PRODUCT DATASHEET

ES-HG-S05-F14-R50

Precision Transmission Component

Cup Harmonic Gearboxes | High-Torque Cup Unit Type I

Product Overview

Precision Transmission Component with rated Torque 7 N·m, instantaneous Maximum Torque 46 N·m and start/Stop Peak Torque 23 N·m.

Key Specifications

PARAMETER	VALUE	UNIT
Rated Torque	7	N·m
Instantaneous Maximum Torque	46	N·m
Start/Stop Peak Torque	23	N·m
Reduction Ratio	50	
Backlash	≤20 / 20	arc sec
Maximum Input Speed	8500	r/min
Allowable Average Torque	9	N·m
Frame Size	14	
Weight	0.51	kg

Technical Specifications

PARAMETER	SPECIFICATION	UNIT	NOTES
PERFORMANCE			
Rated Torque	7	N·m	
Instantaneous Maximum Torque	46	N·m	
Start/Stop Peak Torque	23	N·m	
Backlash	≤20 / 20	arc sec	
Allowable Average Torque	9	N·m	
Angular Transmission Accuracy	1.5	arc min	
Hysteresis Loss	2	arc min	
Starting Torque	4.5 / 0.045	N·m	
MECHANICAL			
Frame Size	14		
Weight	0.51	kg	
Wave Generator Dimension T	7+0.10 / 9.4+0.10	mm	Varies by published configuration.

Technical Specifications

PARAMETER	SPECIFICATION	UNIT	NOTES
MECHANICAL			
Wave Generator Bore U	φ8H7 / φ6H7		Varies by published configuration.
Wave Generator Keyway W	3JS9/P9 / 2JS9/P9		Varies by published configuration.
RELIABILITY			
Design Life	10000	h	
ADDITIONAL SPECIFICATIONS			
Reduction Ratio	50		
Maximum Input Speed	8500	r/min	
Average Input Speed	3500	r/min	
Torsional Rigidity K1	0.34 / 3400	N·m/rad	
Torsional Rigidity K2	0.47 / 4700	N·m/rad	
Torsional Rigidity K3	0.57 / 5700	N·m/rad	
Torsional Rigidity T2	6.9	N·m	
Torsional Rigidity T1	2	N·m	

Dimensional & Integration Overview

Mechanical Overview

PARAMETER	VALUE	UNIT
Frame Size	14	
Weight	0.51	kg
Wave Generator Dimension T	7+0.10 / 9.4+0.10	mm
Wave Generator Bore U	φ8H7 / φ6H7	
Wave Generator Keyway W	3JS9/P9 / 2JS9/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.