

## PRODUCT DATASHEET

# ES-HG-S02-F17-R120

## Precision Transmission Component

Harmonic Component Sets | Hat Component Set

### Product Overview

Precision Transmission Component with rated Torque 24 N·m, instantaneous Maximum Torque 86 N·m and start/Stop Peak Torque 54 N·m.

### Key Specifications

| PARAMETER                    | VALUE | UNIT    |
|------------------------------|-------|---------|
| Rated Torque                 | 24    | N·m     |
| Instantaneous Maximum Torque | 86    | N·m     |
| Start/Stop Peak Torque       | 54    | N·m     |
| Reduction Ratio              | 120   |         |
| Backlash                     | ≤20   | arc sec |
| Maximum Input Speed          | 7300  | r/min   |
| Allowable Average Torque     | 39    | N·m     |
| Frame Size                   | 17    |         |
| Weight                       | 0.19  | kg      |

## Technical Specifications

| PARAMETER                        | SPECIFICATION        | UNIT    | NOTES                                                                                                                                                                                                                                                                             |
|----------------------------------|----------------------|---------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>PERFORMANCE</b>               |                      |         |                                                                                                                                                                                                                                                                                   |
| Rated Torque                     | 24                   | Nm      | Frame Size: 17; Reduction Ratio: 120                                                                                                                                                                                                                                              |
| Instantaneous Maximum Torque     | 86                   | Nm      | Frame Size: 17; Reduction Ratio: 120                                                                                                                                                                                                                                              |
| Start/Stop Peak Torque           | 54                   | Nm      | Frame Size: 17; Reduction Ratio: 120                                                                                                                                                                                                                                              |
| Backlash                         | ≤20                  | arc sec | Frame Size: 17; Reduction Ratio: 120                                                                                                                                                                                                                                              |
| Allowable Average Torque         | 39                   | Nm      | Frame Size: 17; Reduction Ratio: 120                                                                                                                                                                                                                                              |
| <b>MECHANICAL</b>                |                      |         |                                                                                                                                                                                                                                                                                   |
| Frame Size                       | 17                   |         | Frame Size: 17; Reduction Ratio: 120                                                                                                                                                                                                                                              |
| Weight                           | 0.19                 | kg      | Frame Size: 17; Reduction Ratio: 120                                                                                                                                                                                                                                              |
| Wave Generator Dimension T       | 12.8+0.10 / 9.4+0.10 | mm      | Frame Size: 17; Option Index: 1; Option Label: Wave generator - A φ 11; Reduction Ratio: 120; Wave Generator Option: wave-generator-fd26f6670d9b / Frame Size: 17; Option Label: Wave generator - A φ 8; Reduction Ratio: 120; Wave Generator Option: wave-generator-e6e55a341aa3 |
| Wave Generator Bore U            | φ11H7 / φ8H7         |         | Frame Size: 17; Option Index: 1; Option Label: Wave generator - A φ 11; Reduction Ratio: 120; Wave Generator Option: wave-generator-fd26f6670d9b / Frame Size: 17; Option Label: Wave generator - A φ 8; Reduction Ratio: 120; Wave Generator Option: wave-generator-e6e55a341aa3 |
| Wave Generator Keyway W          | 3JS9/P9 / 4JS9/P9    |         | Frame Size: 17; Option Label: Wave generator - A φ8; Reduction Ratio: 120; Wave Generator Option: wave-generator-e6e55a341aa3 / Frame Size: 17; Option Index: 1; Option Label: Wave generator - A φ11; Reduction Ratio: 120; Wave Generator Option: wave-generator-fd26f6670d9b   |
| <b>RELIABILITY</b>               |                      |         |                                                                                                                                                                                                                                                                                   |
| Design Life                      | 15000                | h       | Frame Size: 17; Reduction Ratio: 120                                                                                                                                                                                                                                              |
| <b>ADDITIONAL SPECIFICATIONS</b> |                      |         |                                                                                                                                                                                                                                                                                   |
| Reduction Ratio                  | 120                  |         | Frame Size: 17; Reduction Ratio: 120                                                                                                                                                                                                                                              |
| Maximum Input Speed              | 7300                 | r/min   | Frame Size: 17; Reduction Ratio: 120                                                                                                                                                                                                                                              |
| Average Input Speed              | 3500                 | r/min   | Frame Size: 17; Reduction Ratio: 120                                                                                                                                                                                                                                              |

## Dimensional & Integration Overview

### Mechanical Overview

| PARAMETER                  | VALUE                | UNIT |
|----------------------------|----------------------|------|
| Frame Size                 | 17                   |      |
| Weight                     | 0.19                 | kg   |
| Wave Generator Dimension T | 12.8+0.10 / 9.4+0.10 | mm   |
| Wave Generator Bore U      | φ11H7 / φ8H7         |      |
| Wave Generator Keyway W    | 3JS9/P9 / 4JS9/P9    |      |

[View Product Online](#)   [Request Engineering Data](#)   [Request a Quote](#)

**01** Specifications are subject to change without notice. Verify the current product configuration before final design release.

**02** 2D drawings, CAD files and integration documentation are controlled documents and are supplied separately on request.