

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

145 Adams Avenue, Hauppauge, NY 11788 USA  
Tel: (631) 435-1110 • Fax: (631) 435-1824

Manufacturers of World Class Discrete Semiconductors

2N4237  
2N4238  
2N4239

NPN SILICON TRANSISTOR

JEDEC TO-39 CASE

## DESCRIPTION

The CENTRAL SEMICONDUCTOR 2N4237 Series types are Silicon NPN Transistors in a hermetically sealed metal case designed for power amplifier, power driver and switching power supply applications.

MAXIMUM RATINGS (T <sub>C</sub> =25°C)	SYMBOL	2N4237	2N4238	2N4239	UNIT
Collector-Base Voltage	V <sub>CB0</sub>	50	80	100	V
Collector-Emitter Voltage	V <sub>CEO</sub>	40	60	80	V
Emitter Base Voltage	V <sub>EB0</sub>	6.0	6.0	6.0	V
Collector Current	I <sub>C</sub>	3.0	3.0	3.0	A
Base Current	I <sub>B</sub>	0.5	0.5	0.5	A
Power Dissipation	P <sub>D</sub>	6.0	6.0	6.0	W
Operating and Storage Junction Temperature	T <sub>J</sub> , T <sub>stg</sub>		-65 TO +200		°C
Thermal Resistance	θ <sub>JC</sub>		29.2		°C/W

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

SYMBOL	TEST CONDITIONS	MIN	MAX	UNIT
I <sub>CB0</sub>	V <sub>CB</sub> =Rated V <sub>CB0</sub>		0.1	mA
I <sub>CEV</sub>	V <sub>CE</sub> =45V, V <sub>EB</sub> =1.5V (2N4237)		0.1	mA
I <sub>CEV</sub>	V <sub>CE</sub> =75V, V <sub>EB</sub> =1.5V (2N4238)		0.1	mA
I <sub>CEV</sub>	V <sub>CE</sub> =90V, V <sub>EB</sub> =1.5V (2N4239)		0.1	mA
I <sub>CEV</sub>	V <sub>CE</sub> =30V, V <sub>EB</sub> =1.5V, T <sub>C</sub> =150°C (2N4237)		1.0	mA
I <sub>CEV</sub>	V <sub>CE</sub> =50V, V <sub>EB</sub> =1.5V, T <sub>C</sub> =150°C (2N4238)		1.0	mA
I <sub>CEV</sub>	V <sub>CE</sub> =70V, V <sub>EB</sub> =1.5V, T <sub>C</sub> =150°C (2N4239)		1.0	mA
I <sub>CEO</sub>	V <sub>CE</sub> =Rated V <sub>CEO</sub>		0.7	mA
I <sub>EB0</sub>	V <sub>EB</sub> =6.0V		0.5	mA
BV <sub>CEO</sub>	I <sub>C</sub> =100mA (2N4237)	40		V
BV <sub>CEO</sub>	I <sub>C</sub> =100mA (2N4238)	60		V
BV <sub>CEO</sub>	I <sub>C</sub> =100mA (2N4239)	80		V
V <sub>CE</sub> (SAT)	I <sub>C</sub> =500mA, I <sub>B</sub> =50mA		0.3	V
V <sub>CE</sub> (SAT)	I <sub>C</sub> =1.0A, I <sub>B</sub> =0.1A		0.6	V
V <sub>BE</sub> (SAT)	I <sub>C</sub> =1.0A, I <sub>B</sub> =0.1A		1.5	V
V <sub>BE</sub> (ON)	V <sub>CE</sub> =1.0V, I <sub>C</sub> =250mA		1.0	V
h <sub>FE</sub>	V <sub>CE</sub> =1.0V, I <sub>C</sub> =50mA	30		
h <sub>FE</sub>	V <sub>CE</sub> =1.0V, I <sub>C</sub> =250mA	30	150	
h <sub>FE</sub>	V <sub>CE</sub> =1.0V, I <sub>C</sub> =500mA	30		
h <sub>FE</sub>	V <sub>CE</sub> =1.0V, I <sub>C</sub> =1.0A	15		
h <sub>fe</sub>	V <sub>CE</sub> =10V, I <sub>C</sub> =100mA, f=1.0kHz	30		
f <sub>T</sub>	V <sub>CE</sub> =10V, I <sub>C</sub> =100mA, f=1.0MHz	2.0		MHz
C <sub>ob</sub>	V <sub>CB</sub> =10V, I <sub>E</sub> =0, f=0.1MHz		100	pF