

New Jersey Semi-Conductor Products, Inc.

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Description: The Sylvania Type 2N1102 is an NPN germanium transistor designed especially for moderate gain audio output applications where an increased voltage rating is required. Any two transistors of this type designation constitute a matched pair.

Absolute Maximum Ratings (at 25°C - Each unit):

Collector to Base Voltage	40 volts
Collector to Emitter Voltage	25 volts
Collector Current, I_C	100 ma
Power Dissipation, P_t	180 mw
Derate 3.6 mw per °C rise above 25°C ambient.	
Junction Temperature	75 °C

Characteristics at 25°C:

	* Min.	Typical	* Max.	Units
Collector Cutoff Current, I_{CBO} $V_{CB} = 40, I_E = 0$	-	-	50	ua
Collector Current, I_{CER} $V_{CE} = 25, R_{BE} = 1 \text{ Kohms}$	-	-	100	ua
Current Gain, h_{FE} $V_{CE} = 1.6, I_C = 10 \text{ ma}$	-	note 1	-	-
Current Gain, h_{FE} $V_{CE} = 1.6, I_C = 35 \text{ ma}$	25	40	50	-
Input Resistance, R_{in} $V_{CE} = 1.6, I_C = 35 \text{ ma}$	200	350	500	ohms
Emitter Cutoff Current, I_{EBO} $V_{EB} = 10, I_C = 0$	-	-	10	ua
Frequency Cutoff, f_{ae} $V_{CE} = 6, I_C = 1 \text{ ma}$	10	-	-	kc
Saturation Voltage, $V_{CE(S)}$ $I_C = 100 \text{ ma}, I_B = 20 \text{ ma}$	-	-	0.5	v

* Typical distribution limits.

Note 1: Ratio of h_{FE} at $I_C = 10 \text{ ma}$ to h_{FE} at $I_C = 35 \text{ ma}$ not to exceed 1.5/1.



Quality Semi-Conductors

