

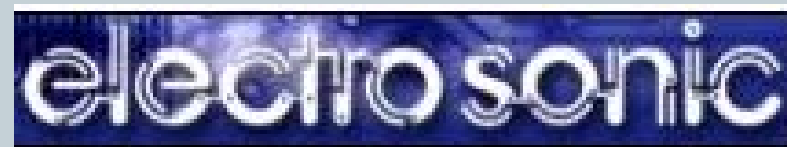
Cost Assessment



NIAGARA COLLEGE TECHNOLOGY DEPT.



Component Distributors



Component Distributors



Keys to picking the right distributor:

Know what you want to purchase

Who has stock

What is the estimated delivery time

What currency can you purchase with (CDN\$ or US\$)

What are the shipping costs

When ordering from outside the country, are duties and brokerage fees included

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Digi-Key – Search 2N3906

Keywords: 2n3906

- In Stock
- Lead free
- RoHS compliant

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Discrete Semiconductor Products **Transistors (BJT) - Single**

Current - Collector (Ic) (Max)	Current - Collector Cutoff (Max)	Manufacturer	Package / Case	Packaging	Power - Max	Vce Saturation (Max) @ Ib, Ic
100mA 200mA	- 50nA	Diodes Inc Fairchild Optoelectronics Group Micro Commercial Co NXP Semiconductors ON Semiconductor Rohm Semiconductor STMicroelectronics	TO-92 TO-92-3 TO-92-3 (Straight Leads)	Bulk Cut Tape (CT) Digi-Reel® Tape & Box (TB) Tape & Reel (TR)	250mW 500mW 600mW 625mW	200mV @ 1mA, 10mA 250mV @ 1mA, 10mA 400mV @ 5mA, 50mA

- In Stock
- Lead free
- RoHS compliant

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Digi-Key – Search 2N3906 (cont.)

 Click the Associated Packaging icon next to the part number to see this part in other packaging types.

 Click RoHS icon next to part number for RoHS Compliant Substitutes.

To see real-time pricing, click either the Digi-Key part number or unit price link.








Digi-Key Part Number	Manufacturer Part Number	Description	Series	Manufacturer	Transistor Type	Voltage - Collector Emitter Breakdown (Max)	Current - Collector (Ic) (Max)	Power - Max	DC Current Gain (hFE) (Min) @ Ic, Vce	Vce Saturation (Max) @ Ib, Ic	Frequency - Transition	Current - Collector Cutoff (Max)	Mounting
2N3906FS-ND	2N3906BU	IC TRANS PNP SS GP 200MA TO-92	-	Fairchild Optoelectronics Group	PNP	40V	200mA	625mW	100 @ 10mA, 1V	250mV @ 1mA, 10mA	250MHz	50nA	Through Hole
2N3906D26ZTR-ND 	2N3906TFR	IC TRANS PNP SS GP 200MA TO-92	-	Fairchild Optoelectronics Group	PNP	40V	200mA	625mW	100 @ 10mA, 1V	250mV @ 1mA, 10mA	250MHz	50nA	Through Hole
2N3906D26ZCT-ND 	2N3906TFR	IC TRANS PNP SS GP 200MA TO-92	-	Fairchild Optoelectronics Group	PNP	40V	200mA	625mW	100 @ 10mA, 1V	250mV @ 1mA, 10mA	250MHz	50nA	Through Hole
2N3906RLRAGOSCT-ND 	2N3906RLRAG	TRANS PNP GP SS 200MA 40V TO92	-	ON Semiconductor	PNP	40V	200mA	625mW	100 @ 10mA, 1V	250mV @ 1mA, 10mA	250MHz	50nA	Through Hole
2N3906RLRAGOSTR-ND 	2N3906RLRAG	TRANS PNP GP SS 200MA 40V TO92	-	ON Semiconductor	PNP	40V	200mA	625mW	100 @ 10mA, 1V	250mV @ 1mA, 10mA	250MHz	50nA	Through Hole
2N3906-APTB-ND 	2N3906-AP	TRANSISTOR PNP GP 40V TO92	-	Micro Commercial Co	PNP	40V	200mA	600mW	100 @ 10mA, 1V	250mV @ 1mA, 10mA	250MHz	50nA	Through Hole
2N3906-APCT-ND 	2N3906-AP	TRANSISTOR PNP GP 40V TO92	-	Micro Commercial Co	PNP	40V	200mA	600mW	100 @ 10mA, 1V	250mV @ 1mA, 10mA	250MHz	50nA	Through Hole
2N3906TFTR-ND 	2N3906TF	TRANSISTOR PNP 40V 200MA TO-92	-	Fairchild Optoelectronics Group	PNP	40V	200mA	625mW	100 @ 10mA, 1V	250mV @ 1mA, 10mA	250MHz	50nA	Through Hole

Digi-Key – Search 2N3906 (cont.)

or to see this part in other packaging types.

substitutes.

or unit price link.

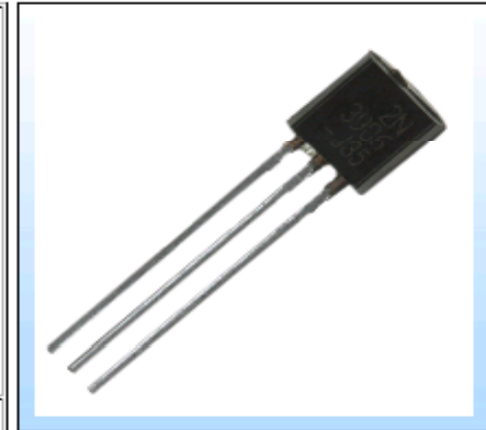
Series	Manufacturer	Transistor Type	Voltage - Collector Emitter Breakdown (Max)	Current - Collector (Ic) (Max)	Power - Max	DC Current Gain (hFE) (Min) @ Ic, Vce	Vce Saturation (Max) @ Ib, Ic	Frequency - Transistion	Current - Collector Cutoff (Max)	Mounting Type	Package / Case	Packaging	Quantity Available	Minimum Quantity	Unit Price CAD	
-	Fairchild Optoelectronics Group	PNP	40V	200mA	625mW	100 @ 10mA, 1V	250mV @ 1mA, 10mA	250MHz	50nA	Through Hole	TO-92	Bulk	39,626	1	0.15000	
-	Fairchild Optoelectronics Group	PNP	40V	200mA	625mW	100 @ 10mA, 1V	250mV @ 1mA, 10mA	250MHz	50nA	Through Hole	TO-92	Tape & Reel (TR)	20,000	2,000	0.03333	
-	Fairchild Optoelectronics Group	PNP	40V	200mA	625mW	100 @ 10mA, 1V	250mV @ 1mA, 10mA	250MHz	50nA	Through Hole	TO-92	Cut Tape (CT)	Available	1	0.15000	
-	ON Semiconductor	PNP	40V	200mA	625mW	100 @ 10mA, 1V	250mV @ 1mA, 10mA	250MHz	50nA	Through Hole	TO-92	Cut Tape (CT)	Available	10	0.25700	
-	ON Semiconductor	PNP	40V	200mA	625mW	100 @ 10mA, 1V	250mV @ 1mA, 10mA	250MHz	50nA	Through Hole	TO-92	Tape & Reel (TR)	28,000	2,000	0.05176	
-	Micro Commercial Co	PNP	40V	200mA	600mW	100 @ 10mA, 1V	250mV @ 1mA, 10mA	250MHz	50nA	Through Hole	TO-92	Tape & Box (TB)	6,000	2,000	0.04300	
-	Micro Commercial Co	PNP	40V	200mA	600mW	100 @ 10mA, 1V	250mV @ 1mA, 10mA	250MHz	50nA	Through Hole	TO-92	Cut Tape (CT)	Available	1	0.56000	
-	Fairchild Optoelectronics	PNP	40V	200mA	625mW	100 @ 10mA, 1V	250mV @ 1mA, 10mA	250MHz	50nA	Through Hole	TO-92	Tape & Reel (TR)	4,000	2,000	0.03318	

Digi-Key – Search 2N3906 (cont.)



Digi-Key Part Number	2N3906FS-ND	Price Break	Unit Price	Extended Price
Quantity Available	39,626	1	0.15000	0.15
Manufacturer	Fairchild Optoelectronics Group	25	0.11080	2.77
Manufacturer Part Number	2N3906BU	100	0.08030	8.03
Description	IC TRANS PNP SS GP 200MA TO-92	250	0.05244	13.11
Lead Free Status / RoHS Status	Lead free / RoHS compliant	500	0.03828	19.14
		1,000	0.03333	33.33
		5,000	0.02469	123.43
		10,000	0.02098	209.83
		25,000	0.01851	462.85

All prices are in Canadian dollars and include duty and brokerage fees.



Quantity	Item Number	Customer Reference	
<input type="text"/>	2N3906FS-ND <input type="button" value="v"/>	<input type="text"/>	<input type="button" value="Add to Order"/>

When requested quantity exceeds displayed pricing table quantities, a lesser unit price may appear on your order. You may submit a [request for quotation](#) on quantities which are greater than those displayed in the pricing table.

Datasheets	2N3906 , MMBT6906 , PZT3906
Product Photos	2N3906BU
Product Change Notification	Fe Wire Change 12/Oct/2007
Standard Package	1,000
Category	Discrete Semiconductor Products
Family	Transistors (BJT) - Single
Series	-
Transistor Type	PNP
Voltage - Collector Emitter Breakdown (Max)	40V
Current - Collector (Ic) (Max)	200mA

Digi-Key – Search 2N3906 (cont.)

When requested quantity exceeds displayed pricing table quantities, a lesser unit price may appear on your order. You may submit a [request for quotation](#) on quantities which are greater than those displayed in the pricing table.

Datasheets	2N3906, MMBT6906, PZT3906
Product Photos	2N3906BU
Product Change Notification	Fe Wire Change 12/Oct/2007
Standard Package	1,000
Category	Discrete Semiconductor Products
Family	Transistors (BJT) - Single
Series	-
Transistor Type	PNP
Voltage - Collector Emitter Breakdown (Max)	40V
Current - Collector (Ic) (Max)	200mA
Power - Max	625mW
DC Current Gain (hFE) (Min) @ Ic, Vce	100 @ 10mA, 1V
Vce Saturation (Max) @ Ib, Ic	250mV @ 1mA, 10mA
Frequency - Transistion	250MHz
Current - Collector Cutoff (Max)	50nA
Mounting Type	Through Hole
Package / Case	TO-92
Packaging	Bulk
Catalog Page	1301 (PDF)
Other Names	2N3906 2N3906-ND 2N3906BU 2N3906FS 2N3906FS-ND

[Send this link via E-Mail](#)

Component Packaging



- Make sure that the component you select is the correct package (e.g. Through hole or Surface Mount)
- Some different type of packaging include:
SIP, DIP, DO, TO, SOIC, SOT, BGA, QFP, PLCC,
DPAK, D²PAK

RoHS



- **Restriction on the use of certain Hazardous Substances in electrical and electronic equipment**
- A European Directive (effective July 1, 2006) controlling the use of certain hazardous substances in the production of new electrical and electronic equipment (EEE)
- Industry refers to this directive as “lead-free”, but it covers more than lead.
- These regulations place bans on equipment containing more than the agreed levels of lead, cadmium, mercury, hexavalent chromium, polybrominated biphenyl (PBB) and polybrominated diphenyl ether (PBDE) flame retardants

RoHS (cont.)



- Solder is also affected by this regulation as it is part of the manufacturing process
- Types of lead-free solder include:
 - ✦ $\text{SnAg}_{3.0}\text{Cu}_{0.5}$ (SAC 305) – melting point 217-220 °C
 - ✦ $\text{SnCu}_{0.7}$ - melting point of 227 °C
 - ✦ SnZn_9 - melting point of 199 °C - prone to corrosion and oxidation
 - ✦ SnSb_5 – antimony used in plumbing 232-240 °C
 - ✦ $\text{SnAg}_{2.5}\text{Cu}_{0.8}\text{Sb}_{0.5}$ - melting point 217-225 °C
- Lead was initially added to solder to combat “Tin Whiskering” and is still used in military, aerospace and life-critical medical applications
- Component manufacturers have for the most part have switched to RoHS compliant components and discontinued lead