

2N4360	TO-106	20	10	10	15	0.7	10	-10	1	3	30	10	2	8	10	100	10	20	-10	0	5	-10	0	190	100	89
2N4381	TO-18	25	1	1	15	1	5	-15	1	3	12	15	2	6	15	75	15	20	-15	0	5	-15	0	20	1000	89
2N4382	TO-18	25	1	1	15	2.5	9	-15	1	10	30	15	4	8	15	100	15	20	-15	0	5	-15	0	20	1000	88
2N5020	TO-18	25	1	1	15	0.3	1.5	-15	1	0.3	1.2	15	1	3.5	15	20	15	25	-15	0	7	-15	0	30	1000	89
2N5021	TO-18	25	1	1	15	0.5	2.5	-15	1	1	3.5	15	1.5	5	15	20	15	25	-15	0	7	-15	0	30	1000	89
2N5033	TO-106	20	10	10	15	0.3	2.5	-10	1	0.3	3.5	10	1	5	10	20	10	25	-10	0	7	-10	0	100	1000	89
2N5460	TO-92	40	10	5	20	0.75	6	-15	1	1	5	15	1	4	15	50	15	7	-15	0	2	-15	0	115	100	89
2N5461	TO-92	40	10	5	20	1	7.5	-15	1	2	9	15	1.5	5	15	50	15	7	-15	0	2	-15	0	115	100	89
2N5462	TO-92	40	10	5	20	1.8	9	-15	1	4	16	15	2	6	15	50	15	7	-15	0	2	-15	0	115	100	89
UC450	TO-18	25	1	0.25	20	5	10	-20	.001	25	75	20	10	10	20			25	-20	0	7	0	10			88
UC451	TO-18	25	1	0.25	20	1	6	-20	.001	3.75	37.5	20	6	6	20			25	-20	0	7	0	10			88



## Pro-Electron Series

Type No.	Case Style	V <sub>CBO</sub> (V) Min	V <sub>CEO</sub> (V) Min	V <sub>EBO</sub> (V) Min	I <sub>CBO</sub> (nA) Max @ V <sub>CB</sub> (V)	h <sub>FE</sub> (1kHz)*		I <sub>C</sub> (mA)	V <sub>CE</sub> (V)	V <sub>CE(sat)</sub> (V) Max	V <sub>BE(sat)</sub> (V) V <sub>BE(on)*</sub>		C <sub>ob</sub> (pF) Max	f <sub>T</sub> (MHz)		t <sub>off</sub> (ns) Max	NF (dB) Max	Test Condition See Note	Process No.
						Min	Max				Min	Max		Min	Max				
BC107	TO-18	50	45	6	15	125	900*	2	5	0.2 0.6	0.55	0.7*	4.5	150	10		10	1	04
BC107A	TO-18	50	45	6	15	125	260*	2	5	0.2 0.6	0.55	0.7*	4.5	150	10		10	1	04
BC107B	TO-18	50	45	6	15	240	500*	2	5	0.2 0.6	0.55	0.7*	4.5	150	10		10	1	04
BC108	TO-18	30	20	5	15	125	900*	2	5	0.2 0.6	0.55	0.7*	4.5	150	10		10	1	04
BC108A	TO-18	30	20	5	15	125	260*	2	5	0.2 0.6	0.55	0.7*	4.5	150	10		10	1	04
BC108B	TO-18	30	20	5	15	240	500*	2	5	0.2 0.6	0.55	0.7*	4.5	150	10		10	1	04
BC108C	TO-18	30	20	5	15	450	900*	2	5	0.2 0.6	0.55	0.7*	4.5	150	10		10	1	04
BC109	TO-18	30	20	5	15	240	900*	2	5	0.2 0.6	0.55	0.7*	4.5	150	10		4 4	1 2	04

Test Conditions:	1. I <sub>C</sub> = 200 μA, V <sub>CE</sub> = 5V, R <sub>S</sub> = 2 kΩ, f = 1 kHz, BW = 200 Hz	4. I <sub>C</sub> = 20 μA, V <sub>CE</sub> = 5V, R <sub>S</sub> = 10 kΩ, f = 1 kHz, BW = 150 Hz	7. I <sub>C</sub> = 50 μA, V <sub>CE</sub> = 5V, R <sub>S</sub> = 10 kΩ, BW = 10 Hz to 15 kHz	10. I <sub>C</sub> = 10 μA, V <sub>CE</sub> = 5V, R <sub>S</sub> = 10 kΩ, WB	13. I <sub>C</sub> = 10 mA, I <sub>B1</sub> = 3 mA, I <sub>B2</sub> = 1 mA	16. I <sub>C</sub> = 150 mA, V <sub>CE</sub> = 6V, I <sub>B1</sub> = I <sub>B2</sub> = 15 mA	19. V <sub>CC</sub> = 20V, I <sub>C</sub> = 100 mA, I <sub>B1</sub> = I <sub>B2</sub> = 5 mA
	2. I <sub>C</sub> = 200 μA, V <sub>CE</sub> = 5V, R <sub>S</sub> = 2 kΩ, WB	5. I <sub>C</sub> = 200 μA, V <sub>CE</sub> = 5V, R <sub>S</sub> = 2 kΩ, f = 20 Hz to 15 kHz	8. I <sub>C</sub> = 50 μA, V <sub>CE</sub> = 5V, R <sub>S</sub> = 10 kΩ, f = 1 kHz, BW = 200 Hz	11. I <sub>C</sub> = 150 mA, V <sub>CE</sub> = 10V, I <sub>B1</sub> = I <sub>B2</sub> = 15 mA	14. I <sub>C</sub> = 100 mA, I <sub>B1</sub> = 40 mA, I <sub>B2</sub> = 20 mA	17. I <sub>C</sub> = 10 mA, I <sub>B1</sub> = 1 mA, I <sub>B2</sub> = -1 mA	
	3. I <sub>C</sub> = 30 μA, V <sub>CE</sub> = 5V, R <sub>S</sub> = 10 kΩ, f = 1 kHz, BW = 200 Hz	6. I <sub>C</sub> = 100 μA, V <sub>CE</sub> = 5V, R <sub>S</sub> = 2 kΩ, f = 10 Hz to 10 kHz	9. I <sub>C</sub> = 200 μA, V <sub>CE</sub> = 2V, R <sub>S</sub> = 2 kΩ, f = 1 kHz, BW = 200 Hz	12. I <sub>C</sub> = 150 mA, I <sub>B1</sub> = I <sub>B2</sub> = +7.5 mA	15. V <sub>CC</sub> = 10V, I <sub>C</sub> = 100 mA, I <sub>B1</sub> = I <sub>B2</sub> = 10 mA	18. I <sub>C</sub> = 300 mA, I <sub>B1</sub> = I <sub>B2</sub> = 30 mA, V <sub>CC</sub> = 25V	