ADIS1654x IMU Package Internal Dimension and Data Sheet Revision

Data Sheet Specification Comparison

From Rev. A (Current)

GYROSCOPE PERFORMANCE SPECIFICATIONS

Table 2. For ±125°/sec (ADIS16545-1BMLZ and ADIS16547-1BMLZ)

Parameter	Test Conditions/Comments	Min	Typ	Max	Unit
GYROSCOPES					
Dynamic Range		±125			°/sec
Sensitivity	32-bit		10,485,760		LSB/°/sec
Repeatability[1]	−40°C ≤ T_C ≤ +85°C, 1 σ		±0.2		%
Error Over Temperature	−40°C ≤ T_C ≤ +85°C, 1 σ		±0.09		%
Misalignment Error[2]	−40°C ≤ T_C ≤ +85°C, 1 σ				
	Axis to axis		±0.15		Degrees
	Axis to package		±0.15		Degrees

To Rev. B (New)

GYROSCOPE PERFORMANCE SPECIFICATIONS

Table 2. For ±125°/sec (ADIS16545-1BMLZ and ADIS16547-1BMLZ)

Parameter	Test Conditions/Comments	Min	Typ	Max	Unit
GYROSCOPES					
Dynamic Range		±125			°/sec
Sensitivity	32-bit		10,485,760		LSB/°/sec
Repeatability[1]	−40°C ≤ T_C ≤ +85°C, 1 σ		±0.2		%
Error Over Temperature	−40°C ≤ T_C ≤ +85°C, 1 σ		±0.09		%
Misalignment Error[2]	−40°C ≤ T_C ≤ +85°C, 1 σ				
	Axis to axis		±0.05		Degrees
	Axis to package			±0.25	Degrees

Data Sheet Specification Comparison

From Rev. A (Current)

Table 3. For ±450°/sec (ADIS16545-2BMLZ and ADIS16547-2BMLZ) (Continued)

Parameter	Test Conditions/Comments	Min	Typ	Max	Unit
Misalignment Error[2]	−40°C ≤ T_C ≤ +85°C, 1 σ				
	Axis to axis		±0.15		Degrees
	Axis to package		±0.15		Degrees

To Rev. B (New)

Table 3. For ±450°/sec (ADIS16545-2BMLZ and ADIS16547-2BMLZ) (Continued)

Parameter	Test Conditions/Comments	Min	Typ	Max	Unit
Misalignment Error[2]	−40°C ≤ T_C ≤ +85°C, 1 σ				
	Axis to axis		±0.05		Degrees
	Axis to package			±0.25	Degrees

Data Sheet Specification Comparison

From Rev. A (Current)

Table 4. For ±2000°/sec (ADIS16545-3BMLZ and ADIS16547-3BMLZ)

Parameter	Test Conditions/Comments	Min	Typ	Max	Unit
GYROSCOPES					
Dynamic Range		±2000			°/sec
Sensitivity	32-bit		655,360		LSB/°/sec
Repeatability[1]	−40°C ≤ T_C ≤ +85°C, 1 σ		±0.3		%
Error Over Temperature	−40°C ≤ T_C ≤ +85°C, 1 σ		±0.09		%
Misalignment Error[2]	−40°C ≤ T_C ≤ +85°C, 1 σ				
	Axis to axis		±0.15		Degrees
	Axis to package		±0.15		Degrees

To Rev. B (New)

Table 4. For ±2000°/sec (ADIS16545-3BMLZ and ADIS16547-3BMLZ)

Parameter	Test Conditions/Comments	Min	Typ	Max	Unit
GYROSCOPES					
Dynamic Range		±2000			°/sec
Sensitivity	32-bit		655,360		LSB/°/sec
Repeatability[1]	−40°C ≤ T_C ≤ +85°C, 1 σ		±0.3		%
Error Over Temperature	−40°C ≤ T_C ≤ +85°C, 1 σ		±0.09		%
Misalignment Error[2]	−40°C ≤ T_C ≤ +85°C, 1 σ				
	Axis to axis		±0.05		Degrees
	Axis to package			±0.25	Degrees

Data Sheet Specification Comparison

From Rev. A (Current)

ACCELEROMETER PERFORMANCE SPECIFICATIONS

Table 5. For ±8 g (ADIS16545)

Parameter	Test Conditions/Comments	Min	Typ	Max	Unit
ACCELEROMETERS	Each axis				
Dynamic Range		±8			*g*
Sensitivity	32-bit		262,144,000		LSB/*g*
Error Over Temperature	$-40°C \le T_C \le +85°C$, 1 σ		±0.014		%
Repeatability[1]	$-40°C \le T_C \le +85°C$, 1 σ		±0.04		%
Misalignment Error	$-40°C \le T_C \le +85°C$, 1 σ				
	Axis to axis		±0.15		Degrees
	Axis to package		±0.15		Degrees

To Rev. B (New)

ACCELEROMETER PERFORMANCE SPECIFICATIONS

Table 5. For ±8 g (ADIS16545)

Parameter	Test Conditions/Comments	Min	Typ	Max	Unit
ACCELEROMETERS	Each axis				
Dynamic Range		±8			*g*
Sensitivity	32-bit		262,144,000		LSB/*g*
Error Over Temperature	$-40°C \le T_C \le +85°C$, 1 σ		±0.014		%
Repeatability[1]	$-40°C \le T_C \le +85°C$, 1 σ		±0.04		%
Misalignment Error	$-40°C \le T_C \le +85°C$, 1 σ				
	Axis to axis		±0.05		Degrees
	Axis to package			±0.25	Degrees

Data Sheet Specification Comparison

From Rev. A (Current)

Table 6. For ±40 g (ADIS16547)

Parameter	Test Conditions/Comments	Min	Typ	Max	Unit
ACCELEROMETERS	Each axis				
Dynamic Range		±40			*g*
Sensitivity	32-bit		52,428,800		LSB/*g*
Repeatability[1]	−40°C ≤ T_C ≤ +85°C, 1 σ		±0.04		%
Error Over Temperature	−40°C ≤ T_C ≤ +85°C, 1 σ		±0.014		%
Misalignment Error	−40°C ≤ T_C ≤ +85°C, 1 σ				
	Axis to axis		±0.025		Degrees
	Axis to package		±0.15		Degrees

To Rev. B (New)

Table 6. For ±40 g (ADIS16547)

Parameter	Test Conditions/Comments	Min	Typ	Max	Unit
ACCELEROMETERS	Each axis				
Dynamic Range		±40			*g*
Sensitivity	32-bit		52,428,800		LSB/*g*
Repeatability[1]	−40°C ≤ T_C ≤ +85°C, 1 σ		±0.04		%
Error Over Temperature	−40°C ≤ T_C ≤ +85°C, 1 σ		±0.014		%
Misalignment Error	−40°C ≤ T_C ≤ +85°C, 1 σ				
	Axis to axis		±0.05		Degrees
	Axis to package			±0.25	Degrees