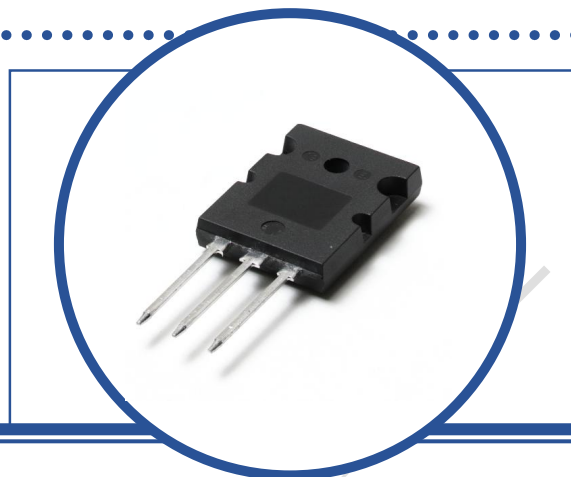


# SILICON EPITAXIAL PLANAR PNP TRANSISTOR

## MAG9413

- TO-264 Plastic Package
- Complimentary PNP – MAG6333
- Designed specifically for audio power amplifier applications
- Highest current audio bipolar available on the market with widest safe operating area



### ABSOLUTE MAXIMUM RATINGS (T<sub>A</sub> = 25°C unless otherwise stated)

V <sub>CBO</sub>	Collector – Base Voltage	-260V
V <sub>CEO</sub>	Collector – Emitter Voltage	-260V
V <sub>EBO</sub>	Emitter – Base Voltage	-5V
I <sub>C</sub>	Continuous Collector Current	-30A
I <sub>B</sub>	Base Current	-8A
I <sub>CM</sub>	Peak Collector Current	-45A
P <sub>D</sub>	Total Power Dissipation at T <sub>A</sub> = 25°C	400W
T <sub>J</sub>	Maximum Junction Temperature	150°C
T <sub>stg</sub>	Storage Temperature Range	-55 to +150°C

### THERMAL PROPERTIES

Symbols	Parameters	Min.	Typ.	Max.	Units
R <sub>θJC</sub>	Thermal Resistance, Junction To Case			0.32	°C/W

Magnatec reserves the right to change test conditions, parameter limits and package dimensions without notice. Information furnished by Magnatec is believed to be both accurate and reliable at the time of going to press. However Magnatec assumes no responsibility for any errors or omissions discovered in its use. Magnatec encourages customers to verify that datasheets are current before placing orders.

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

Symbols	Parameters	Test Conditions	Min.	Typ	Max.	Units
I <sub>CBO</sub>	Collector-Cut-Off Current	V <sub>CB</sub> = 260V			-100	μA
I <sub>EBO</sub>	Emitter-Cut-Off-Current	V <sub>EB</sub> = 5V			-100	μA
V <sub>(BR)CEO</sub>	Collector-Base Breakdown Voltage	I <sub>C</sub> = 10mA	-230			V
V <sub>CE(sat)</sub> <sup>(1)</sup>	Collector-Emitter Saturation Voltage	I <sub>C</sub> = 10A    I <sub>B</sub> = 1A			-1	V
		I <sub>C</sub> = 20A    I <sub>B</sub> = 2A			-1.5	
V <sub>BE(sat)</sub> <sup>(1)</sup>	Base-Emitter Saturation Voltage	I <sub>C</sub> = 20A    I <sub>B</sub> = 2A			-2.0	
h <sub>FE</sub> <sup>(1)</sup>	Forward-current transfer ratio	I <sub>C</sub> = 5A    V <sub>CE</sub> = 4V	50 <sup>(2)</sup>			
		I <sub>C</sub> = 10A    V <sub>CE</sub> = 4V	45			

## DYNAMIC CHARACTERISTICS

f <sub>T</sub>	Transition Frequency	I <sub>E</sub> = 2A    V <sub>CE</sub> = 12V		60		MHz
C <sub>obo</sub>	Output Capacitance	V <sub>CB</sub> = 10V		800		pF
		f = 1.0MHz				

### Notes

- (1) Pulse Width ≤ 300us, δ ≤ 2%  
 (2) h<sub>FE</sub> Rank : A (50 to 100), B(70 to 140)

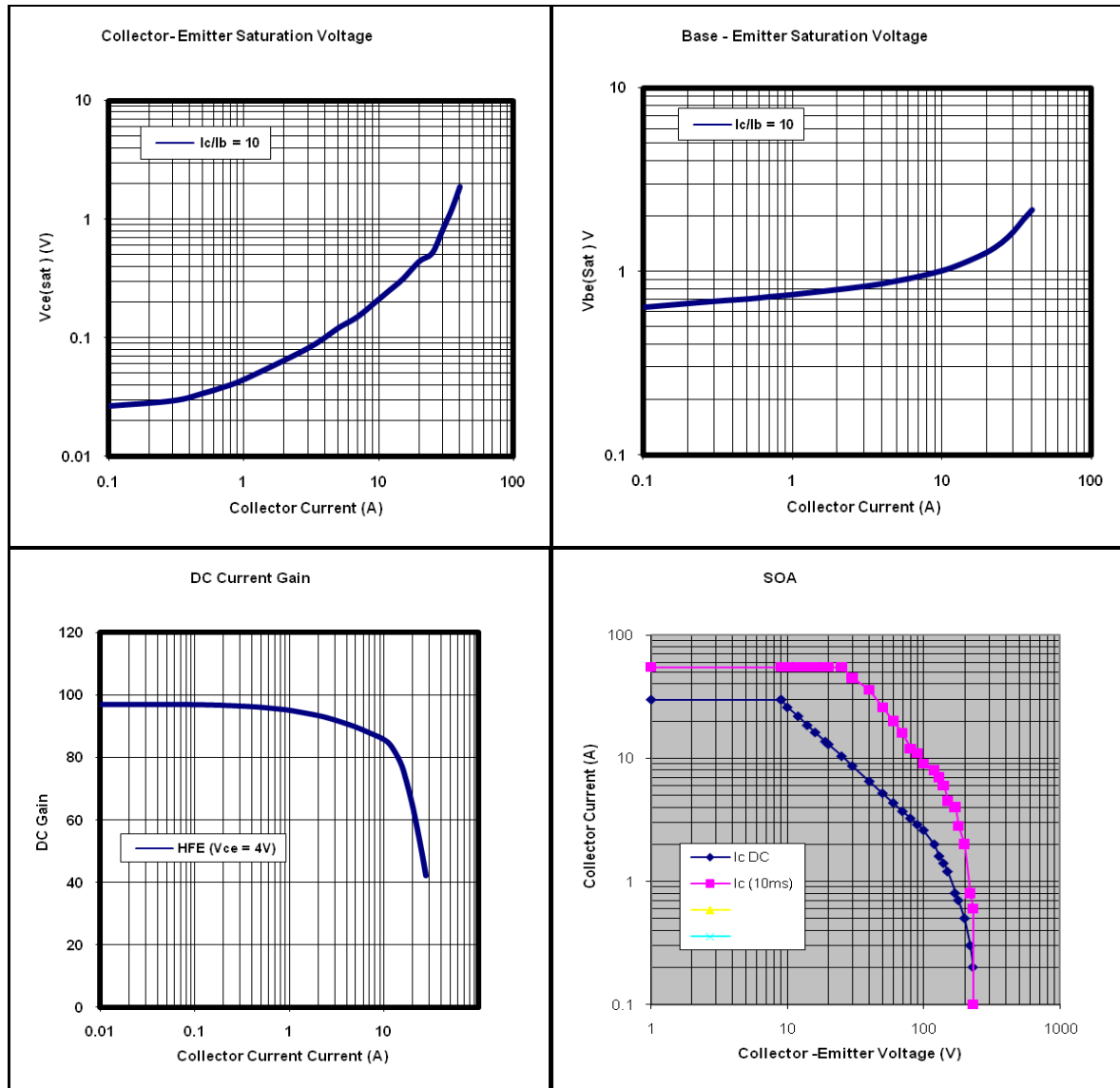
## ORDERING INFORMATION

Part Number	Marking	Package	Package Method	Remarks
MAG9413A	MAG9413A	TO-264	TUBE	h <sub>FE</sub> A Rank
MAG9413B	MAG9413B	TO-264	TUBE	h <sub>FE</sub> B Rank

# SILICON EPITAXIAL PNP TRANSISTOR MAG9413



## TYPICAL CHARACTERISTICS

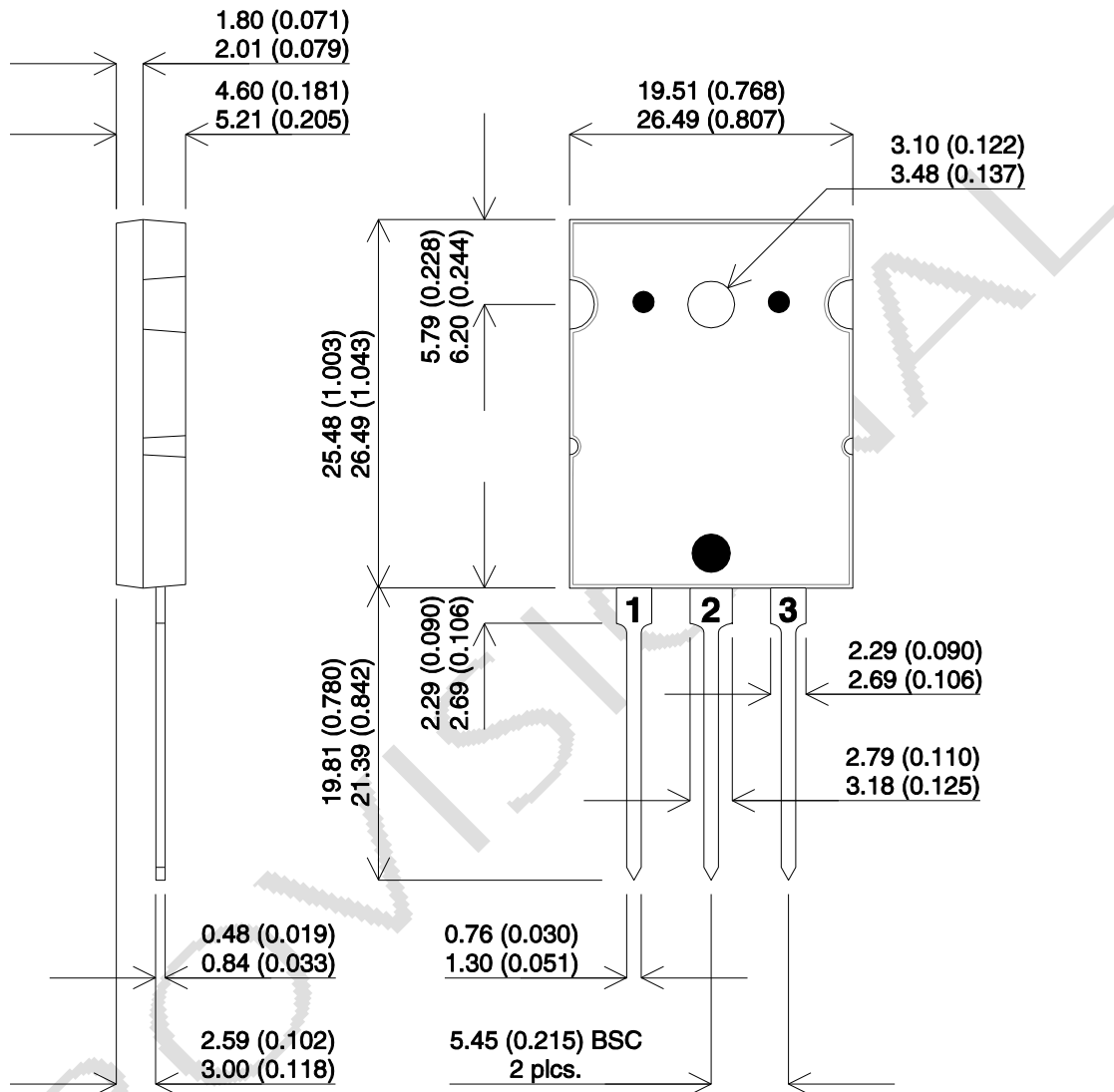


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## MECHANICAL DATA

Dimensions in mm (inches)



### TO-264

Pin 1 - Base

Pin 2 - Collector

Case - Emitter