



Accelerator Pedal Assembly Series 552

Features

- Ruggedized construction for extended durability in harsh environments
- Automotive Design and Process Validated; PPAP qualified.
- Resistant to effects of fluid intrusion and stray electromagnetic field
- Uses Contacting type sensor to determine rotation position of pedal.
- Proven automotive technology with over 150 million units delivered.
- Integrated Dual Output sensor.
- No electromagnetic interference issues



Applications

- The 552 is used in vehicle applications that require a precise control of vehicle acceleration, in a pre-packaged design.
 - Automotive
 - Industrial
 - Off Road & Construction equipment
 - Agriculture
 - Recreational

Description

The accelerator pedal transfers linear movement of the foot on the pedal arm pad to an acceleration command for the vehicle through a linear voltage change, similar to a potentiometer. The device provides redundant dual output in order to increase the product reliability. There are 8 different pedal configurations with various radii which are offered to cover various customer packaging requirements. This product was designed and developed to meet the demanding automotive durability and performance requirements

Durability and Environmental Tests:

Parameter	Unit
Vibration	105 hours; 3 planes; 20-200 Hz
Full Stroke Cycling	3 Million Cycles; Temperature Cycling from -40°C to 80°C
Humidity Cycling	240 hours; RH cycling from 0-95%
Thermal Shock	1000 Cycles; -40°C to 85°C, 20 minute dwells, 60 second transition time
Dust Exposure	GB4208 Test; IP5K4 Resistance Class
Salt Fog	ASTM B117; 96H



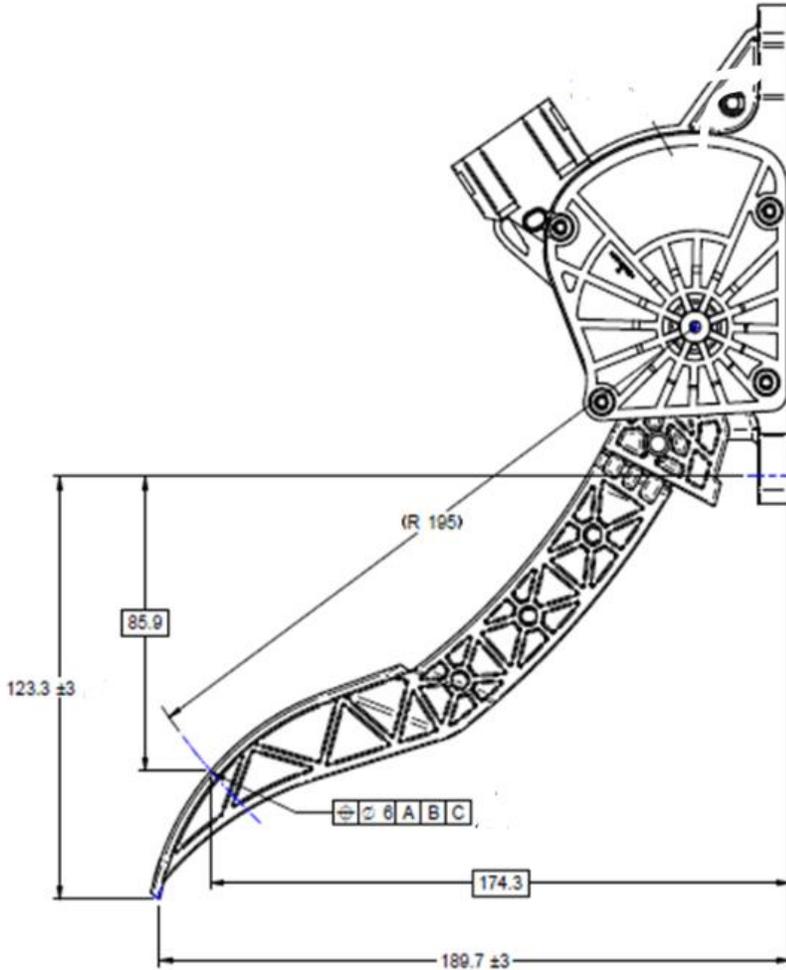
Functional Specifications

Functional Characteristic																					
Working Temperature	-40°C to +85°C																				
Weight	≤ 350g																				
IP Rating	IP54* (pedal must be mounted to achieve rating)																				
Working Angle	Options Available: 12.6° / 14° / 17°																				
Electrical Characteristic	Working Voltage: 5V ± 0.3V																				
	Working Current: ≤ 20mA																				
	Output Pull-Down Resistor: ≥ 330KΩ																				
	Output Options (% of supply voltage)																				
	<table border="1"> <thead> <tr> <th>Angle</th> <th colspan="2">12.6°/14°</th> <th colspan="2">17°</th> </tr> <tr> <th>Position</th> <th>Idle</th> <th>Full travel</th> <th>Idle</th> <th>Full travel</th> </tr> </thead> <tbody> <tr> <td>SIG1</td> <td>15%±2%</td> <td>82%±4%</td> <td>20%±2%</td> <td>82.6%±4%</td> </tr> <tr> <td>SIG2</td> <td>7.5%±1%</td> <td>41%±2%</td> <td>10%±1.5%</td> <td>41.3%±2%</td> </tr> </tbody> </table>	Angle	12.6°/14°		17°		Position	Idle	Full travel	Idle	Full travel	SIG1	15%±2%	82%±4%	20%±2%	82.6%±4%	SIG2	7.5%±1%	41%±2%	10%±1.5%	41.3%±2%
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Linearity: ± 3%																					
Correlation: (SIG1 - (2*SIG2)) ≤ 2.8%																					
Force Characteristic	Idle Force (pressing): 20N ± 5N																				
	Full travel force (pressing): 33N ± 5N																				
	Minimum Force (releasing): ≥ 5N																				

- Correlation – two signals are compared to validate the quality of the pedal outputs.
- Linearity – a measure of the actual signal vs. a perfect signal across the length a of pedal’s travel.

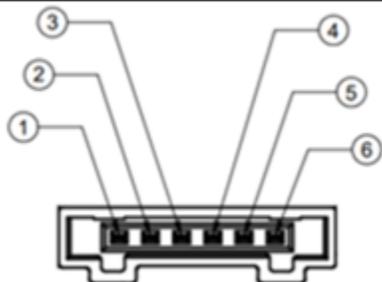


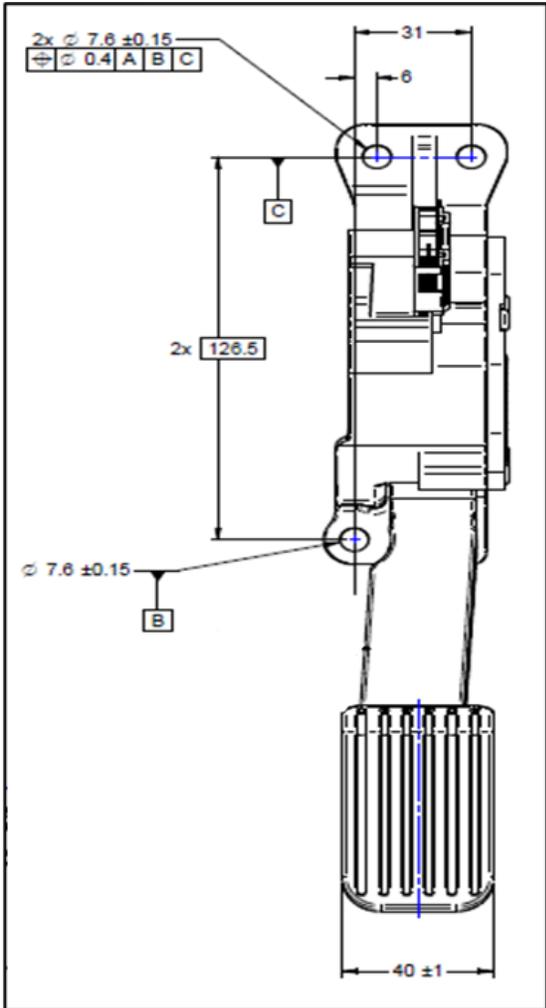
Dimensional Information: This is 1 of the 8 available design options (Shown below: Part number 552-99-010)



Mating Connector type: 3B0972706

1	SUPPLY PPS2
2	SUPPLY PPS1
3	GROUND PPS1
4	OUTPUT PPS1
5	GROUND PPS2
6	OUTPUT PPS2







8 Variants of 552 Pedal Series:

CTS Part Number		Radius of Pedal	Full Pedal Travel (FPT)	Output @Idle	Output @FPT	Force @P1	Force @P2
552-99-002		196mm	12.6°	15%	82%	19N	30.8N
552-99-003		205mm	12.6°	15%	82%	18.3N	29.6N
552-99-004		225.5mm	12.6°	15%	82%	16.8N	27.2N
552-99-006		189.5mm	12.6°	15%	82%	19.6N	31.8N
552-99-007		201.4mm	12.6°	15%	82%	18.6N	30.1N

CTS Part Number		Radius of Pedal	Full Pedal ITravel (FPT)	Output @Idle	Output @FPT	Force @P1	Force @P2
552-99-010		195mm	14.6°	15%	78.60%	17N	30N
552-99-005		168mm	14°	15%	82%	20.5N	30N
552-99-009		170mm	14°	15%	82%	20N	29.5N