

2N398, 2N398 A (GERMANIUM)



PNP germanium transistor for high-voltage, audio-frequency applications.

(TO-5)

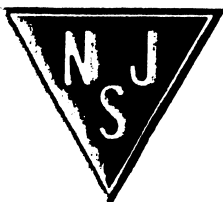
All leads isolated

MAXIMUM RATINGS

Rating	Symbol	2N398A	2N398	Unit
Collector-Base Voltage	V_{CB}	105	105	V _{dc}
Collector-Emitter Voltage	V_{CEO}	105	105	V _{dc}
Emitter-Base Voltage	V_{EB}	50	50	V _{dc}
DC Collector Current	I_C	200	100	mA
Emitter Current	I_E	200	100	mA
Junction Temperature	T_J	-65 to +100	-65 to +85	°C
Storage Temperature	T_{stg}	-65 to +100	-65 to +85	°C
Collector Dissipation @ 25°C	P_D	150	50	mW
Thermal Resistance, Junction to Ambient	$\theta_{JA \text{ max}}$	0.5	1.2	°C/mW

ELECTRICAL CHARACTERISTICS (T_c = 25°C unless otherwise noted)

Characteristics	Symbol	Min	Typical	Max	Unit
Collector-Base Cutoff Current ($V_{CB} = 105 \text{ V}$, $I_B = 0$)	I_{CBO}	-	12.0	50	μA
Collector-Base Cutoff Current ($V_{CB} = 2.5 \text{ V}$, $I_B = 0$)	I_{CBO}	-	5.0	14	μA
Emitter-Base Cutoff Current ($V_{EB} = 50 \text{ V}$, $I_C = 0$)	I_{EBO}	-	3.0	50	μA
Collector-Emitter Saturation Voltage ($I_C = 5 \text{ mAdc}$; $I_B = 0.25 \text{ mAdc}$)	$V_{CE (SAT)}$	-	0.11	0.35	V _{dc}
Base-Emitter Saturation Voltage ($I_C = 5 \text{ mAdc}$; $I_B = 0.25 \text{ mAdc}$)	$V_{BE (SAT)}$	-	0.22	0.40	V _{dc}
DC Current Transfer Ratio ($I_C = 5 \text{ mAdc}$; $V_{CE} = 0.35 \text{ Vdc}$)	h_{FE}	20	65	-	-
DC Collector-Emitter Punch-Through Voltage (V_{CB} necessary to obtain V_{EB} of -1 V max, using instrument with $Z_{in} > 11$ megohm to measure V_{BE})	V_{PT}	105	160	-	V _{dc}
Small-Signal Short-Circuit, Forward Current Transfer Ratio Cutoff Frequency ($V_{CB} = 6 \text{ Vdc}$; $I_E = 1 \text{ mAdc}$)	$f_{\alpha b}$	-	1.0	-	MHz



NJ Semi-Conductors reserves the right to change test conditions, parameter 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.