

# ANCAP Safety Rating

## BMW 5 SERIES (March 2017 - onwards)



**ANCAP**  
Safety ★★★★★



BMW 5 Series

### This ANCAP safety rating applies to:

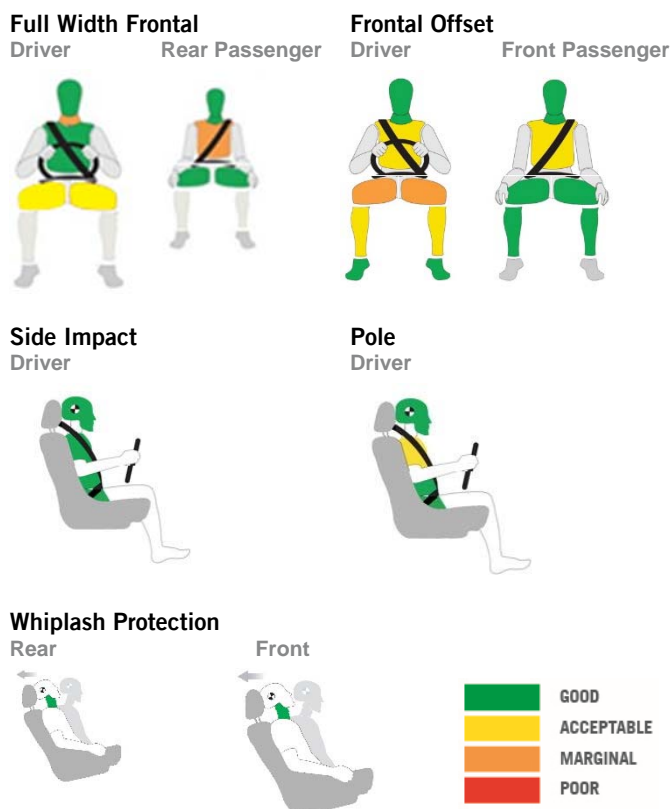
Make / Model	BMW 5 Series
Year Range	March 2017 - onwards
Variant(s)*	520d variants only
Vehicle Type	Large Car

The tested model of BMW 5 Series was introduced in Australia and New Zealand in March 2017. This ANCAP safety rating applies to 520d variants only. Other variants are unrated.

Dual frontal, side chest and side head-protecting airbags (curtains) and a driver knee airbag are standard. Autonomous emergency braking (AEB), lane support systems (LSS), adaptive cruise control (ACC) and intelligent speed assistance (ISA) are standard.

A full list of safety features and technologies can be viewed within the *Safety Features & Technologies* table on page 2 of this report.

### Injury Outcomes.



### Test Results Summary.

<b>Airbags</b>	Dual Frontal, Side, Head, Knee
<b>Adult Occupant Protection</b>	91% (34.82 out of 38)
- Full Width Frontal Test <sup>#</sup>	7.00 (out of 8)
- Frontal Offset Test <sup>#</sup>	6.32 (out of 8)
- Side Impact Test <sup>#</sup>	8.00 (out of 8)
- Pole Test <sup>#</sup>	7.80 (out of 8)
- Whiplash Protection Test	2.71 (out of 3)
- AEB (City)	3.00 (out of 3)
<b>Child Occupant Protection</b>	85% (42.03 out of 49)
<b>Safety Assist</b>	59% (7.10 out of 12)
- Speed Assistance System	1.50 (out of 3)
- Seat Belt Reminders	3.00 (out of 3)
- Lane Support System	0.00 (out of 3)
- AEB (Interurban)	2.60 (out of 3)
<b>Pedestrian Protection</b>	81% (34.06 out of 42)
<b>ANCAP Safety Rating</b>	★★★★★
<b>Rating Year<sup>^</sup></b>	2017

<sup>#</sup> Scaled scores. Total test score out of 16.00 points.

### Adult Occupant Protection.

#### Full Width Frontal Test

Each body region is scored out of 4 points

Driver	Rear Passenger
Head: 4.00 points	Head: 4.00 points
Neck: 2.65 points	Neck: 4.00 points
Chest: 4.00 points	Chest: 2.33 points
Upper legs: 3.00 points	Upper legs: 4.00 points

In the full width frontal test, driver head and chest protection was good, while neck protection was marginal. The driver knee airbag did not deploy quickly enough to protect the right knee from the dashboard and upper leg protection was penalised. Chest protection for the rear passenger was marginal but that of other body regions was good.

#### Frontal Offset Test

Each body region is scored out of 4 points

Driver / Front Passenger (lesser of each)
Head / neck: 4.00 points
Chest: 3.86 points
Upper legs: 1.00 points
Lower legs: 3.77 points

The passenger compartment held its shape well in the frontal offset test. Incorrect deployment of the driver knee airbag in the full width frontal test led to penalties for the upper leg region in the frontal offset test score. Pedal and steering wheel displacements were well controlled. Driver and passenger contact with the airbags was stable.

#### Side Impact Test

#### Pole Test

Each body region is scored out of 4 points

Side Impact Test	Pole Test
Head: 4.00 points	Head: 4.00 points
Chest: 4.00 points	Chest: 3.60 points
Abdomen: 4.00 points	Abdomen: 4.00 points
Pelvis: 4.00 points	Pelvis: 4.00 points

Good protection was provided for the driver in the side impact test. In the more severe side pole test, protection for the head and pelvis was good and chest protection was acceptable.

#### Whiplash Protection

Front / Rear:	1.71 points
Rear:	1.00 points
AEB (City):	3.00 points

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### Child Occupant Protection.

#### Crash Test Performance

6 year old child:	11.22 points
10 year old child:	11.80 points

#### Child Safety Features & Child Seat Installation

Safety features:	7.00 points
Installation check:	12.00 points

**NOTE:** The child restraints tested by Euro NCAP are relevant to the European market. For Australasian consumers, this information should be used as a guide to vehicle features only. For more detailed information about Australian child restraints visit [childcarseats.com.au](http://childcarseats.com.au).

### Pedestrian Protection.

#### Pedestrian Test

Scored out of 42 points

Adult & child head impacts:	22.68 points
Upper leg impacts:	0.05 points
Lower leg impacts:	6.00 points
AEB (VRU):	5.33 points

This vehicle scored 34.06 out of 42 points (Good). The BMW 5 Series has an 'active' bonnet so tests were conducted with the bonnet in the raised position. Good or adequate protection was provided over the entire bonnet surface. The bumper provided good protection for pedestrians' legs. Protection of the pelvis area was poor at all test locations. The autonomous emergency braking system is able to detect pedestrians as well other vehicles and performed well in testing. (Tested by Euro NCAP v8.3)



Green	GOOD
Yellow	ADEQUATE
Orange	MARGINAL
Brown	WEAK
Red	POOR

### Score Deductions.

#### Deductions from full width frontal test scores

Neck:	No deductions
Head:	No deductions
Chest:	No deductions
Upper legs / pelvis:	-1.00 points (incorrect airbag deployment)
Overall:	No deductions

#### Deductions from frontal offset test scores

Head / neck:	No deductions
Chest:	No deductions
Upper legs:	-1.00 points (incorrect airbag deployment)
	-2.00 points (variable contact & concentrated loading)
Lower legs:	No deductions
Overall:	No deductions

#### Deductions from side impact test score

Head / neck:	No deductions
Chest:	No deductions
Abdomen:	No deductions
Pelvis:	No deductions
Overall:	No deductions

#### Deductions from pole test score

Head / neck:	No deductions
Chest:	No deductions
Abdomen:	No deductions
Pelvis:	No deductions
Overall:	No deductions

### Safety Features & Technologies.

Descriptions of each of these safety features and safety assist technologies (SAT) and detail on fitting requirements for each star rating level can be found at [ancap.com.au](http://ancap.com.au).

Safety Feature / Safety Assist Technology	Availability
Seat belts (three-point, lap/sash) for all forward-facing seats	S
Seat belt pretensioners (front)	S
Seat belt pretensioners (rear outboard)	S
Intelligent seat belt reminder (driver)	S
Intelligent seat belt reminder (front passenger)	S
Intelligent seat belt reminder (2 <sup>nd</sup> row seats)	S
Airbag - Frontal (driver)	S
Airbag - Frontal (passenger)	S
Airbag - Side, chest protection (front seats)	S
Airbag - Side, chest protection (2 <sup>nd</sup> row seats)	X
Airbag - Side, head protection (front seats)	S
Airbag - Side, head protection (2 <sup>nd</sup> row seats)	S
Airbag - Knee (driver)	S
Airbag - Knee (front passenger)	X
Head restraints for all seats	S
Adaptive cruise control (ACC)	S
Antilock braking system (ABS)	S
Autonomous emergency braking (AEB)	
- City	S
- Interurban	S
- Vulnerable road user	S
Automatic emergency call (eCall)	S
Automatic headlights	S
Automatic high beam	O
Blind spot monitoring (BSM)	S
Electronic brakeforce distribution (EBD)	S
Electronic stability control (ESC)	S
Emergency brake assist (EBA)	S
Emergency stop signal (ESS)	S
Fatigue reminder	S
Following distance warning (FDW)	S
Lane support system (LSS)	S
Daytime running lights (DRL)	S
Hill launch assist	S
Intersection collision warning	S
Night vision enhancement	O
Rain sensing windscreen wipers	S
Reversing collision avoidance	S
Speed assistance - automatic / intelligent speed limiting (ISA)	S
Speed assistance - manual speed limiting	S
Speed assistance - speed sign recognition & warning	S
Tyre pressure monitoring system (TPMS)	O

**S** = Standard on all variants.

**O** = Optional on base variant. May be standard on higher variants.

**V** = Not available on base variant but standard or optional on higher variants.

**X** = Not available on any variant.

**E** = Available in Europe but not available on any Australasian variant.

These specifications are subject to change. Please check with the manufacturer for the latest specifications.

**Safety Assist.**

**Speed Assistance System (SAS)**

Scored 1.5 out of 3 points

Speed information:	0.0
Warning function:	0.5
Speed Limitation Function:	1.0

**AEB (Interurban)**

Scored 2.60 out of 3 points

Autonomous emergency braking (AEB):	1.40 out of 1.5
Forward collision warning (FCW):	0.95 out of 1.0
Human machine interface (HMI):	0.25 out of 0.5

**Seat Belt Reminder (SBR)**

Scored 3.0 out of 3 points

Driver and passenger:	Pass
Rear:	Pass

**Lane Support Systems (LSS)**

Scored 0.0 out of 3 points

A lane support system was not available as standard on the tested European variant and was therefore not assessed. A lane support system is fitted as standard to Australian and New Zealand variants.

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The standard-fit autonomous emergency braking (AEB) system showed good performance in tests of its functionality at highway speeds. Collision was avoided in almost all circumstances and mitigated in others. A lane keep assist system is standard. A driver-set speed assistance system which allows the driver to limit the maximum speed of the vehicle as appropriate, and a speed limit information system are also fitted as standard on Australian and New Zealand variants.

**Approaching a stationary vehicle:**

18.00 out of 18.00 points for Forward Collision Warning (FCW)



**Approaching a slow moving vehicle:**

11.00 out of 11.00 points for Autonomous Emergency Braking (AEB)



**Approaching a braking vehicle with short headway:**

1.45 out of 2.00 points for AEB, 1.41 out of 2.00 points for FCW



**Approaching a braking vehicle with long headway:**

2.00 out of 2.00 points for AEB, 2.00 out of 2.00 points for FCW



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### Injury Values & Measurements.

Body Region	Frontal offset test at 64km/h (v7)		Full width frontal test at 50km/h (v1)		Side impact test at 50km/h (v7)	Oblique pole test at 32km/h (v7)
	Driver	Front Passenger	Driver	Rear Passenger	Driver	Driver
<b>Head</b>						
HIC	142.00	162.00	363.00	315.00	75.00	310.64
Acceleration (g for 3ms)	40.80	42.80	61.60	55.40	31.30	57.69
<b>Neck</b>						
Shear (kN)	0.56	0.62	0.27	1.05	-	-
Tension (kN)	1.15	0.54	2.01	1.59	-	-
Extension (Nm)	9.40	8.90	34.70	15.90	-	-
<b>Chest</b>						
Compression (mm)	22.26	22.72	17.92	28.02	11.10	30.18
Viscous criterion (m/s)	0.07	0.05	0.09	0.16	0.06	0.39
<b>Abdomen</b>						
Compression (mm)	-	-	-	-	11.51	23.52
<b>Pelvis</b>						
Force (kN)	-	-	-	-	0.78	
<b>Upper legs</b>						
Femur force left (kN)	0.83	0.19	1.40	1.65		
Femur force right (kN)	0.95	0.47	1.85	1.81		
Knee displacement left (mm)	1.70	0.77	2.59			
Knee displacement right (mm)	1.84	0.16	2.43			
<b>Lower legs</b>						
Force left (kN)	2.34	1.69	-	-		
Force right (kN)	2.32	1.61	-	-		
Index (upper / lower) left	0.26 / 0.41	0.22 / 0.15	-	-		
Index (upper / lower) right	0.24 / 0.30	0.24 / 0.15	-	-		
<b>Intrusion Measurements</b>						
<b>Steering column</b>						
Forward (mm)	62	-	-	-		
Downward (mm)	19	-	-	-		
Sideways (mm)	5	-	-	-		
<b>Pedals</b>						
Brake - rearward (mm)	12	-	-	-		
Accelerator - upward (mm)	3	-	-	-		
<b>A-Pillar</b>						
Rearward (mm)	5	-	-	-		

\* **Model Variants:** ANCAP safety ratings do not automatically extend to variants that have different body styles, engine configurations, driven wheels or occupant restraint systems (e.g. fewer airbags). In these cases, ANCAP considers technical evidence submitted by manufacturers before deciding on extending a rating to additional variants of a model. For further information about the application of ANCAP safety ratings to model variants, see the ANCAP Variant Policy.

^ **Rating Year:** The Rating Year denotes the year requirements against which a vehicle has been assessed. The Rating Year is determined by ANCAP and may be based on the year in which a new vehicle model is first launched into the Australian and/or New Zealand markets; the year in which the vehicle was tested (if tested by Euro NCAP); or, for vehicles which hold an existing ANCAP safety rating, the year in which the rating was updated (or earlier applicable year).

### Assessment Details.

Tested Make / Model	BMW 5 Series 520d
Tested Vehicle(s) Built	2017
Tested Body Type	Sedan
Tested Vehicle Kerb Weight	1560 kg
Tested Vehicle Engine	2.0 litre diesel
Tested By	Euro NCAP
Assessed By	Euro NCAP
Document Reference	5SERIES17_rev
Document Created / Revised	20 Apr 2017 / 17 May 2017 / 9 Oct 17
Rating Published	April 2017
Rating Updated	May 2017



Frontal offset test at 64km/h