

LINEAR SYSTEMS

Twenty-Five Years Of Quality Through Innovation

IT130A IT130 IT131 IT132

MONOLITHIC DUAL PNP TRANSISTORS

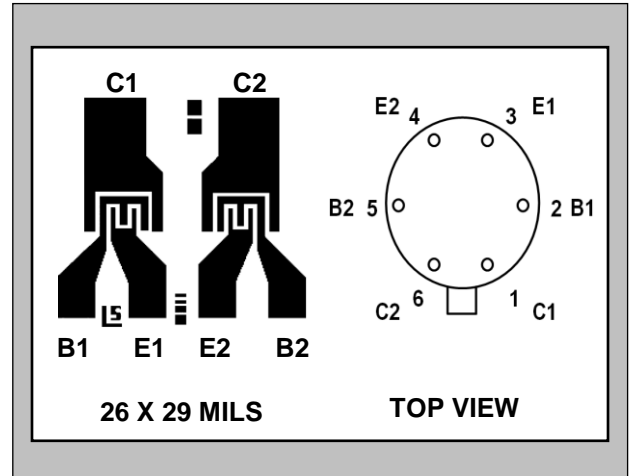
FEATURES

Direct Replacement for Intersil IT130 Series
Pin for Pin Compatible

ABSOLUTE MAXIMUM RATINGS NOTE 1

(T_A = 25°C unless otherwise noted)

I _C	Collector-Current	-10mA
Maximum Temperatures		
Storage Temperature Range		-65°C to +150°C
Operating Junction Temperature		-55°C to +150°C
Maximum Power Dissipation	ONE SIDE	BOTH SIDES
Device Dissipation T _A =25°C	250mW	500mW
Linear Derating Factor	2.3mW/°C	4.3W/°C

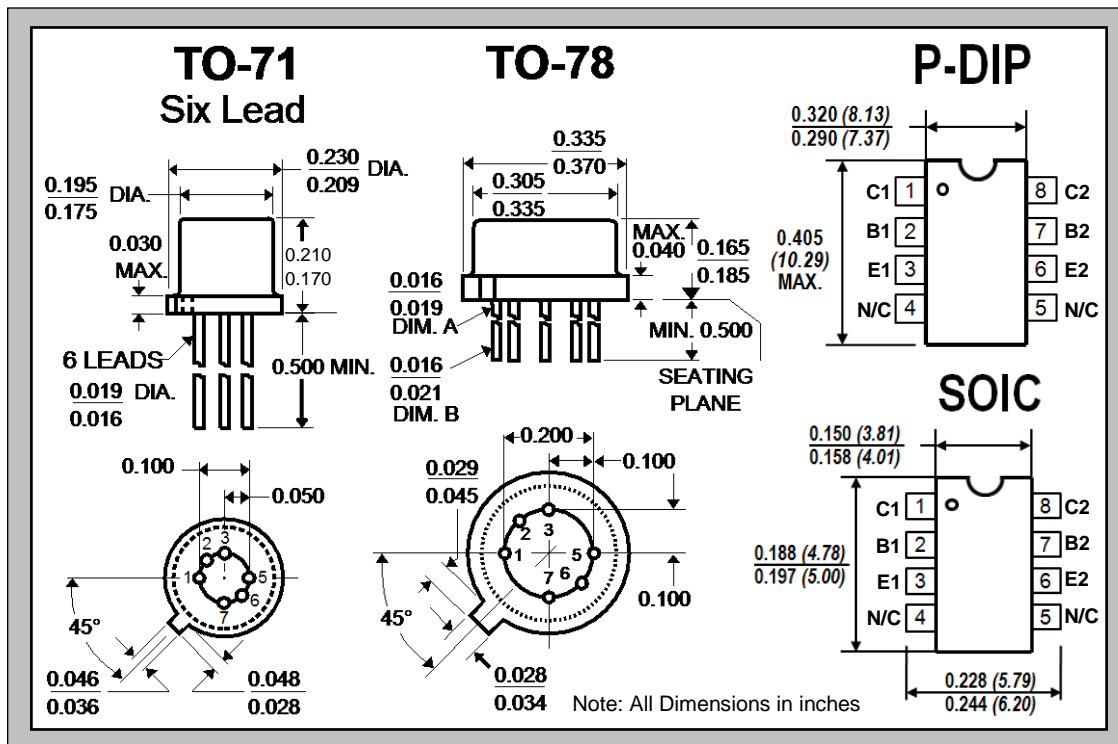


ELECTRICAL CHARACTERISTICS T_A = 25°C (unless otherwise noted)

SYMBOL	CHARACTERISTIC	IT130A	IT130	IT131	IT132		UNITS	CONDITIONS
BV _{CBO}	Collector to Base Voltage	-45	-45	-45	-45	MIN.	V	I _C = -10μA I _E = 0A
BV _{CEO}	Collector to Emitter Voltage	-45	-45	-45	-45	MIN.	V	I _C = -10μA I _B = 0A
BV _{EBO}	Emitter-Base Breakdown Voltage	-6.2	-6.2	-6.2	-6.2	MIN.	V	I _E = -10μA I _C = 0A NOTE 2
BV _{CCO}	Collector to Collector Voltage	±60	±60	±60	±60	MIN.	V	I _{CCO} = ±10μA I _B = I _E = 0A
h _{FE}	DC Current Gain	200	200	80	80	MIN.		I _C = -10μA V _{CE} = -5V
		225	225	100	100	MIN.		I _C = -1.0mA V _{CE} = -5V
V _{CE(SAT)}	Collector Saturation Voltage	-0.5	-0.5	-0.5	-0.5	MAX.	V	I _C = -0.5mA I _B = -0.05mA
I _{EBO}	Emitter Cutoff Current	-1	-1	-1	-1	MAX.	nA	I _C = 0A V _{EB} = -3V
I _{CBO}	Collector Cutoff Current	-1	-1	-1	-1	MAX.	nA	I _E = 0A V _{CB} = -45V
C _{OBO}	Output Capacitance ⁴	2	2	2	2	MAX.	pF	I _E = 0A V _{CB} = -5V
C _{C1C2}	Collector to Collector Capacitance ⁴	4	4	4	4	MAX.	pF	V _{CC} = 0V
I _{C1C2}	Collector to Collector Leakage Current	±500	±500	±500	±500	MAX.	nA	V _{CC} = ±60V, I _B = I _E = 0A
f _T	Current Gain Bandwidth Product ⁴	110	110	90	90	MIN.	MHz	I _C = -1mA V _{CE} = -5V
NF	Narrow Band Noise Figure ⁴	3	3	3	3	MAX.	dB	I _C = -100μA V _{CE} = -5V BW = 200Hz, R _G = 10 KΩ f = 1KHz

MATCHING CHARACTERISTICS @ 25°C (unless otherwise noted)

SYMBOL	CHARACTERISTIC	IT130A	IT130	IT131	IT132		UNITS	CONDITIONS
$ V_{BE1}-V_{BE2} $	Base Emitter Voltage Differential	1	2	3	5	MAX.	mV	$I_C = -10 \mu A$ $V_{CE} = -5V$
$\Delta (V_{BE1}-V_{BE2}) /\Delta T$	Base Emitter Voltage Differential Change with Temperature ⁴	3	5	10	20	MAX.	$\mu V/^\circ C$	$I_C = 10 \mu A$ $V_{CE} = 5V$ $T = -55^\circ C$ to $+125^\circ C$
$ I_{B1}-I_{B2} $	Base Current Differential	2.5	5	25	25	MAX.	nA	$I_C = -10 \mu A$ $V_{CE} = -5V$



NOTES:

1. These ratings are limiting values above which the serviceability of any semiconductor may be impaired.
2. The reverse base-to-emitter voltage must never exceed 6.2 volts; the reverse base-to-emitter current must never exceed 10 μA .
3. All MIN/TYP/MAX Limits are absolute values. Negative signs indicate electrical polarity only.
4. Not a production test.

Linear Integrated Systems (LIS) is a 25-year-old, third-generation precision semiconductor company providing high-quality discrete components. Expertise brought to LIS is based on processes and products developed at Amelco, Union Carbide, Intersil and Micro Power Systems by company President John H. Hall. Hall, a protégé of Silicon Valley legend Dr. Jean Hoerni, was the director of IC Development at Union Carbide, co-founder and vice president of R&D at Intersil, and founder/president of Micro Power Systems.