(8.5~10.5)	Full	0.5	18	1.3	-55~+85℃	100/20	6×6×3.0	CW / CCW	T/Y
HMCTA130T150G-H	Ku Band(13.0~15.0)	Full	0.5	20	1.25	-55~+85℃	100/20	5×5×3.0	CW / CCW	T/Y
HMCTA140T180G-H	Ku Band(14.0~18.0)	Full	0.5	20	1.25	-55~+85℃	100/20	5×5×3.0	CW / CCW	T/Y

Microstrip Product

Typical Microstrip Isolator

Model	Frequency (GHz)	BW Max	Insertion loss(dB)Max	Isolation (dB)Min	VSWR Max	Operating temperature (℃)	PK/CW/RP (Watt)	Size(mm) L × W × H	Direction	Shape
HMITA27T35G	S Band(2.7~3.5)	Full	0.6	20	1.3	-55~+85℃	20/10/5	16×14×4.5	CW / CCW	T/Y
HMITA30T40G	S Band(3.0~4.0)	Full	0.5	18	1.3	-55~+85℃	20/10/5	16×14×4.5	CW / CCW	T/Y
HMITA35T55G	S Band(3.5~5.5)	Full	0.6	16	1.3	-55~+85℃	20/10/5	16×14×4.5	CW / CCW	T/Y
HMITA34T45G	S Band(3.4~4.5)	Full	0.6	18	1.3	-55~+85℃	20/10/5	12×12×3.5	CW / CCW	T/Y
HMITA37T39G	S Band(3.7~3.9)	Full	0.5	20	1.25	-55~+85℃	20/10/5	12×12×3.5	CW / CCW	T/Y
HMITA40T50G	C Band(4.0~5.0)	Full	0.5	20	1.25	-55~+85℃	20/10/5	12×12×3.5	CW / CCW	T/Y
HMITA45T55G	C Band(4.5~5.5)	Full	0.5	20	1.25	-55~+85℃	20/10/5	12×12×3.5	CW / CCW	T/Y
HMITA50T60G	C Band(5.0~6.0)	Full	0.5	20	1.25	-55~+85℃	20/10/5	10×10×3.5	CW / CCW	T/Y
HMITA55T65G	C Band(5.5~6.5)	Full	0.5	20	1.25	-55~+85℃	20/10/5	10×10×3.5	CW / CCW	T/Y
HMITA65T75G	C Band(6.5~7.5)	Full	0.5	20	1.25	-55~+85℃	20/10/5	10×10×3.5	CW / CCW	T/Y
HMITA50T80G	C Band(5.0~8.0)	Full	0.6	18	1.3	-55~+85℃	20/10/5	10×10×3.5	CW / CCW	T/Y
HMITA60T80G	C Band(6.0~8.0)	Full	0.5	20	1.25	-55~+85℃	20/10/5	10×10×3.5	CW / CCW	T/Y
HMITA70T95G	C Band(7.0~9.5)	Full	0.6	17	1.35	-55~+85℃	20/10/3	8×7×3	CW / CCW	T/Y
HMITA75T95G	C Band(7.5~9.5)	Full	0.5	18	1.3	-55~+85℃	20/10/3	8×7×3	CW / CCW	T/Y
HMITA80T100G	X Band(8.0~10.0)	Full	0.5	20	1.25	-55~+85℃	20/10/3	7×6×3	CW / CCW	T/Y
HMITA85T105G	X Band(8.5~10.5)	Full	0.5	20	1.25	-55~+85℃	20/10/3	7×6×3	CW / CCW	T/Y
HMITA80T120G	X Band(8.0~12.0)	Full	0.6	18	1.35	-55~+85℃	20/10/3	7×6×3	CW / CCW	T/Y
HMITA90T110G	X Band(9.0~11.0)	Full	0.5	20	1.25	-55~+85℃	20/10/3	7×6×3	CW / CCW	T/Y
HMITA100T120G	X Band(10.0~12.0)	Full	0.5	20	1.25	-55~+85℃	20/10/3	7×6×3	CW / CCW	T/Y
HMITA110T130G	X Band(11.0~13.0)	Full	0.5	20	1.25	-55~+85℃	20/10/3	7×6×3	CW / CCW	T/Y
HMITA120T150G	Ku Band(12.0~15.0)	Full	0.5	18	1.3	-55~+85℃	20/10/3	7×6×3	CW / CCW	T/Y
HMITA120T180G	Ku Band(12.0~18.0)	Full	0.7	16	1.4	-55~+85℃	20/10/3	7×6×3	CW / CCW	T/Y
HMITA140T180G	Ku Band(14.0~18.0)	Full	0.5	20	1.25	-55~+85℃	20/10/2	6×5×3	CW / CCW	T/Y
HMITA150T200G	Ku Band(15.0~20.0)	Full	0.6	18	1.3	-55~+85℃	20/10/2	6×5×3	CW / CCW	T/Y
HMITA180T220G	K Band(18.0~22.0)	Full	0.5	20	1.25	-55~+85℃	15/5/2	5.5×4.5×3	CW / CCW	T/Y
HMITA180T240G	K Band(18.0~24.0)	Full	0.6	18	1.3	-55~+85℃	15/5/2	5.5×4.5×3	CW / CCW	T/Y
HMITA240T280G	K Band(24.0~28.0)	Full	0.7	18	1.3	-55~+85℃	5/2/1	5.5×4.5×3	CW / CCW	T/Y
HMITA280T320G	Ka Band(28.0~32.0)	Full	0.7	18	1.35	-55~+85℃	5/2/1	4.5×3.5×3.5	CW / CCW	T/Y
HMITA330T370G	Ka Band(33.0~37.0)	Full	0.7	18	1.35	-55~+85℃	5/2/1	4.5×3.5×3.5	CW / CCW	T/Y
HMITA320T380G	Ka Band(32.0~38.0)	Full	0.8	17	1.4	-55~+85℃	5/2/1	4.5×3.5×3.5	CW / CCW	T/Y
HMITA320T400G	Ka Band(32.0~40.0)	Full	1	14	1.4	-55~+85℃	5/2/1	4.5×3.5×3.5	CW / CCW	T/Y
HMITA380T400G	Ka Band(38.0~40.0)	Full	0.7	20	1.35	-55~+85℃	5/2/1	4.5×3.5×3.5	CW / CCW	T/Y

Microstrip Product

Broadband Microstrip Isolator

Model	Frequency (GHz)	BW Max	Insertion loss(dB)Max	Isolation (dB)Min	VSWR Max	Operating temperature (℃)	PK/CW/RP (Watt)	Size(mm) L × W × H	Direction	Shape
HMITA20T60G-B	S/C Band (2.0~6.0)	Full	1.2(1.4)	11(10)	1.7	-55~+85℃	30/10/10	17×15×7.5	CW / CCW	T/Y
HMITA60T180G	C/X/Ku Band (6.0~18.0)	Full	1.2	15	1.65	-55~+85	30/10/1	9.7×12×6	CW / CCW	T/Y
HMITA60T180G-1	C/X/Ku Band(6.0~18.0)	Full	1 (1.2)	12 (11)	1.65	-55~+85	30/10/1	9×7×3	CW / CCW	T/Y
HMITA80T120G-B	X Band(8.0~12.0)	Full	0.5	19	1.3	-55~+85℃	20/10/3	7.5×6.5×3	CW / CCW	T/Y
HMITA180T280G-B	K Band(18.0~28.0)	Full	0.8	16	1.3	-55~+85℃	10/2/1	5.5×4.5×3.5	CW / CCW	T/Y

Miniaturized Microstrip Isolator

Model	Frequency (GHz)	BW Max	Insertion loss(dB)Max	Isolation (dB)Min	VSWR Max	Operating temperature (℃)	PK/CW/RP (Watt)	Size(mm) L × W × H	Direction	Shape
HMITA50T60G-M	C Band(5.0~6.0)	Full	0.6	18	1.3	-55~+85℃	10/2.5/3	7.5×6.5×4	CW / CCW	T/Y
HMITA80T120G-M	X Band(8.0~12.0)	Full	0.6	15	1.4	-55~+85℃	5/2/2	5×4×2.5	CW / CCW	T/Y
HMITA150T170G-M	Ku Band(15.0~17.0)	Full	0.5	20	1.2	-55~+85℃	20/5/2	4.5×3.5×1.7	CW / CCW	T/Y

Surface Mount Technology Microstrip Circulator and Isolator

All our microstrip circulators/isolators can take SMT option.

Microstrip Product

Dual-Junction Circulator

Model	Frequency (GHz)	BW Max	Insertion loss(dB)Max	Isolation (dB)Min	VSWR Max	Operating temperature (℃)	PK/CW/RP (Watt)	Size(mm) L × W × H	Direction
HMDHA50T60G	C Band(5.0~6.0)	Full	0.5(P1-P2)	18.0(P2-P1)	1.35	-55~+85	30/15/5	15×15×4	CW / CCW
			0.9(P2-P3)	30.0(P3-P2)					
HMDHA50T60G	C Band(5.0~6.0)	Full	0.5(P1-P2)	20.0(P2-P1)	1.25	-55~+85	30/15/5	18×10×4	CW / CCW
			0.9(P2-P3)	30.0(P3-P2)					
HMDYA80T120G	X Band(8.0~12.0)	Full	0.65(P1-P2)	16.0(P2-P1)	1.35	-55~+85	20/10/3	10×8×3	CW / CCW
			1.3(P2-P3)	28.0(P3-P2)					
HMDYA85T105G	X Band(8.5~10.5)	Full	0.5(P1-P2)	20.0(P2-P1)	1.25	-55~+85	20/10/3	10×8×3	CW / CCW
			0.9(P2-P3)	30.0(P3-P2)					
HMDHA80T120G	X Band(8.0~12.0)	Full	0.6(P1-P2)	16.0(P2-P1)	1.35	-55~+85	20/10/3	10×8×3	CW / CCW
			1.2(P2-P3)	28.0(P3-P2)					
HMDHA85T105G	X Band(8.5~10.5)	Full	0.4(P1-P2)	20.0(P2-P1)	1.25	-55~+85	20/10/3	10×8×3	CW / CCW
			0.8(P2-P3)	30.0(P3-P2)					
HMDHA140T180G	Ku Band(14.0~18.0)	Full	0.5(P1-P2)	17.0(P2-P1)	1.3	-55~+85	20/10/3	8×7×3	CW / CCW
			0.9(P2-P3)	28.0(P3-P2)					
HMDYA140T180G	Ku Band(14.0~18.0)	Full	0.6(P1-P2)	16.0(P2-P1)	1.35	-55~+85	20/10/3	8×7×3	CW / CCW
			1.1(P2-P3)	28.0(P3-P2)					
HMDHA50T60G-MR	C Band(5.0~6.0)	Full	0.5(P1-P2)	18.0(P2-P1)	1.35	-55~+85	20/10/10	12.5×9×3	CW / CCW
			1.0(P2-P3)	30.0(P3-P2)					
HMDHA90T100G-M	X Band(9.0~10.0)	Full	0.5(P1-P2)	18.0(P2-P1)	1.25	-55~+85	10/5/1	8×4×2.5	CW / CCW
			1.0(P2-P3)	30.0(P3-P2)					
HMDHA90T100G-MR	X Band(9.0~10.0)	Full	0.5(P1-P2)	20.0(P2-P1)	1.25	-55~+85	10/5/10	8×6×2.5	CW / CCW
			1.0(P2-P3)	30.0(P3-P2)					
HMDHA85T105G-M	X Band(8.5~10.5)	Full	0.4(P1-P2)	18.0(P2-P1)	1.25	-55~+85	20/10/3	8.5×6×3	CW / CCW
			0.8(P2-P3)	30.0(P3-P2)					
HMDHA85T105G-MR	X Band(8.5~10.5)	Full	0.4(P1-P2)	18.0(P2-P1)	1.25	-55~+85	20/10/10	8.5×8×3	CW / CCW
			0.8(P2-P3)	30.0(P3-P2)					
HMDHA150T170G-MR	Ku Band(15.0~17.0)	Full	0.4(P1-P2)	20.0(P2-P1)	1.25	-55~+85	20/10/10	6×5.6×2.5	CW / CCW
			0.75(P2-P3)	30.0(P3-P2)					
HMDYA150T170G-M	Ku Band(15.0~17.0)	Full	0.4(P1-P2)	20.0(P2-P1)	1.25	-55~+85	20/10/2	5.8×5×2.5	CW / CCW
			0.8(P2-P3)	30.0(P3-P2)					
HMDYA157T177G-M	Ku Band(15.7~17.7)	Full	0.4(P1-P2)	20.0(P2-P1)	1.25	-55~+85	20/10/2	5.8×5×2.5	CW / CCW
			0.8(P2-P3)	30.0(P3-P2)					
HMDHA50T60G	C Band(5.0~6.0)	Full	0.5(P1-P2)	18.0(P2-P1)	1.35	-55~+85	30/15/10	14×17×4	CW / CCW
			0.9(P2-P3)	30.0(P3-P2)					
HMDHA85T105G	X Band(8.5~10.5)	Full	0.45(P1-P2)	18.0(P2-P1)	1.3	-55~+85	20/10/2	10×8×3	CW / CCW
			0.9(P2-P3)	30.0(P3-P2)					