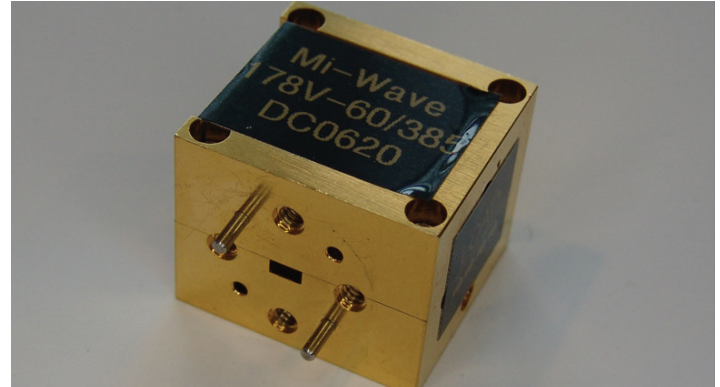


Description

Mi-Wave's 178 series is an H-plane, three-port Y-junction ferrite device with one arm internally terminated in a matched load. Reflected energy is circulated into this load to isolate the input. All external mating surfaces are machined to extreme flatness to provide connection to standard waveguide flanges for minimum discontinuity. The 179 Series isolators are available in standard waveguide sizes from 18.0 to 110 GHz, in round style flanges only.

- **Optimal Temperature Response**
- **Compact & Rugged**
- **Broad Bandwidth**
- **Low Loss**
- **Low VSWR**
- **High Isolation**



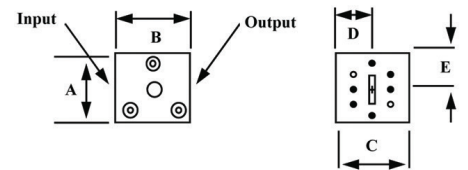
Applications

The 178 Series Y-junction isolators are useful in test setup and operational systems. These devices provide a high degree of isolation between signal sources and system loads by sharply attenuating reflected signals with very low loss in the forward direction.

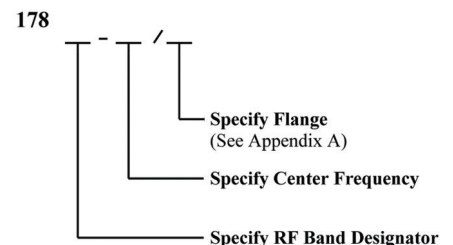
*Wider Bandwidths Available

Dimensional Specifications										
Model No.	A		B		C		D		E	
	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm
178K	1.50	38.1	1.25	31.8	1.18	29.97	0.59	14.9	0.59	14.9
178A	1.50	38.1	1.25	31.8	1.18	29.97	0.59	14.9	0.59	14.9
178B	1.50	38.1	1.25	31.8	1.18	29.97	0.59	14.9	0.59	14.9
178U	1.50	38.1	1.25	31.8	1.18	29.97	0.59	14.9	0.59	14.9
178V	1.10	27.9	1.00	25.4	0.90	22.9	0.50	12.7	0.50	11.4
178E	1.10	27.9	1.00	25.4	0.90	22.9	0.50	12.7	0.50	11.4
178W	1.10	27.9	1.00	25.4	0.90	22.9	0.50	12.7	0.50	11.4
178F	1.10	27.9	1.00	25.4	0.90	22.9	0.50	12.7	0.50	11.4

TECHNICAL SPECIFICATIONS								
(TYPICAL)								
Model No.	178K	178A	178B	178U	178V	178E	178W	178F
Frequency Band (GHz)	18–26.5	26.5–40	33–50	40–60	50–75	60–90	75–110	90–140
Bandwidth¹	1.8 GHz	1.5 GHz	1.3 GHz	1.3 GHz	1.5 GHz	1.5 GHz	1.5 GHz	1.5 GHz
Isolation² (dB) (typ)	20.0	20.0	20.0	18.0	18.0	15.0	15.0	15.0
Insertion Loss (dB)¹ (typ)	0.4	0.4	0.5	0.7	0.8	0.9	1.0	1.3
VSWR Max (typ)	1.30	1.30	1.30	1.35	1.40	1.4	1.4	1.4
Temperature Range	-15° to +65°C							
Peak Power (kW)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Average Power (Watts)	—							
Forward	30	30	25	15	110	5	5	2
Backward	1.5	1.0	0.8	0.4	0.3	0.2	0.2	0.2
Weight (oz)	2.0	2.0	2.0	2.0	3.0	3.0	3.0	3.0
Flange Type	UG-425/U	UG-381/U	UG-383/U	UG-383/U	UG-385/U	UG-387/U	UG-387/U	UG-387/U



Ordering Information



1. Specify center frequency.