Differential Amplifiers — Dual Monolithic P-Channel MOSFETS (Enhancement)

Ordering Information Preferred Part Number	Package	$V_{GS(th)}$ min/max V		BV_{DSS} min/max V	I_{DSS} max pA	I_{GSS} max pA	g_{fs} min μmho	$I_{D(on)}$ min/max mA		$r_{DS(on)}$ max Ω	$V_{GS\ 1-2}$ max mV
3N165	TO-99	-2	-5	-40	-200	-10	1500	-5.0	-30	300	100
3N166	TO-99	-2	-5	-40	-200	-10	1500	-5.0	-30	300	—
3N188	TO-99	-2	-5	-40	-200	-200	1500	-5.0	-30	300	100 Diode Protected
3N189	TO-99	-2	-5	-40	-200	-200	1500	-5.0	-30	300	Diode Protected
3N190	TO-99	-2	-5	-40	-200	-200	1500	-5.0	-30	300	—
3N191	TO-99	-2	-5	-40	-200	-200	1500	-5.0	-30	300	—

Differential Amplifiers — Dual NPN Bipolar Transistors

Ordering Information Preferred Part Number	Package	$V_{BE\ 1-2}$ mV max	ΔV_{BE} μV/°C max	h_{FE} I_C = 10 μA V_{CE} = 5V min	$I_{B\ 1-2}$ I_C = 10 μA V_{CE} = 5V nA max	BV_{CEO} V min	I_{CBO} nA max	Noise dB max	f_t MHz @ I_C min	C_{obo} pF max	Structure
2N4044	TO-78	3	3	200	5	60	0.1	2	200 @ 1 mA	0.8	Dielec. Isol.
2N4045	TO-78	5	10	80	25	45	0.1	3	150 @ 1 mA	0.8	Dielec. Isol.
2N4100	TO-78	5	5	150	10	55	0.1	3	150 @ 1 mA	0.8	Dielec. Isol.
2N4878	TO-71	3	3	200	5	60	0.1	2	200 @ 1 mA	0.8	Dielec. Isol.
2N4879	TO-71	5	5	150	10	55	0.1	3	150 @ 1 mA	0.8	Dielec. Isol.
2N4880	TO-71	5	10	80	25	45	0.1	3	150 @ 1 mA	0.8	Dielec. Isol.
IT120	TO-78 TO-71	2	5	200	5	45	1.0	2 typ.	150 @ 1 mA	2	Junc. Isol.
IT120A	TO-78 TO-71	1	3	200	2.5	45	1.0	2 typ.	150 @ 1 mA	2	Junc. Isol.
IT121	TO-78 TO-71	3	10	80	25	45	1.0	2 typ.	180 @ 1 mA	2	Junc. Isol.
IT122	TO-78 TO-71	5	20	80	25	45	1.0	2 typ.	180 @ 1 mA	2	Junc. Isol.
IT124	TO-78	5	10	1500	0.6A, V_{CE} = 1 V	2	0.1	3	100 @ 200 μA	0.8	Dielec. Isol.
IT126	TO-78 TO-71	1	3	200	2.5	60	0.1	1 typ.	250 @ 10 mA	4	Dielec. Isol.
IT127	TO-78 TO-71	2	5	200	5	45	0.1	1 typ.	250 @ 10 mA	4	Dielec. Isol.
IT128	TO-78 TO-71	5	10	100	10	45	0.5	1 typ.	250 @ 10 mA	4	Dielec. Isol.
IT129	TO-78 TO-71	10	20	100	25	45	0.5	1 typ.	250 @ 10 mA	4	Dielec. Isol.

Differential Amplifiers — Dual PNP Bipolar Transistors

Ordering Information Preferred Part Number	Package	$V_{BE\ 1-2}$ mV max	ΔV_{BE} μV/°C max	h_{FE} I_C = 10 μA V_{CE} = 5V min	$I_{B\ 1-2}$ I_C = 10 μA V_{CE} = 5V nA max	BV_{CEO} V min	I_{CBO} nA max	Noise dB max	f_t MHz @ I_C min	C_{obo} pF max	Structure
2N5117	TO-78	3	3	100	10	45	0.1	4	100 @ 0.5 mA	0.8	Junc. Isol.
2N5118	TO-78	5	5	100	15	45	0.1	4	100 @ 0.5 mA	0.8	Junc. Isol.
2N5119	TO-78	5	15	50	40	45	0.1	4	100 @ 0.5 mA	0.8	Junc. Isol.
IT130	TO-78 TO-71	2	5	200	5	-45	1.0	2 typ.	150 @ 1 mA	2	Junc. Isol.
IT130A	TO-78 TO-71	1	3	200	2.5	-60	1.0	2 typ.	150 @ 1 mA	2	Junc. Isol.
IT131	TO-78 TO-71	5	10	80	10	-45	1.0	2 typ.	150 @ 1 mA	2	Junc. Isol.
IT132	TO-78 TO-71	10	20	80	25	-45	1.0	2 typ.	150 @ 1 mA	2	Junc. Isol.
IT136	TO-78 TO-71	1	3	200	2.5	-60	0.1	2 typ.	250 @ 10 mA	4	Dielec. Isol.
IT137	TO-78 TO-71	2	5	200	5	-45	0.1	2 typ.	250 @ 10 mA	4	Dielec. Isol.
IT138	TO-78 TO-71	5	10	100	10	-45	0.5	2 typ.	250 @ 10 mA	4	Dielec. Isol.
IT139	TO-78 TO-71	10	20	100	25	-45	0.5	2 typ.	250 @ 10 mA	4	Dielec. Isol.