

NPN Bipolar Transistor



2N5179-NRC
TO-72

Low noise tuned amplifiers

Absolute Maximum Ratings

Description	Symbol	Value	Unit
Collector-Base Voltage	V_{CBO}	20	V
Collector-Emitter Voltage	V_{CEO}	12	V
Emitter Base Voltage	V_{EBO}	2.5	V
Collector Current	I_C	50	mA
Power Dissipation at $T_a = 25^\circ\text{C}$ at $T_c = 25^\circ\text{C}$	P_{tot} -	200 300	mW
Operating and Storage Junction	T_j, T_{stg}	-65 to +200	$^\circ\text{C}$
Temperature Range	-	-	-
Thermal Resistance	-	-	-
Junction to Case	$R_{th(j-c)}$	583	$^\circ\text{C} / \text{W}$
Junction to Ambient	$R_{th(j-a)}$	875	$^\circ\text{C} / \text{W}$

Electrical Characteristics ($T_a = 25^\circ\text{C}$ Unless Otherwise Specified)

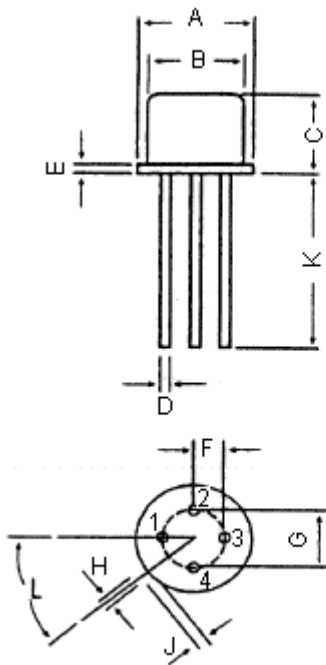
Description	Symbol	Test Condition	Min.	Typ.	Max.	Unit
Collector Cut off Current	I_{CBO}	$V_{CB} = 15 \text{ V}, I_E = 0, T_a = 150^\circ\text{C}$	-	-	20	nA
		$V_{CB} = 15 \text{ V}, I_E = 0$	-	-	1	uA
Collector-Base Voltage	V_{CBO}	$I_C = 1 \text{ uA}, I_E = 0$	20	-	-	V
Collector-Emitter Voltage	$V_{CEO(sus)}$	$I_C = 3 \text{ mA}, I_B = 0$	12	-	-	V
Emitter Base Voltage	V_{EBO}	$I_E = 10 \text{ uA}, I_C = 0$	2.5	-	-	V
Collector Emitter Saturation Voltage	$V_{CE(Sat)}$	$I_C = 10 \text{ mA}, I_B = 1 \text{ mA}$	-	-	0.4	V
Base Emitter Saturation Voltage	$V_{BE(Sat)}$	$I_C = 10 \text{ mA}, I_B = 1 \text{ mA}$	-	-	1	V
DC Current Gain	hFE	$I_C = 3 \text{ mA}, V_{CE} = 1 \text{ V}$	25	-	250	-
Dynamic Characteristics						
Forward Current Transfer Ratio	hfe	$I_C = 2 \text{ mA}, V_{CE} = 6 \text{ V}, f = 1 \text{ kHz}$	25	-	300	-
	ft	$I_C = 5 \text{ mA}, V_{CE} = 6 \text{ V}, f = 100 \text{ MHz}$	900	-	2,000	MHz

NPN Bipolar Transistor

Electrical Characteristics ($T_a = 25^\circ\text{C}$ Unless Otherwise Specified)

Description	Symbol	Test Condition	Min.	Typ.	Max.	Unit
Out-Put Capacitance	C_{ob}	$V_{CB} = 10\text{ V}, I_E = 0, f = 1\text{ MHz}$	-	-	1	pF
In-Put Capacitance	C_{ib}	$V_{EB} = 0.5\text{ V}, I_C = 0, f = 1\text{ MHz}$	-	-	2	pF
Collector Base Time Constant	$r_{bb'} C_{b'c}$	$I_C = 2\text{ mA}, V_{CE} = V, f = 31.9\text{ MHz}$	3	-	14	ps
Small-Signal Power Gain	G_p	$I_C = 5\text{ mA}, V_{CE} = 12\text{ V}, f = 200\text{ MHz}$	15	-	-	dB
Common Emitter Oscillator Power Output	P_o	$I_E = -12\text{ mA}, V_{CB} = 10\text{ V}, f = >500\text{ MHz}$	20	-	-	mW

TO-72 Metal Can Package



Pin Configuration

1. Emitter
2. Base
3. Collector
4. Case

Diameter	Min.	Max.
A	5.24	5.84
B	4.52	4.95
C	4.31	5.33
D	0.4	0.53
E	-	0.76
F	1.14	1.39
G	2.28	2.97
H	0.91	1.17
J	0.71	1.22
K	12.7	-
L	12°	48°

Dimensions : Millimetres

Part Number Table

Description	Part Number
NPN Bipolar Transistor	2N5179-NRC

Important Notice : This data sheet and its contents (the "Information") belong to the members of the Premier Farnell group of companies (the "Group") or are licensed to it. No licence is granted for the use of it other than for information purposes in connection with the products to which it relates. No licence of any intellectual property rights is granted. The Information is subject to change without notice and replaces all data sheets previously supplied. The Information supplied is believed to be accurate but the Group assumes no responsibility for its accuracy or completeness, any error in or omission from it or for any use made of it. Users of this data sheet should check for themselves the Information and the suitability of the products for their purpose and not make any assumptions based on information included or omitted. Liability for loss or damage resulting from any reliance on the Information or use of it (including liability resulting from negligence or where the Group was aware of the possibility of such loss or damage arising) is excluded. This will not operate to limit or restrict the Group's liability for death or personal injury resulting from its negligence. Multicomp is the registered trademark of the Group. © Premier Farnell plc 2011.