

# Central<sup>TM</sup> Semiconductor Corp.

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Manufacturers of World Class Discrete Semiconductors

2N5086  
2N5087

PNP SILICON TRANSISTORS

JEDEC TO-92 CASE (EBC)

## DESCRIPTION

The CENTRAL SEMICONDUCTOR 2N5086, 2N5087 series are molded epoxy silicon PNP signal transistors designed for low level, low noise amplifier applications.

## MAXIMUM RATINGS (T<sub>A</sub>=25°C)

	SYMBOL		UNIT
Collector-Base Voltage	V <sub>CB0</sub>	50	V
Collector-Emitter Voltage	V <sub>CE0</sub>	50	V
Emitter-Base Voltage	V <sub>EB0</sub>	3.0	V
Collector Current	I <sub>C</sub>	50	mA
Power Dissipation	P <sub>D</sub>	625	mW
Power Dissipation	P <sub>D</sub>	1.5	W
Operating and Storage Junction Temperature	T <sub>J</sub> , T <sub>stg</sub>	-65 TO +150	°C
Thermal Resistance	θ <sub>JA</sub>	0.2	°C/mW
Thermal Resistance	θ <sub>JC</sub>	83.3	°C/W

## ELECTRICAL CHARACTERISTICS (T<sub>A</sub>=25°C)

SYMBOL	TEST CONDITIONS	2N5086		2N5087		UNIT
		MIN	MAX	MIN	MAX	
I <sub>CBO</sub>	V <sub>CB</sub> =10V		10	10		nA
I <sub>CBO</sub>	V <sub>CB</sub> =35V		50	50		nA
I <sub>EB0</sub>	V <sub>EB</sub> =3.0V		50	50		nA
BV <sub>CB0</sub>	I <sub>C</sub> =100μA	50		50		V
BV <sub>CE0</sub>	I <sub>C</sub> =1.0mA	50		50		V
V <sub>CE(SAT)</sub>	I <sub>C</sub> =10mA, I <sub>B</sub> =1.0mA		0.3		0.3	V
V <sub>BE(ON)</sub>	V <sub>CE</sub> =5.0V, I <sub>C</sub> =1.0mA		0.85		0.85	V
h <sub>FE</sub>	V <sub>CE</sub> =5.0V, I <sub>C</sub> =100μA	150	500	250	800	
h <sub>FE</sub>	V <sub>CE</sub> =5.0V, I <sub>C</sub> =1.0mA	150		250		
h <sub>FE</sub>	V <sub>CE</sub> =5.0V, I <sub>C</sub> =10mA	150		250		
h <sub>fe</sub>	V <sub>CE</sub> =5.0V, I <sub>C</sub> =1.0mA, f=1.0kHz	150	600	250	900	
f <sub>T</sub>	V <sub>CE</sub> =5.0V, I <sub>C</sub> =500μA, f=20MHz	40		40		MHz
C <sub>ob</sub>	V <sub>CB</sub> =5.0V, I <sub>E</sub> =0, f=100kHz		4.0		4.0	pF
NF	V <sub>CE</sub> =5.0V, I <sub>C</sub> =20μA, R <sub>S</sub> =10kΩ, f=10Hz TO 15.7kHz		3.0		2.0	dB
NF	V <sub>CE</sub> =5.0V, I <sub>C</sub> =100μA, R <sub>S</sub> =3.0kΩ, f=1.0kHz		3.0		2.0	dB



## OUTSTANDING SUPPORT AND SUPERIOR SERVICES

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### PRODUCT SUPPORT

Central's operations team provides the highest level of support to insure product is delivered on-time.

- Supply management (Customer portals)
- Inventory bonding
- Consolidated shipping options
- Custom bar coding for shipments
- Custom product packing

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### DESIGNER SUPPORT/SERVICES

Central's applications engineering team is ready to discuss your design challenges. Just ask.

- Free quick ship samples (2<sup>nd</sup> day air)
- Online technical data and parametric search
- SPICE models
- Custom electrical curves
- Environmental regulation compliance
- Customer specific screening
- Up-screening capabilities
- Special wafer diffusions
- PbSn plating options
- Package details
- Application notes
- Application and design sample kits
- Custom product and package development

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### REQUESTING PRODUCT PLATING

1. If requesting Tin/Lead plated devices, add the suffix "TIN/LEAD" to the part number when ordering (example: 2N2222A TIN/LEAD).
2. If requesting Lead (Pb) Free plated devices, add the suffix "PBFREE" to the part number when ordering (example: 2N2222A PBFREE).

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### CONTACT US

#### Corporate Headquarters & Customer Support Team

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