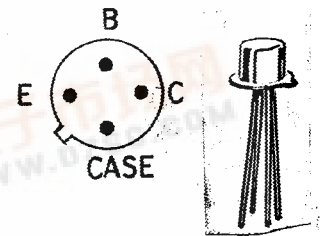


GENERAL DESCRIPTION

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 OUTLINEMAXIMUM 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_{CB0}	20V
Collector-Emitter Voltage, V_{CEO}	12V
Emitter-Base Voltage, V_{EBO}	2.5V
Storage Temperature Range, T_{stg}	-65°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	$V_{CB}=15\text{V}$ $I_E=0$
Collector Cutoff Current	I_{CBO}			1.0	uA	$V_{CB}=15\text{V}$ $I_E=0$ $T_A=150^\circ\text{C}$
Collector-Base Breakdown Voltage	BV_{CBO}	20			V	$I_C=0.001\text{mA}$ $I_E=0$
Collector Emitter Sustaining Voltage	$V_{CEO(sus)}$	12			V	$I_C=3\text{mA}$ $I_B=0$
Emitter Base Breakdown Voltage	BV_{EBO}	2.5			V	$I_E=0.01\text{mA}$ $I_C=0$
Collector Emitter Saturation Voltage	$V_{CE(sat)}$			0.4	V	$I_C=10\text{mA}$ $I_B=1\text{mA}$
Base Emitter Saturation Voltage	$V_{BE(sat)}$			1.0	V	$I_C=10\text{mA}$ $I_B=1\text{mA}$
Collector Base Capacitance	C_{cb}			1.0	pF	$V_{CB}=10\text{V}$ $I_E=0$ $f=0.1$ to 1.0MHz
Small Signal Current Gain	h_{fe}	25		300		$I_C=2\text{mA}$ $V_{CE}=6\text{V}$ $f=1\text{kHz}$
Collector-Base Time Constant	$C_{cr_{bb}}$	3.0		14	pS	$I_E=2\text{mA}$ $V_{CB}=6\text{V}$ $f=31.9\text{MHz}$



----- CONTINUE -----

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	$V_{CB}=10V$ $I_E=12mA$ $f \geq 500MHz$