PRODUCT DATASHEET

ES-HG-S29-F11-R50

Precision Transmission Component

Ultra-Thin Harmonic Gearboxes | Ultra-Short Gear Unit

Product Overview

Precision Transmission Component with rated Torque 2.4 N·m, instantaneous Maximum Torque 11.5 N·m and start/Stop Peak Torque 5.8 N·m.

Key Specifications

PARAMETER	VALUE	UNIT
Rated Torque	2.4	N·m
Instantaneous Maximum Torque	11.5	N·m
Start/Stop Peak Torque	5.8	N·m
Reduction Ratio	50	
Maximum Input Speed	8000	r/min
Allowable Average Torque	3.5	N·m
Frame Size	11	
Weight	0.13	kg
Average Input Speed	3500	r/min

Technical Specifications

PARAMETER	SPECIFICATION	UNIT	NOTES
PERFORMANCE			
Rated Torque	2.4	N·m	Frame Size: 11; Reduction Ratio: 50; Size: 11
Instantaneous Maximum Torque	11.5	N·m	Frame Size: 11; Reduction Ratio: 50; Size: 11
Start/Stop Peak Torque	5.8	N·m	Frame Size: 11; Reduction Ratio: 50; Size: 11
Allowable Average Torque	3.5	N·m	Frame Size: 11; Reduction Ratio: 50; Size: 11
Angle Transmission Accuracy	2	arc min	Frame Size: 11; Ratio Bucket: 50; Reduction Ratio: 50; Size: 11
Hysteresis Loss	3	arc min	Frame Size: 11; Ratio Bucket: 50; Reduction Ratio: 50; Size: 11
MECHANICAL			
Frame Size	11		Frame Size: 11; Reduction Ratio: 50; Size: 11
Weight	0.13	kg	Frame Size: 11; Reduction Ratio: 50; Size: 11
Wave Generator Dimension T	7+0.10 / 9.4+0.10	mm	Frame Size: 11; Option Label: Wave generator - A φ6; Reduction Ratio: 50; Wave Generator Option: wave-generator-39713db786bd / Frame Size: 11; Option Index: 1; Option Label: Wave generator - A φ8; Reduction Ratio: 50; Wave Generator Option: wave-generator-0b03493338e1
Wave Generator Bore U	φ6H7 / φ8H7		Varies by published configuration.

Technical Specifications

PARAMETER	SPECIFICATION	UNIT	NOTES
MECHANICAL			
Wave Generator Keyway W	2JS9/P9 / 3JS9/P9		Frame Size: 11; Option Label: Wave generator - A φ6; Reduction Ratio: 50; Wave Generator Option: wave-generator-39713db786bd / Frame Size: 11; Option Index: 1; Option Label: Wave generator - A φ8; Reduction Ratio: 50; Wave Generator Option: wave-generator-0b03493338e1
RELIABILITY			
Design Life	8000	h	Frame Size: 11; Reduction Ratio: 50; Size: 11
ADDITIONAL SPECIFICATIONS			
Reduction Ratio	50		Frame Size: 11; Reduction Ratio: 50; Size: 11
Maximum Input Speed	8000	r/min	Frame Size: 11; Reduction Ratio: 50; Size: 11
Average Input Speed	3500	r/min	Frame Size: 11; Reduction Ratio: 50; Size: 11
Torsional Rigidity K2	0.051	×10⁴ N·m/rad	Frame Size: 11; Ratio Bucket: 50; Reduction Ratio: 50; Size: 11; Source Condition: ratio=50
Torsional Rigidity K1	0.037	×10⁴ N·m/rad	Frame Size: 11; Ratio Bucket: 50; Reduction Ratio: 50; Size: 11; Source Condition: ratio=50
Torsional Rigidity K3	0.071	×10⁴ N·m/rad	Frame Size: 11; Ratio Bucket: 50; Reduction Ratio: 50; Size: 11; Source Condition: ratio=50
Torsional Rigidity T2	0.75	N·m	Frame Size: 11; Ratio Bucket: 50; Reduction Ratio: 50; Size: 11; Source Condition: all ratios
Torsional Rigidity T1	0.29	N·m	Frame Size: 11; Ratio Bucket: 50; Reduction Ratio: 50; Size: 11; Source Condition: all ratios

Dimensional & Integration Overview

Mechanical Overview

PARAMETER	VALUE	UNIT
Frame Size	11	
Weight	0.13	kg
Wave Generator Dimension T	7+0.10 / 9.4+0.10	mm
Wave Generator Bore U	φ6H7 / φ8H7	
Wave Generator Keyway W	2JS9/P9 / 3JS9/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.