

## PRODUCT DATASHEET

# ES-HG-S02-F20-R100

Precision Transmission Component

Harmonic Component Sets | Hat Component Set

### Product Overview

Precision Transmission Component with rated Torque 40 N·m, instantaneous Maximum Torque 147 N·m and start/Stop Peak Torque 82 N·m.

### Key Specifications

| PARAMETER                    | VALUE | UNIT    |
|------------------------------|-------|---------|
| Rated Torque                 | 40    | N·m     |
| Instantaneous Maximum Torque | 147   | N·m     |
| Start/Stop Peak Torque       | 82    | N·m     |
| Reduction Ratio              | 100   |         |
| Backlash                     | ≤20   | arc sec |
| Maximum Input Speed          | 6500  | r/min   |
| Allowable Average Torque     | 49    | N·m     |
| Frame Size                   | 20    |         |
| Weight                       | 0.27  | kg      |

## Technical Specifications

| PARAMETER                    | SPECIFICATION                    | UNIT    | NOTES                                |
|------------------------------|----------------------------------|---------|--------------------------------------|
| PERFORMANCE                  |                                  |         |                                      |
| Rated Torque                 | 40                               | Nm      | Frame Size: 20; Reduction Ratio: 100 |
| Instantaneous Maximum Torque | 147                              | Nm      | Frame Size: 20; Reduction Ratio: 100 |
| Start/Stop Peak Torque       | 82                               | Nm      | Frame Size: 20; Reduction Ratio: 100 |
| Backlash                     | ≤20                              | arc sec | Frame Size: 20; Reduction Ratio: 100 |
| Allowable Average Torque     | 49                               | Nm      | Frame Size: 20; Reduction Ratio: 100 |
| MECHANICAL                   |                                  |         |                                      |
| Frame Size                   | 20                               |         | Frame Size: 20; Reduction Ratio: 100 |
| Weight                       | 0.27                             | kg      | Frame Size: 20; Reduction Ratio: 100 |
| Wave Generator Dimension T   | 9.4+0.10 / 12.8+0.10 / 16.3+0.10 | mm      | Varies by published configuration.   |
| Wave Generator Bore U        | φ11H7 / φ14H7 / φ8H7             |         | Varies by published configuration.   |
| Wave Generator Keyway W      | 3JS9/P9 / 4JS9/P9 / 5JS9/P9      |         | Varies by published configuration.   |
| RELIABILITY                  |                                  |         |                                      |
| Design Life                  | 15000                            | h       | Frame Size: 20; Reduction Ratio: 100 |
| ADDITIONAL SPECIFICATIONS    |                                  |         |                                      |
| Reduction Ratio              | 100                              |         | Frame Size: 20; Reduction Ratio: 100 |
| Maximum Input Speed          | 6500                             | r/min   | Frame Size: 20; Reduction Ratio: 100 |
| Average Input Speed          | 3500                             | r/min   | Frame Size: 20; Reduction Ratio: 100 |

## Dimensional & Integration Overview

### Mechanical Overview

| PARAMETER                  | VALUE                            | UNIT |
|----------------------------|----------------------------------|------|
| Frame Size                 | 20                               |      |
| Weight                     | 0.27                             | kg   |
| Wave Generator Dimension T | 9.4+0.10 / 12.8+0.10 / 16.3+0.10 | mm   |
| Wave Generator Bore U      | φ11H7 / φ14H7 / φ8H7             |      |
| Wave Generator Keyway W    | 3JS9/P9 / 4JS9/P9 / 5JS9/P9      |      |

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**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.