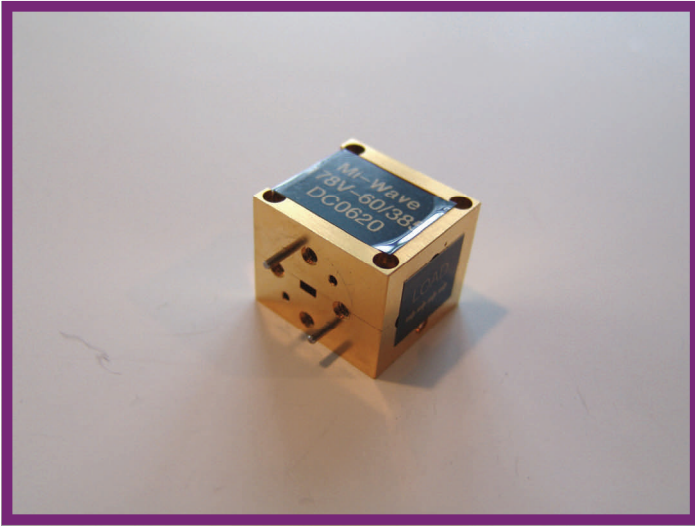


# 178 Series

# Y-Junction Isolators



## Features

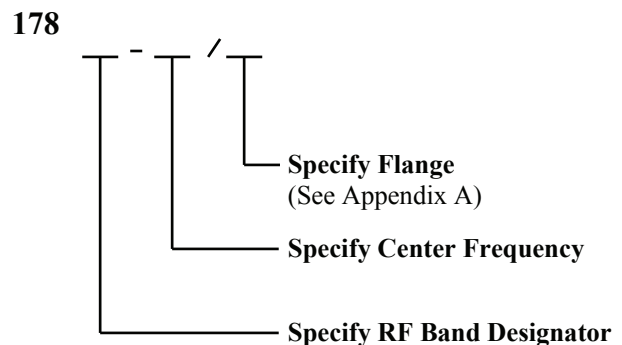
- Low Loss
- Low VSWR
- High Isolation
- Broad Bandwidth
- Compact & Rugged
- Optimal Temperature Response

## Description

### 178 Series Isolators

**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 178 series isolators are available in standard waveguide sizes from 18.0 to 110 GHz, in round style flanges only.

## Ordering Information



## 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.

## **Mi-Wave**

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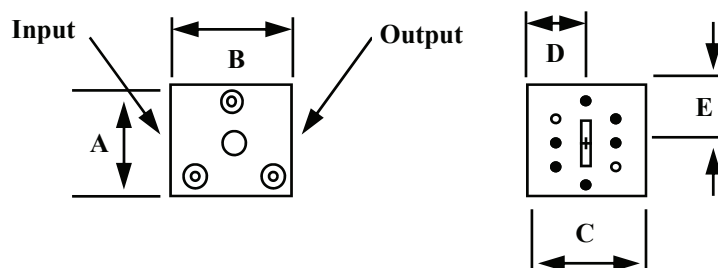
# 178 Series

# Y-Junction Isolators

## Technical Specifications

Model Number	178K	178A	178B	178U	178V	178E	178W
Frequency Band (GHz)	18.0-26.5	26.5-40.0	33.0- 50.0	40.0-60.0	50.0-75.0	60.0-90.0	75.0-110.0
Bandwidth <sup>1</sup>	2.0GHz	1.5GHz	1.3GHz	1.3GHz	1.5GHz	1.5GHz	1.5GHz
Isolation <sup>2</sup> (dB)	20.0	20.0	20.0	15.0	15.0	15.0	15.0
Insertion Loss (dB)	0.4	0.4	0.5	0.7	1.0	1.0	1.0
VSWR <sup>2</sup> Max.	1.30	1.30	1.30	1.35	1.40	1.4	1.4
Temperature Range	_____ 15° to + 65°C _____			_____ 0° - 50° _____			
Peak Power (kW)	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Average Power (Watts)							
Forward	30	30	25	15	10	5	5
Backward	1.5	1.0	0.8	0.4	0.3	0.2	0.2
Weight (oz)	3.0	3.0	3.0	3.0	5.0	5.0	5.0
Flange Type	UG425/U	UG381/U	UG383/U	UG383/U	UG385/U	UG387/U	UG387/U

1. Specify center frequency.
2. Specification shown is for band edges.



## 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	.59	14.9	.59	14.9
178A	1.50	38.1	1.25	31.8	1.18	29.97	.59	14.9	.59	14.9
178B	1.50	38.1	1.25	31.8	1.18	29.97	.59	14.9	.59	14.9
178U	1.50	38.1	1.25	31.8	1.18	29.97	.59	14.9	.59	14.9
178V	1.10	27.9	1.00	25.4	.90	22.9	.50	12.7	.45	11.4
178E	1.10	27.9	1.00	25.4	.90	22.9	.50	12.7	.45	11.4
178W	1.10	27.9	1.00	25.4	.90	22.9	.49	12.7	.50	11.4

**Mi-Wave**

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