



2N2102 FAMILY [n-p-n] (silicon)
 $f_T = 120 \text{ MHz min}; P_T = 5 \text{ W max}$

DESCRIPTION

2N TYPES

2N697	40 V—General Purpose
2N699	80 V—General Purpose
2N1613	50 V—Linear Beta
2N1711	50 V—High Linear Beta
2N1893	80 V—Low Leakage
2N2102	65 V 2N1613—More Linear, Low Leakage & $V_{CE(sat)}$
2N2270	45 V 2N697—Higher h_{FE} , Lower Leakage and $V_{CE(sat)}$
2N2405	High Voltage, High Beta 2N2102
2N3053	40 V, General Purpose, Low Cost

AUDIO TYPES

40309	Driver, 2-W Mobile Radio Amplifier
40311	Driver, 5-W Class A Amplifier
40314	Complementary Driver for 10-W Class AB Amplifier
40315	Driver, 10-W Class B Amplifier
40317	Driver, 10-W Class B, AC/DC Amplifier
40320	Driver, 25-W AC/DC Amplifier
40544	Driver, 25-W Comp. Amplifier
40326	Predriver for 35-W Class B AC/DC PA Amplifier
40360	Predriver for 35-W Class AB Amplifier
40361	Complementary driver for 35-W Class AB Amplifier
40323	Predriver for 50-W Class B PA Amplifier
40407	Predriver for 70-W Class AB Amplifier
40408	Predriver for 70-W Class AB Amplifier
40409	Complementary Driver for 70-W Class AB Amplifier
40611	Driver, 3-W True Comp. Univ. Amplifier
40616	Driver, 5- & 7-W True Comp. Univ. Amplifier
40814	Predriver for 12-W True Comp. Univ. Amplifier
40625	Driver, 16-W True Comp. Univ. Amplifier
40628	Driver, 20-W True Comp. Univ. Amplifier
40635	Driver, 40-W Quasi-Comp. Univ. Amplifier

OTHER TYPES

40389	2N3053 with Heat Radiator
40392	2N3053 with Flange

HIGH-RELIABILITY TYPES

40366	Hi-Rel Version of 2N2102
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$V_{CEO(sus)}$ V	$V_{CER(sus)}$ V	$V_{CEV(sus)}$ V	h_{FE}^* Current—mA							$I_{CBO}-\mu A$ Temp.— $^{\circ}C$ V_{CB}			$V_{CE(sat)}-V$		$V_{BE(sat)}-V$		
			0.01	0.1	10	50	150	500	1000	25	150	V	I_C mA	I_B mA	I_C mA		
—	40	—	—	—	—	—	40-120	—	—	1	—	30	1.5	150	15	1.3	150
—	80	—	—	—	—	—	40-120	—	—	2	—	60	5	150	15	1.3	150
—	50	—	—	20 min.	35 min.	—	40-120	20 min.	—	0.01	10	60	1.5	150	15	1.3	150
—	50	—	20 min.	35 min.	75 min.	—	100-300	40 min.	—	0.01	10	60	1.5	150	15	1.3	150
80	100	—	—	20 min.	35 min.	—	40-120	—	—	0.01	15	90	5	150	15	1.3	150
65	80	—	10 min.	20 min.	35 min.	—	40-120	25 min.	10 min.	0.002	2	60	0.5	150	15	1.1	150
45	60	—	—	—	—	—	50-200	—	—	0.1	50	60	0.9	150	15	1.2	150
90	120	—	—	—	35 min.	—	60-200	25 min.	—	0.01	10	90	0.5	150	15	1.1	150
40	50	60	—	—	—	—	50-250	—	—	0.25	—	30	1.4	150	15	1.7	150

18	—	—	—	—	—	70-350	—	—	—	0.25	1000	15	—	—	—	1	50
30	—	—	—	—	—	70-350	—	—	—	0.25	1000	15	—	—	—	1	50
40	—	—	—	—	—	70-350	—	—	—	0.25	1000	15	1.4	150	15	1	50
35	—	—	—	—	—	70-350	—	—	—	0.25	1000	15	—	—	—	1	50
40	—	—	—	—	40-200	—	—	—	—	0.25	1000	15	—	—	—	1	10
40	—	—	—	—	40-200	—	—	—	—	0.25	1000	15	—	—	—	1	10
—	50	—	—	—	—	35-200	—	—	—	10 \blacktriangle	—	40	1	150	15	1.7	50
40	—	—	—	—	40-200	—	—	—	—	0.25	1000	15	—	—	—	1	10
70	—	—	—	—	40-200	—	—	—	—	1 \blacksquare	250 \blacksquare	60	1.4	150	15	1	10
—	70	—	—	—	—	70-350	—	—	—	1 \blacktriangle	100 \blacktriangle	60	1.4	150	15	1	50
18	—	—	—	—	—	70-350	—	—	—	0.25	1000	15	—	—	—	1	50
50	—	—	—	—	40-200 @ 1 mA	—	—	—	—	0.25	—	10	—	—	—	0.8	1
90	—	—	—	—	40-200	—	—	—	—	1 \blacksquare	250 \blacksquare	80	1.4	150	15	1	10
—	90	—	—	—	—	—	50-250	—	—	1 \blacktriangle	100 \blacktriangle	80	1.4	150	15	1	150
25	—	—	—	—	—	70-500	—	—	—	0.5	—	15	—	—	—	—	—
32	—	—	—	—	—	70-500	—	—	—	0.5	—	15	—	—	—	—	—
45	—	—	—	—	50-250	—	—	—	—	10 \blacksquare	—	10	1.4	150	15	1.7	150
45	—	—	—	—	—	—	100-300	—	—	0.25	—	60	0.5	150	15	1	150
55	—	—	—	—	—	—	100-300	—	—	0.25	—	60	0.5	150	15	1	150
—	70	—	—	—	—	—	50-250	—	—	10 \blacktriangle	—	65	0.8	150	15	1.4	150

40	50	60	—	—	—	—	50-250	—	—	0.25	—	30	1.4	150	15	1.7	150
40	50	60	—	—	—	—	50-250	—	—	0.25	—	30	1.4	150	15	1.7	150

65	80	—	10 min.	20 min.	—	—	40-120	25 min.	10 min.	0.002	—	60	0.5	150	15	1.1	150
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Note: All the above types are available with radiator or flange:
 Radiator improves $R_{\theta JA}$ from 175 $^{\circ}C/W$ to 50 $^{\circ}C/W$
 Flange improves $R_{\theta JC}$ from 35 $^{\circ}C/W$ to 25 $^{\circ}C/W$

*All "2N" types and 40407, h_{FE} measured
 at $V_{CE} = 10 \text{ V}$ All other types h_{FE} measured
 at $V_{CE} = 4 \text{ V}$

$\blacktriangle I_{CER} @ V_{CE}$ $\blacksquare I_{CEO} @ V_{CE}$