

So we want to find some temperature sensor options using digikey. The first step is to just search for temperature sensor



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temperature sensor

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All Products

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Jump To:

Top Results for: Temperature sensor

- Boxes, Enclosures, Racks
- Cables, Wires
- Circuit Protection
- Connectors, Interconnects
- Development Boards, Kits, Programmers
- Discrete Semiconductor Products
- Fans, Thermal Management
- Filters
- Industrial Controls
- Integrated Circuits (ICs)
- Kits
- Maker/DIY, Educational
- Networking Solutions
- Optoelectronics
- Power Supplies - External/Internal (Off-Board)
- Resistors
- RF/I/F and RFID
- Sensors, Transducers
- Soldering, Desoldering, Rework
- Products
- Switches
- Test and Measurement
- Tools
- Uncategorized

Results: 89,775

Search Within Results All Manufacturers

Search Entry: Temperature sensor

Searching brings us to this page, which is not what we want. We want to see some temperature sensors, this is a list of sensor categories (with the top result bizarrely being pressure sensors).

Top Results for: Temperature sensor

Pressure Sensors, Transducers (27128 items)	Sensors, Transducers
Temperature Sensors - NTC Thermistors (6595 items)	Sensors, Transducers
DC Fans (5326 items)	Fans, Thermal Management
Temperature Sensors - Thermocouple, Mechanical (2000 items)	Sensors, Transducers
Temperature Sensors - Analog and Digital Output (3787 items)	Sensors, Transducers
Proximity Sensors (3107 items)	Sensors, Transducers
Magnetic Sensors - Position, Proximity, Speed (Modules) (3306 items)	Sensors, Transducers
Magnetic Sensors - Switches (Solid State) (3270 items)	Sensors, Transducers
Optical Sensors - Photoelectric, Industrial (2853 items)	Sensors, Transducers
Embedded - Microcontrollers (2153 items)	Integrated Circuits (ICs)
Current Transducers (1690 items)	Sensors, Transducers
Position Sensors - Angle, Linear Position Measuring (1599 items)	Sensors, Transducers
Temperature Sensors - Thermocouple, Solid State (1404 items)	Sensors, Transducers

The type we want is analog and digital output. I know this because I've worked with temperature sensors before. If you don't know what category you want click through a few and see if what is in it is what you want. It's also normally a good choice to start with the category with the most items in it. Also most sensor don't have this many different types as this

Results: 3,787

Okay that is a lot of results to deal with, lucky we can filter a bunch out

Manufacturer	Packaging	Series	Part Status	Sensor Type	Sensing Temperature - Local	Sensing Temperature - Remote	
Amphenol Advanced Sensors	Bulk	*	Active	Analog, Infrared (IR)	-55°C ~ 100°C	-250°C ~ 2500°C	
ams	Cut Strip	-	Discontinued at Digi-Key	Analog, Local	-55°C ~ 120°C	-200°C ~ 850°C	
Analog Devices Inc.	Cut Tape (CT)	Automotive, AEC-Q100	Last Time Buy	Analog, Local/Remote	-55°C ~ 125°C	-70°C ~ 380°C (IR)	
C-TON Industries	Digi-Reel®	Automotive, AEC-Q100, TruTherm™	Not For New Designs	Analog, Remote	-55°C ~ 130°C	-64°C ~ 125°C	
Digi International	Tape & Box (TB)	DigiPile™	Obsolete	Analog/Digital, Local/Remote	-55°C ~ 150°C	-64°C ~ 150°C	
DLP Design Inc.	Tape & Reel (TR)	Grid-EYE		Digital, Infrared (IR)	-55°C ~ 175°C	-64°C ~ 191°C	
Excelitas Technologies	Tray	ItyBitty™		Digital, Local	-50°C ~ 150°C	-55°C ~ 125°C	
Fairchild/ON Semiconductor	Tube	S-5813A		Digital, Local/Remote	-50°F ~ 300°F	-55°C ~ 127°C	
IDT, Integrated Device Technology Inc		S-5814A		Digital, Remote	-40°C ~ 100°C	-55°C ~ 145°C	
Intersil		S-5851A			-40°C ~ 105°C	-55°C ~ 150°C	

Stock Status	Media Available	Environmental
<input type="checkbox"/> In Stock	<input type="checkbox"/> Datasheet	<input type="checkbox"/> RoHS Compliant
<input type="checkbox"/> Normally Stocking	<input type="checkbox"/> Photo	<input type="checkbox"/> Non-RoHS Compliant
<input type="checkbox"/> New Products	<input type="checkbox"/> EDA / CAD Models	

[Clear All Selections](#) [Apply Filters](#)

Search Entry: Temperature sensor

Results per Page	25	Page	1/152	<	<	1	2	3	4	5	>	>	Enter Quantity	?
Compare Parts		Image	Digi-Key Part Number	Manufacturer Part Number	Manufacturer	Description	Quantity Available	Unit Price USD	Minimum Quantity					
			▲ ▼	▲ ▼	▲ ▼	▲ ▼	▲ ▼	▲ ▼	▲ ▼	▲ ▼	▲ ▼	▲ ▼		
	<input type="checkbox"/>		MCP9700T-E/ITTR-ND	MCP9700T-E/TT	Microchip Technology	SENSOR TEMP ANLG VOLT SOT-23-3	57,000 - Immediate	0.19950	3,000					
	<input type="checkbox"/>		MCP9700T-E/TTCT-ND	MCP9700T-E/TT	Microchip Technology	SENSOR TEMP ANLG VOLT SOT-23-3	59,236 - Immediate	0.26000	1					
	<input type="checkbox"/>		MCP9700T-E/TTDKR-ND	MCP9700T-E/TT	Microchip	SENSOR TEMP	59,236 -	Digi-Reel®						

Looking at the first two results we can see a good way to start filtering. These are the same sensor but with different minimum quantities. We don't want 3,000 sensors so we can get rid of that

To get rid of the large quantity options we go to “packaging” at the top and select what is highlighted below. Then hit apply filters

Results: 3,744

Search Within Results

Amphenol Advanced Sensors
ams
Analog Devices Inc.
C-TON Industries
Digi International
DLP Design Inc.
Excelitas Technologies
Fairchild/ON Semiconductor
IDT, Integrated Device Technology Inc
Intersil

Bulk
Cut Strip
Cut Tape (CT)
Digi-Reel®
Tape & Box (TB)
Tape & Reel (TR)
Tray
Tube

Automotive, AEC-Q100
Automotive, AEC-Q100, TruTherm™
DigiPile™
Grid-EYE
IttyBitty™
S-5813A
S-5814A
S-5851A

Active
Discontinued at Digi-Key
Last Time Buy
Not For New Designs
Obsolete

Analog, Infrared (IR)
Analog, Local
Analog, Local/Remote
Analog, Remote
Analog/Digital, Local/Remote
Digital, Infrared (IR)
Digital, Local
Digital, Local/Remote
Digital, Remote

-55°C ~ 100°C
-55°C ~ 120°C
-55°C ~ 125°C
-55°C ~ 130°C
-55°C ~ 150°C
-55°C ~ 175°C
-50°C ~ 150°C
-50°F ~ 300°F
-40°C ~ 100°C
-40°C ~ 105°C

-250°C ~ 2500°C
-200°C ~ 850°C
-70°C ~ 380°C (IR)
-64°C ~ 125°C
-64°C ~ 150°C
-64°C ~ 191°C
-55°C ~ 125°C
-55°C ~ 127°C
-55°C ~ 145°C
-55°C ~ 150°C

Analog C
Analog C
Analog V
Direct Lin
FET Driv
Frequenc
I²C
I²C, SPI
I²C/SMB

Clear

Stock Status
 In Stock
 Normally Stocking
 New Products

Media Available
 Datasheet
 Photo
 EDA / CAD Models

Environmental
 RoHS Compliant
 Non-RoHS Compliant

Clear All Selections

Apply Filters

1,453 Remaining

Search Entry: Temperature sensor

Compare Parts	Image	Digi-Key Part Number	Manufacturer Part Number	Manufacturer	Description	Quantity Available	Unit Price USD	Minimum Quantity	Packaging	Series	Part Status	Sensor Type	Sensing Temperature - Local	Sensing Temperature - Remote	Output Type	Voltage - Supply	Resolution
		MCP9700T-E/TTTR-ND	MCP9700T-E/TT	Microchip Technology	SENSOR TEMP ANLG VOLT SOT-23-3	57,000 - Immediate	0.19950	3,000	Tape & Reel (TR)		Active	Analog, Local	-40°C ~ 125°C		Analog Voltage	2.3 V ~ 5.5 V	10mV/°C
		MCP9700T-E/TTCT-ND	MCP9700T-E/TT	Microchip Technology	SENSOR TEMP ANLG VOLT SOT-23-3	59,236 - Immediate	0.26000	1	Cut Tape (CT)		Active	Analog, Local	-40°C ~ 125°C		Analog Voltage	2.3 V ~ 5.5 V	10mV/°C
		MCP9700T-E/TTRDK-ND	MCP9700T-E/TT	Microchip	SENSOR TEMP	59,236 -	Digi-Reel®	4			Active	Analog,	-40°C ~		Analog	2.3 V ~ 5.5	10mV/°C

Results: 1,453

Great, we just got rid of like 2000 entries, but we can do better

Search Within Results



Manufacturer	Packaging	Series	Part Status	Sensor Type	Sensing Temperature - Local	Sensing Temperature - Remote	Output Type
Amphenol Advanced Sensors	Bulk	S-5813A	Active	Analog, Infrared (IR)	-55°C ~ 100°C	-250°C ~ 2500°C	-
ams	Cut Strip	S-5851A	Discontinued at Digi-Key	Analog, Local	-55°C ~ 120°C	-200°C ~ 850°C	Analog Current
Analog Devices Inc.	Cut Tape (CT)	S-5855A	Last Time Buy	Analog, Local/Remote	-55°C ~ 125°C	-70°C ~ 380°C (IR)	Analog Current and Volta
C-TON Industries	Tray	S-58LM20A	Not For New Designs	Analog, Remote	-55°C ~ 130°C	-64°C ~ 125°C	Analog Voltage
Digi International	Tube	S-8120C	Obsolete	Analog/Digital, Local/Remote	-55°C ~ 150°C	-64°C ~ 150°C	Direct Link
DLP Design Inc.		STS3		Digital, Infrared (IR)	-55°C ~ 175°C	-64°C ~ 191°C	Frequency
Excelitas Technologies		TruTherm®		Digital, Local	-50°C ~ 150°C	-55°C ~ 125°C	I²C
Fairchild/ON Semiconductor		TruTherm™		Digital, Local/Remote	-50°F ~ 300°F	-55°C ~ 127°C	SPI
IDT, Integrated Device Technology Inc		TSYS		Digital, Remote	-40°C ~ 100°C	-55°C ~ 145°C	I²C/SMBus
Intersil		Watchdog® XRea®			-40°C ~ 105°C	-55°C ~ 150°C	I²C/SMBus_SPI

Stock Status	Media Available
<input type="checkbox"/> In Stock	<input type="checkbox"/> Datasheet
<input type="checkbox"/> Normally Stocking	<input type="checkbox"/> Photo
<input type="checkbox"/> New Products	<input type="checkbox"/> EDA / CAD Models

Lets select “active” in part status, we don’t want old outdated sensors what will be hard to buy

Search Entry: Temperature sensor

Applied Filters: Packaging

Compare Parts		Image	Digi-Key Part Number	Manufacturer Part Number	Manufacturer	Description	Quantity Available	Unit Price USD	Minimum Quantity	Packaging	Series	Part Status	Sensor Type	Sensing Temperature - Local	Sensing Temperature - Remote	Output Type	Voltage - Supply	Res
<input type="checkbox"/>			MCP9700T-E/TTCT-ND	MCP9700T-E/TT	Microchip Technology	SENSOR TEMP ANLG VOLT SOT-23-3	59,236 - Immediate	0.26000	1	Cut Tape (CT)		Active	Analog, Local	-40°C ~ 125°C		Analog Voltage	2.3 V ~ 5.5 V	10m
<input type="checkbox"/>			MCP9701T-E/TTCT-ND	MCP9701T-E/TT	Microchip Technology	SENSOR TEMP ANLG VOLT SOT-23-3	29,635 - Immediate	0.26000	1	Cut Tape (CT)		Active	Analog, Local	-10°C ~ 125°C		Analog Voltage	3.1 V ~ 5.5 V	19.5



All Products



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Page 10

— 1 —

Next we are going to start thinking about how we want the satellite to work. We want to talk to our sensors through I2C or SPI. So we are going to output type and selecting everything that says “I2C”, “SPI” or “1-wire”. 1-wire is weird proprietary I2C, but it still works for us

C-TON Industries
Excelitas Technologies
Linear Technology
Maxim Integrated
Melexis Technologies N
Microchip Technology
MikroElektronika

Stock Status	Media Available
<input type="checkbox"/> In Stock	<input type="checkbox"/> Datasheet
<input type="checkbox"/> Normally Stocking	<input type="checkbox"/> Photo
<input type="checkbox"/> New Products	<input type="checkbox"/> EDA / CAD Mod

[Clear All Selections](#) [Apply Filters](#) 460 Remaining

Search Entry: Temperature sensor

Applied Filters: Packaging Part Status

Results per Page Page 1/41 < < 1 2 3 4 5 > >| Enter Quantity Download Table

Results: 487 478 Remaining

Search Within Results



Manufacturer

Packaging

Series

Sensor Type

Sensing Temperature - Local

Sensing Temperature - Remote

Output Type

Voltage - Supply

Resolution

ams
Analog Devices Inc.
Maxim Integrated
Melexis Technologies NV
Microchip Technology
MikroEtronika
NXP USA Inc.
Omron Electronics Inc-EMC Div
ON Semiconductor
Panasonic Electronic Components

Next we are going to filter by voltage. We want things that work at either 3.3V or 5V so select everything that encompass those numbers

²C
²C, SPI
²C/SMBus
²C/SMBus, SPI
SPI
-Wire®

2.7 V ~ 5.25 V
2.7 V ~ 5.5 V
2.8 V ~ 3.6 V
2.8 V ~ 5.5 V
3 V ~ 3.6 V
3 V ~ 3.7 V
3 V ~ 5.5 V
3.3 V ~ 16 V
4 V ~ 6 V

0.0625°C
7 b
8 b
8 b (Local), 11 b (Remote)
9 b
10 b
11 b
12 b
13 h

-40°C ~ 200°C
-40°C ~ 55°C

-40°C ~ 85°C
-20°C ~ 100°C (IR)

Clear

Stock Status

In Stock
 Normally Stocking
 New Products

Media Available

Datasheet
 Photo
 EDA / CAD Models

Environmental

RoHS Compliant
 Non-RoHS Compliant

Clear All Selections

Apply Filters

478 Remaining

Search Entry: Temperature sensor x

Applied Filters: Packaging x Part Status x Output Type x

Compare Parts		Image	Digi-Key Part Number	Manufacturer Part Number	Manufacturer	Description	Quantity Available	Unit Price USD	Minimum Quantity	Packaging	Series	Part Status	Sensor Type	Sensing Temperature - Local	Sensing Temperature - Remote	Output Type	Voltage - Supply	Resolution
	<input type="checkbox"/>		296-28341-1-ND	TMP103BYFFR	Texas Instruments	SENSOR TEMP I2C/SMBUS 4DSBGA	5,601 - Immediate	1.60000	1	Cut Tape (CT) Alternate Packaging			Digital, Local	-40°C ~ 125°C		-	I ² C/SMBus	1.4 V ~ 3.6 V
	<input type="checkbox"/>		LM75AIMM/NOPBCT-ND	LM75AIMM/NOPB	Texas Instruments	SENSOR TEMPERATURE I2C 8VSSOP	9,390 - Immediate	1.85000	1	Cut Tape (CT) Alternate Packaging			Digital, Local	-55°C ~ 125°C		-	I ² C	2.7 V ~ 5.5 V

Finally we want surface mount components only. Scroll way over to the right and select that under mounting type

Features	Accuracy - Highest (Lowest)	Test Condition	Operating Temperature	Mounting Type	Package / Case	Supplier Device Package
Programmable Resolution	-	-55°C ~ 175°C	-55°C ~ 100°C	Surface Mount	Die	-
Programmable Resolution, Shutdown Mode	±0.1°C (±0.25°C)	-40°C ~ 105°C (-40°C ~ 150°C)	-55°C ~ 125°C	Through Hole	Module	Die
Programmable Resolution, Standby Mode	±0.1°C (±0.5°C)	-40°C ~ 105°C (-55°C ~ 150°C)	-55°C ~ 127°C	User Defined	C-74, SOT-457	Micro8™
Shutdown Mode	±0.25°C (±1°C)	-40°C ~ 125°C	-55°C ~ 150°C		C-74A, SOT-753	Module
Shutdown Mode, Sleep Mode	±0.2°C	-40°C ~ 65°C (-40°C ~ 125°C)	-55°C ~ 175°C		OT-23-6	SOT-23-5
Shutdown Mode, Standby Mode	±0.2°C (±0.4°C)	-40°C ~ 85°C (-55°C ~ 120°C)	-45°C ~ 125°C		OT-23-6 Thin, TSOT-23-6	SOT-23-6
Shutdown Mode, Standby Mode	±0.2°C (±0.6°C)	-40°C ~ 85°C (-55°C ~ 125°C)	-45°C ~ 130°C		OT-23-8	SOT-23-8
Resolution, Shutdown Mode	±0.33°C (±1.5°C)	-35°C ~ 85°C	-40°C ~ 120°C		OT-563, SOT-666	SOT-563
Resolution, Shutdown Mode, Standby Mode	±0.3°C	-25°C ~ 100°C (-40°C ~ 125°C)	-40°C ~ 125°C		O-220-5	TO-220-5
		-25°C ~ 100°C (-55°C ~ 100°C)	-40°C ~ 125°C (TA)		O-226-3, TO-92-3, (TO-226AA)	TO-92

438 Remaining

Test Condition	Operating Temperature	Mounting Type	Package / Case	Supplier Device Package
▲ ▾	▲ ▾	▲ ▾	▲ ▾	▲ ▾
▲ ▾	▲ ▾	▲ ▾	▲ ▾	▲ ▾
▲ ▾	▲ ▾	▲ ▾	▲ ▾	▲ ▾
▲ ▾	▲ ▾	▲ ▾	▲ ▾	▲ ▾

And this is as far as we can get in a standardized way. The next step is to just start clicking on sensors and looking at them, or trying to come up with more filters based on current, or operating range, or something. This is where the actual work starts to come in.

Results per Page

Compare Parts	Number	?	?	?	Status	- Local	- Remote	Type	Voltage - Supply	Re						
<input type="checkbox"/>	 296-28341-1-ND	SENSOR TEMP	Cut Tape					I ² C/SMBus	1.4 V ~ 3.6 V	7 b						
<input type="checkbox"/>	 LM75AIMM/NOPBCT-ND							I ² C	2.7 V ~ 5.5 V	8 b						
<input type="checkbox"/>	 LM75AIMX/NOPBCT-ND							I ² C	2.7 V ~ 5.5 V	8 b						
<input type="checkbox"/>	 296-21417-1-ND	TMP411ADGKR	Texas Instruments	SENSOR TEMP I ² C/SMBUS 8VSSOP	5,804 - Immediate	1.35000	1	(CT) ? Alternate Packaging		Active	Digital, Local/Remote	-40°C ~ 125°C	-64°C ~ 191°C	I ² C/SMBus	2.7 V ~ 5.5 V	11
<input type="checkbox"/>	 296-26834-1-ND	TMP102AIDRLR	Texas Instruments	SENSOR TEMPERATURE SMBUS SOT563	154,247 - Immediate	2.05000	1	Cut Tape (CT) ? Alternate Packaging		Active	Digital, Local	-40°C ~ 125°C		I ² C/SMBus	1.4 V ~ 3.6 V	11
<input type="checkbox"/>	 296-17838-1-ND	TMP75AIDR	Texas Instruments	SENSOR TEMPERATURE SMBUS 8SOIC	9,154 - Immediate	1.81000	1	Cut Tape (CT) ? Alternate Packaging		Active	Digital, Local	-40°C ~ 125°C		I ² C/SMBus	2.7 V ~ 5.5 V	11
<input type="checkbox"/>	 296-26837-1-ND	TMP75AIDGKR	Texas Instruments	SENSOR TEMPERATURE SMBUS 8VSSOP	3,964 - Immediate	1.81000	1	Cut Tape (CT) ? Alternate Packaging		Active	Digital, Local	-40°C ~ 125°C		I ² C/SMBus	2.7 V ~ 5.5 V	11
<input type="checkbox"/>	 Microchip	SENSOR TEMP	Cut Tape (CT) ? 												2.7 V ~ 5.5 V	