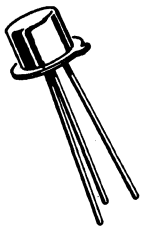
2N869 (SILICON)
2N995



CASE 22
(TO-18)

Collector connected to case

PNP silicon annular transistors for high-frequency general-purpose amplifier applications.

MAXIMUM RATINGS

Rating	Symbol	Types	Value	Unit
Base Voltage	V_{CB}	2N869 2N995	25 20	Vdc
Collector-Emitter Voltage	V_{CEO}	2N869 2N995	18 15	Vdc
Emitter-Base Voltage	V_{EB}	2N869 2N995	5.0 4.0	Vdc
Total Device Dissipation at 25°C Case Temperature at 100°C Case Temperature Derate above 25°C	P_D	Both Types	 1.2 0.68 6.86	 Watts Watt mW/°C
Total Device Dissipation at 25°C Ambient Temperature Derate above 25°C	P_D	Both Types	 0.36 2.06	 Watt mW/°C
Storage Temperature	T_{stg}	Both Types	-65 to +200	°C
Junction Temperature	T_J	Both Types	+200	°C

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

Characteristic	Symbol	Min	Typ	Max	Unit
Collector-Base Breakdown Voltage (I_C = 10 μAdc, I_E = 0) 2N869	BV_{CBO}	25	---	---	Vdc
2N995		20	---	---	
Collector-Emitter Sustaining Voltage [1] (I_C = 10 mAdc, I_B = 0) 2N869	$V_{CEO(sust)}$	18	---	---	Vdc
2N995		15	---	---	
Emitter-Base Breakdown Voltage (I_E = 10 μAdc, I_C = 0) 2N869	BV_{EBO}	5.0	---	---	Vdc
2N995		4.0	---	---	
Collector Cutoff Current (V_{CB} = 15 Vdc, I_E = 0) 2N869	I_{CBO}	---	---	010	μ Adc
2N995		---	---	005	
(V_{CB} = 15 Vdc, I_E = 0, T_A = 150°C) Both Types		---	---	25	
Emitter Current (V_{EB} = 4.0 Vdc, I_C = 0) 2N995	I_{EBO}	---	---	10	μ Adc
Collector Saturation Voltage (I_C = 10 mAdc, I_B = 1.0 mAdc) 2N869	V_{CE} (sat)	---	0.17	1.0	Vdc
(I_C = 20 mAdc, I_B = 2.0 mAdc) 2N995		---	---	0.2	
Base Saturation Voltage (I_C = 10 mAdc, I_B = 1.0 mAdc) 2N869	V_{BE} (sat)	---	0.78	1.0	Vdc
(I_C = 20 mAdc, I_B = 2.0 mAdc) 2N995		---	---	0.95	
DC Forward-Current Transfer Ratio [1]	h_{FE}				---
(I_C = 10 mAdc, V_{CE} = 5.0 Vdc) 2N869		20	---	120	
(I_C = 1.0 mAdc, V_{CE} = 1.0 Vdc) 2N995		25	---	---	
(I_C = 20 mAdc, V_{CE} = 1.0 Vdc) 2N995		35	---	140	
(I_C = 50 mAdc, V_{CE} = 1.0 Vdc) 2N995		25	---	---	
Open-Circuit Output Capacitance (V_{CB} = 10 V, I_E = 0) 2N869	C_{ob}	---	3.0	9	pF
2N995		---	3.0	10	
Open-Circuit Input Capacitance (V_{BE} = 0.5 V, I_C = 0) Both Types	C_{ib}	---	7.0	11	pF
Small-Signal Forward-Current Transfer Ratio	h_{fe}				---
(I_C = 10 mA, V_{CE} = 15 V, f = 100 MHz) 2N869		1.0	3.0	---	
(I_C = 10 mA, V_{CE} = 10 V, f = 100 MHz) 2N995		1.0	3.0	---	

[1] Pulse Note: Pulse Width = 300 μs, Duty Cycle = 1%