

# New Jersey Semi-Conductor Products, Inc.

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2N398  
 2N398A  
 2N398B

## PNP GERMANIUM TRANSISTOR

### JEDEC TO-5 CASE

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

	SYMBOL	2N398	2N398A	2N398B	UNIT
Collector-Base Voltage	V <sub>CB0</sub>	105	105	105	V
Collector-Emitter Voltage	V <sub>CES</sub>	105	105	105	V
Emitter-Base Voltage	V <sub>EB0</sub>	50	50	75	V
Collector Current	I <sub>C</sub>	100	200	200	mA
Emitter Current	I <sub>E</sub>	100	200	200	mA
Power Dissipation	P <sub>D</sub>	150	150	250	mW
Operating and Storage Junction Temperature	T <sub>J</sub> , T <sub>stg</sub>	-65 TO +100			°C

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

SYMBOL	TEST CONDITIONS	2N398		2N398A		2N398B		UNIT
		MIN	MAX	MIN	MAX	MIN	MAX	
I <sub>CB0</sub>	V <sub>CB</sub> =2.5V		14		14	6.0		μA
I <sub>CB0</sub>	V <sub>CB</sub> =105V		-		50	25		μA
I <sub>CB0</sub>	V <sub>CB</sub> =105V, T <sub>A</sub> =71°C		-		-	300		μA
I <sub>EB0</sub>	V <sub>EB</sub> =2.5V		-		-	6.0		μA
I <sub>EB0</sub>	V <sub>EB</sub> =50V		-		50	-		μA
I <sub>EB0</sub>	V <sub>EB</sub> =75V		-		-	50		μA
I <sub>CES</sub>	V <sub>EB</sub> =105V		600		600	300		μA
I <sub>CER</sub>	V <sub>CE</sub> =55V, R <sub>BE</sub> =10kΩ		-		-	300		μA
BV <sub>CB0</sub>	I <sub>C</sub> =50μA	105		-		-		V
BV <sub>EB0</sub>	I <sub>E</sub> =50μA	50		-		-		V
V <sub>PT</sub>	V <sub>BE</sub> (f <sub>1</sub> )=1.0V, R <sub>BE</sub> =11MΩ	105		105		105		V
V <sub>CE</sub> (SAT)	I <sub>C</sub> =5.0mA, I <sub>B</sub> =0.25mA		0.35		0.35		0.25	V
V <sub>BE</sub> (SAT)	I <sub>C</sub> =5.0mA, I <sub>B</sub> =0.25mA		0.4		0.4		0.3	V
h <sub>FE</sub>	V <sub>CE</sub> =0.35V, I <sub>C</sub> =5.0mA	20		20		-		
h <sub>FE</sub>	V <sub>CE</sub> =0.25V, I <sub>C</sub> =5.0mA	-		-		20		
h <sub>fe</sub>	V <sub>CE</sub> =6.0V, I <sub>C</sub> =1.0mA, f=1.0kHz	-		20		40		
f <sub>hfb</sub>	V <sub>CB</sub> =6.0V, I <sub>E</sub> =1.0mA, f=1.0kHz	-		-		1.0		MHz



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