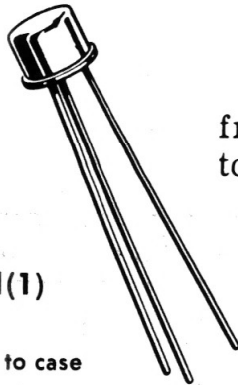


**MOTOROLA****2N1924 thru 2N1926 (GERMANIUM)**www.datasheetcatalog.com**CASE 31(1)**
(TO-5)

Base connected to case

PNP germanium transistors for general purpose, low-frequency applications. Characteristics curves similar to 2N524-2N527 series.

MAXIMUM RATINGS

Rating	Symbol	Value	Unit
Collector-Base Voltage	V_{CB}	60	Vdc
Collector-Emitter Voltage	V_{CEO}	40	Vdc
Emitter-Base Voltage	V_{EB}	25	Vdc
Collector Current	I_C	500	mAdc
Junction and Storage Temperature	T_J & T_{stg}	-65 to +100	°C
Power Dissipation at 25°C Ambient	P_D	225	mW

ELECTRICAL CHARACTERISTICS ($T_c = 25^\circ\text{C}$ unless otherwise noted)

Characteristics	Symbol	Min	Max	Unit
Collector Cutoff Current $V_{CB} = -45 \text{ Vdc}, I_E = 0$	I_{CBO}	—	10	μAdc
Emitter Cutoff Current $V_{EB} = -25 \text{ Vdc}, I_C = 0$	I_{EBO}	—	10	μAdc
Collector-Base Voltage $I_C = 200 \mu\text{Adc}, I_E = 0$	V_{CBO}	60	—	Vdc
Collector-Emitter Voltage $I_C = 50 \mu\text{Adc}, V_{BE} = +1.5 \text{ Vdc}, R_{BE} = 10 \text{ K}$	V_{CEX}	50	—	Vdc
Collector-Emitter Voltage $I_C = 0.6 \text{ mAdc}, R_{BE} = 10 \text{ K}$	V_{CER}	40	—	Vdc
Punch-Thru Voltage ($V_{EB} = 1 \text{ Vdc}, VTVM Z \geq 1 \text{ Megohm}$)	V_{pt}	50	—	Vdc



2N1924 thru 2N1926 (continued)

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ELECTRICAL CHARACTERISTICS (continued)

Characteristics	Symbol	Min	Max	Unit
DC Current Gain $I_C = 20 \text{ mAdc}, V_{CE} = -1 \text{ Vdc}$ 2N1924 2N1925 2N1926	h_{FE}	34 53 72	65 90 121	—
DC Current Gain $I_C = 100 \text{ mAdc}, V_{CE} = -1 \text{ Vdc}$ 2N1924 2N1925 2N1926	h_{FE}	30 47 65	— — —	—
Collector-Emitter Saturation Voltage $I_B = 1.33 \text{ mAdc}, I_C = 20 \text{ mAdc}$ 2N1924 $I_B = 1.0 \text{ mAdc}, I_C = 20 \text{ mAdc}$ 2N1925 $I_B = 0.67 \text{ mAdc}, I_C = 20 \text{ mAdc}$ 2N1926	$V_{CE(SAT)}$	50 55 60	110 110 110	mVdc
Base Input Voltage $V_{CE} = -1 \text{ Vdc}, I_C = 20 \text{ mAdc}$ 2N1924 2N1925 2N1926	V_{BE}	200 190 180	300 290 280	mVdc
Output Capacitance; Input AC Open Circuit $V_{CB} = -5 \text{ Vdc}, I_E = 1 \text{ mAdc}, f = 1 \text{ MHz}$	C_{ob}	—	30	pF
Frequency Cutoff $V_{CB} = -5 \text{ Vdc}, I_E = 1 \text{ mAdc}$ 2N1924 2N1925 2N1926	$f_{\alpha b}$	1.0 1.3 1.5	— — —	MHz
Small-Signal Short-Circuit Forward-Transfer Current Ratio $V_{CE} = -5 \text{ Vdc}, I_E = 1 \text{ mAdc}, f = 1 \text{ kHz}$ 2N1924 2N1925 2N1926	h_{fe}	30 44 60	64 88 120	—
Small-Signal Open Circuit Output Admittance $V_{CE} = -5 \text{ Vdc}, I_E = 1 \text{ mAdc}, f = 1 \text{ kHz}$ 2N1924 2N1925 2N1926	h_{oe}	15 20 25	60 65 70	μmho
Small-Signal Open-Circuit Reverse-Transfer Voltage Ratio $V_{CE} = -5 \text{ Vdc}, I_E = 1 \text{ mAdc}, f = 1 \text{ kHz}$ 2N1924 2N1925 2N1926	h_{re}	2.0 3.0 4.0	8.0 9.0 10	$\times 10^{-4}$
Small-Signal Short-Circuit Input Impedance $V_{CE} = -5 \text{ Vdc}, I_E = 1 \text{ mAdc}, f = 1 \text{ kHz}$ 2N1924 2N1925 2N1926	h_{ie}	700 1200 1500	2200 3200 4200	ohms