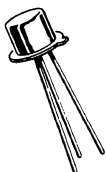# 2N915 (SILICON)

CASE 22
(TO-18)

Collector connected to case

NPN silicon annular transistor for high-frequency amplifier, oscillator and switching applications.

MAXIMUM RATINGS

Rating	Symbol	Value	Unit
Collector-Base Voltage	V_{CB}	70	Vdc
Collector-Emitter Voltage	V_{CEO}	50	Vdc
Emitter-Base Voltage	V_{EB}	5.0	Vdc
Total Device Dissipation @ 25°C Case Temperature Derating Factor Above 25°C	P_D	1.2 6.9	W mW/°C
Total Device Dissipation @ 25°C Ambient Temperature Derating Factor Above 25°C	P_D	0.36 2.06	W mW/°C
Junction Temperature, Operating	T_J	+200	°C
Storage Temperature Range	T_{stg}	-65 to + 200	°C

2N915 (continued)

ELECTRICAL CHARACTERISTICS (T$_A$ = 25°C unless otherwise noted)

Characteristic	Symbol	Min	Max	Unit
Collector Cutoff Current $I_E = 0$ $V_{CB} = 60V$	I_{CBO}		10	nA
Collector Cutoff Current @ 150°C $I_E = 0$ $V_{CB} = 60V$	I_{CBO}		30	μA
Collector Breakdown Voltage $I_C = 100 \mu A$ $I_E = 0$	BV_{CBO}	70		Volts
Collector to Emitter Sustaining Voltage [1] $I_C = 10mA$ $I_B = 0$	V_{CEO}	50		Volts
Emitter Breakdown Voltage $I_C = 0$ $I_E = 100 \mu A$	BV_{EBO}	5.0		Volts
Base Saturation Voltage $I_C = 10mA$ $I_B = 1.0mA$	$V_{BE(sat)}$		0.9	Volts
Collector Saturation Voltage $I_C = 10mA$ $I_B = 1.0mA$	$V_{CE(sat)}$		1.0	Volts
DC Pulse Current Gain $I_C = 10mA$ $V_{CE} = 5.0V$	h_{FE}	50	200	
Output Capacitance $I_E = 0$ $V_{CB} = 10V$	C_{ob}		3.5	pF
Emitter Transition Capacitance $I_C = 0$ $V_{EB} = 0.5V$	C_{TE}		10	pF
High Frequency Current Gain f = 100 MHz $I_C = 10mA$ $V_{CE} = 15V$	h_{fe}	2.5		
Small Signal Current Gain f = 1 kHz $I_C = 1.0mA$ $V_{CE} = 5.0V$ $I_C = 5.0mA$ $V_{CE} = 5.0V$	h_{fe}	40 50	200 250	
Input Resistance f = 1 kHz $I_C = 1.0mA$ $V_{CE} = 5.0V$ $I_C = 5.0mA$ $V_{CE} = 5.0V$	h_{ie}		6000 2000	ohms ohms
Output Conductance f = 1 kHz $I_C = 1.0mA$ $V_{CE} = 5.0V$ $I_C = 5.0mA$ $V_{CE} = 5.0V$	h_{oe}		75 125	μmho μmho

[1] Pulse Test: PW ≤ 300 μs, Duty Cycle ≤ 1.0%