

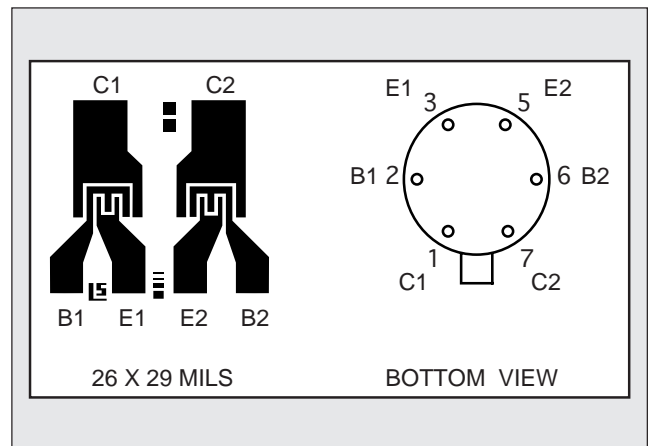
LINEAR SYSTEMS

Linear Integrated Systems

IT124

SUPER-BETA MONOLITHIC DUAL NPN TRANSISTORS

FEATURES		
Direct Replacement for Intersil IT124 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 +200°C
Operating Junction Temperature		+150°C
Maximum Power Dissipation		
	ONE SIDE	BOTH SIDES
Device Dissipation @ Free Air	250mW	500mW
Linear Derating Factor	2.3mW/°C	4.3mW/°C



ELECTRICAL CHARACTERISTICS @ 25°C (unless otherwise noted)

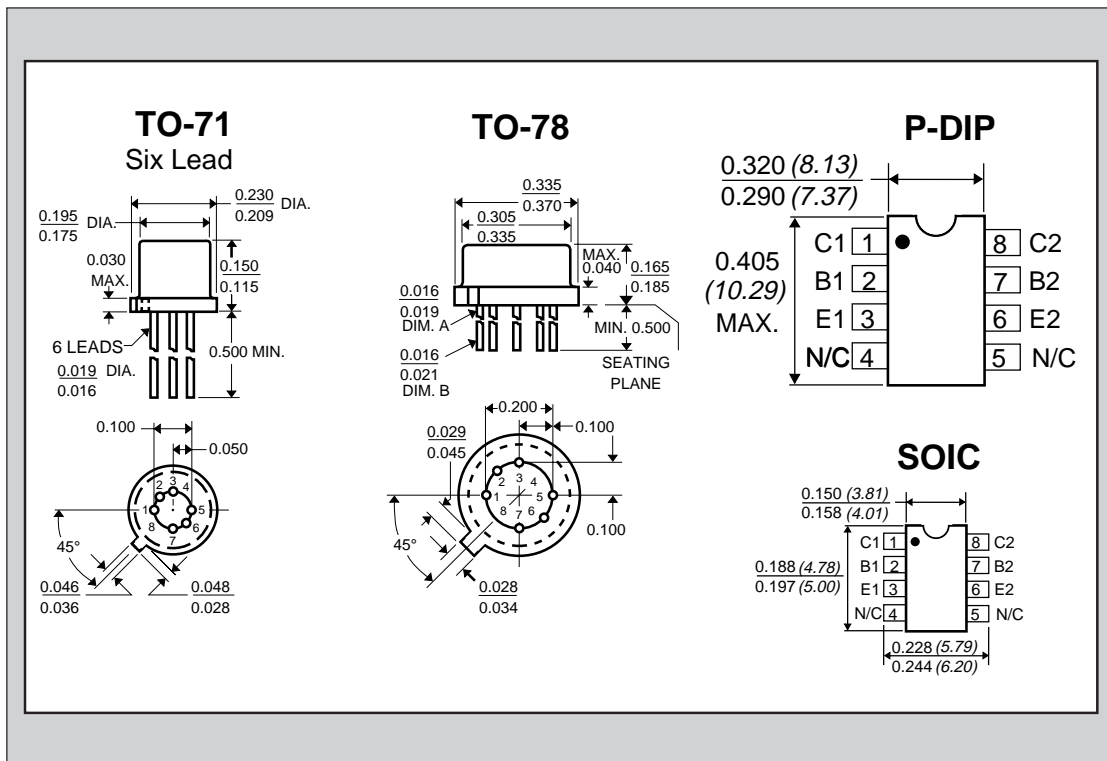
SYMBOL	CHARACTERISTICS	IT124		UNITS	CONDITIONS
BV _{CBO}	Collector-Base Breakdown Voltage	2	MIN.	V	I _C = 10μA I _E = 0
BV _{CEO}	Collector to Emitter Voltage	2	MIN.	V	I _C = 10μA I _B = 0
BV _{EBO}	Emitter-Base Breakdown Voltage	6.2	MIN.	V	I _E = 10μA I _C = 0 NOTE 2
BV _{CCO}	Collector to Collector Voltage	100	MIN.	V	I _C = 10μA I _E = 0
h _{FE}	DC Current Gain	1500	MIN.		I _C = 1μA V _{CE} = 1V
h _{FE}	DC Current Gain	1500	MIN.		I _C = 10μA V _{CE} = 1V
V _{CE(SAT)}	Collector Saturation Voltage	0.5	MAX.	V	I _C = 1mA I _B = 0.1 mA
I _{CBO}	Collector Cutoff Current	100	MAX.	pA	I _E = 0 V _{CB} = 1V
I _{EBO}	Emitter Cutoff Current	100	MAX.	pA	I _C = 0 V _{EB} = 3V
C _{OBO}	Output Capacitance	2	MAX.	pF	I _E = 0 V _{CB} = 1V
C _{C1C2}	Collector to Collector Capacitance	2	MAX.	pF	V _{CC} = 0
I _{C1C2}	Collector to Collector Leakage Current	250	MAX.	pA	V _{CC} = ±50V
f _T	Current Gain Bandwidth Product	100	MIN.	MHz	I _C = 100μA V _{CE} = 1V
NF	Narrow Band Noise Figure	3	MAX.	dB	I _C = 10μA V _{CE} = 3V R _G = 10 KΩ f = 1KHz BW = 200Hz

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MATCHING CHARACTERISTICS @ 25°C (unless otherwise noted)

SYMBOL	CHARACTERISTICS	IT124		UNITS	CONDITIONS
$ V_{BE1} - V_{BE2} $	Base Emitter Voltage Differential	2	TYP.	mV	$I_C = 10 \mu A$ $V_{CE} = 1V$
		5	MAX.	mV	
$\Delta(V_{BE1} - V_{BE2})/\Delta T$	Base Emitter Voltage Differential Change with Temperature	5	TYP.	$\mu V/^\circ C$	$I_C = 10 \mu A$ $V_{CE} = 1V$ $T = -55^\circ C$ to $+125^\circ C$
		15	MAX.	$\mu V/^\circ C$	
$ I_{B1} - I_{B2} $	Base Current Differential	0.6	MAX.	nA	$I_C = 10 \mu A$ $V_{CE} = 1V$



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 .