

PRODUCT DATASHEET

ES-HG-S05-F14-R80

Precision Transmission Component

Cup Harmonic Gearboxes | High-Torque Cup Unit Type I

Product Overview

Precision Transmission Component with rated Torque 10 N·m, instantaneous Maximum Torque 58 N·m and start/Stop Peak Torque 30 N·m.

Key Specifications

PARAMETER	VALUE	UNIT
Rated Torque	10	N·m
Instantaneous Maximum Torque	58	N·m
Start/Stop Peak Torque	30	N·m
Reduction Ratio	80	
Backlash	≤20 / 20	arc sec
Maximum Input Speed	8500	r/min
Allowable Average Torque	14	N·m
Frame Size	14	
Weight	0.51	kg

Technical Specifications

PARAMETER	SPECIFICATION	UNIT	NOTES
PERFORMANCE			
Rated Torque	10	Nm	
Instantaneous Maximum Torque	58	Nm	
Start/Stop Peak Torque	30	Nm	
Backlash	$\leq 20 / 20$	arc sec	
Allowable Average Torque	14	Nm	
Angular Transmission Accuracy	1.5	arc min	
Hysteresis Loss	1	arc min	
Starting Torque	3.1 / 0.031	Nm	
MECHANICAL			
Frame Size	14		
Weight	0.51	kg	
Wave Generator Dimension T	9.4+0.10 / 7+0.10	mm	Varies by published configuration.

Technical Specifications

PARAMETER	SPECIFICATION	UNIT	NOTES
MECHANICAL			
Wave Generator Bore U	$\phi 6H7 / \phi 8H7$		Varies by published configuration.
Wave Generator Keyway W	3JS9/P9 / 2JS9/P9		Varies by published configuration.
RELIABILITY			
Design Life	15000	h	
ADDITIONAL SPECIFICATIONS			
Reduction Ratio	80		
Maximum Input Speed	8500	r/min	
Average Input Speed	3500	r/min	
Torsional Rigidity K1	0.47 / 4700	Nm/rad	
Torsional Rigidity K2	0.61 / 6100	Nm/rad	
Torsional Rigidity K3	0.71 / 7100	Nm/rad	
Torsional Rigidity T2	6.9	Nm	
Torsional Rigidity T1	2	Nm	

Dimensional & Integration Overview

Mechanical Overview

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