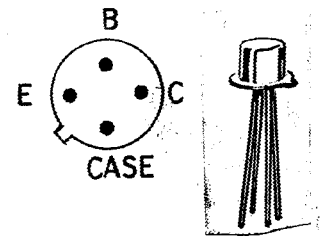


GENERAL DESCRIPTION

2N 5179 is designed for use in high gain, low-noise amplifier, oscillator and mixer circuits. It is also suitable for UHF converter applications. It features high gain-bandwidth product, low noise and low collector-base time constant.

MECHANICAL OUTLINE



MAXIMUM RATINGS

Continuous Collector Current, $I_C$	50mA
Power Dissipation @ $T_A=25^\circ\text{C}$ , $P_t$	200mW
Power Dissipation @ $T_C=25^\circ\text{C}$ , $P_t$	300mW
Collector-Base Voltage, $V_{CBO}$	20V
Collector-Emitter Voltage, $V_{CEO}$	12V
Emitter-Base Voltage, $V_{EBO}$	2.5V
Storage Temperature Range, $T_{stg}$	$-65^\circ\text{C}$ to $+200^\circ\text{C}$

ELECTRICAL CHARACTERISTICS @  $T_A=25^\circ\text{C}$  unless otherwise specified

PARAMETER	SYMBOL	MIN.	TYP.	MAX.	UNITS	TEST CONDITIONS
Collector Cutoff Current	$I_{CBO}$			20	nA	$V_{CB}=15V$ $I_E=0$
Collector Cutoff Current	$I_{CBO}$			1.0	uA	$V_{CB}=15V$ $I_E=0$ $T_A=150^\circ\text{C}$
Collector-Base Breakdown Voltage	$BV_{CBO}$	20			V	$I_C=0.001mA$ $I_E=0$
Collector Emitter Sustaining Voltage	$V_{CEO(sus)}$	12			V	$I_C=3mA$ $I_B=0$
Emitter Base Breakdown Voltage	$BV_{EBO}$	2.5			V	$I_E=0.01mA$ $I_C=0$
Collector Emitter Saturation Voltage	$V_{CE(sat)}$			0.4	V	$I_C=10mA$ $I_B=1mA$
Base Emitter Saturation Voltage	$V_{BE(sat)}$			1.0	V	$I_C=10mA$ $I_B=1mA$
Collector Base Capacitance	$C_{cb}$			1.0	pF	$V_{CB}=10V$ $I_E=0$ $f=0.1$ to $1.0MHz$
Small Signal Current Gain	$h_{fe}$	25		300		$I_C=2mA$ $V_{CE}=6V$ $f=1kHz$
Collector-Base Time Constant	$C_{cb}^r$	3.0		14	pS	$I_E=2mA$ $V_{CB}=6V$ $f=31.9MHz$

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PARAMETER	SYMBOL	MIN.	TYP.	MAX.	UNIT	TEST CONDITIONS
Transistor Frequency	$f_T$	900	1400	2000	MHz	$I_C=5mA$ $V_{CE}=6V$ $f=100MHz$
Noise Figure				4.5	dB	$I_C=1.5mA$ $V_{CE}=6V$ $R_S=50ohms$ $f=200MHz$
Common Emitter Amplifier Power Gain	$G_{pe}$	15			dB	$V_{CE}=6V$ $I_C=5mA$ $f=200MHz$
Power Output	$P_{out}$	20			mW	$V_{CB}=10V$ $I_E=12mA$ $f \geq 500MHz$