

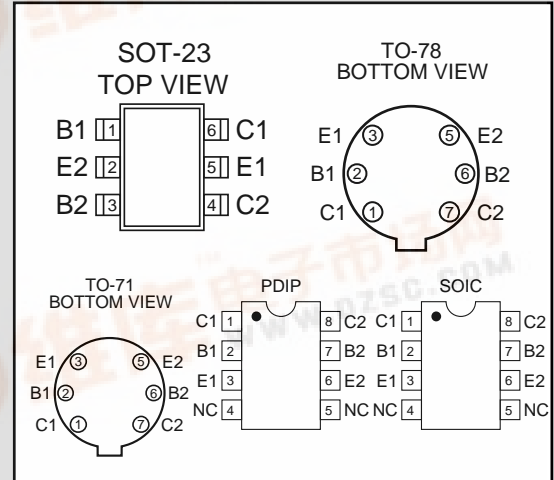
LINEAR SYSTEMS

Linear Integrated Systems

FEATURES	
6 LEAD SOT-23 SURFACE MOUNT PACKAGE*	
TIGHT MATCHING ¹	2mV
EXCELLENT THERMAL TRACKING ¹	3μV/°C
ABSOLUTE MAXIMUM RATINGS ²	
@ 25 °C (unless otherwise stated)	
Maximum Temperatures	
Storage Temperature	-65 to +150 °C
Operating Junction Temperature	-55 to +150 °C
Maximum Power Dissipation	
Continuous Power Dissipation	TBD
Maximum Currents	
Collector Current	50mA
Maximum Voltages	
Collector to Collector Voltage	80V

LS3250 SERIES

MONOLITHIC DUAL NPN TRANSISTORS



MATCHING ELECTRICAL CHARACTERISTICS @25 °C (unless otherwise stated)

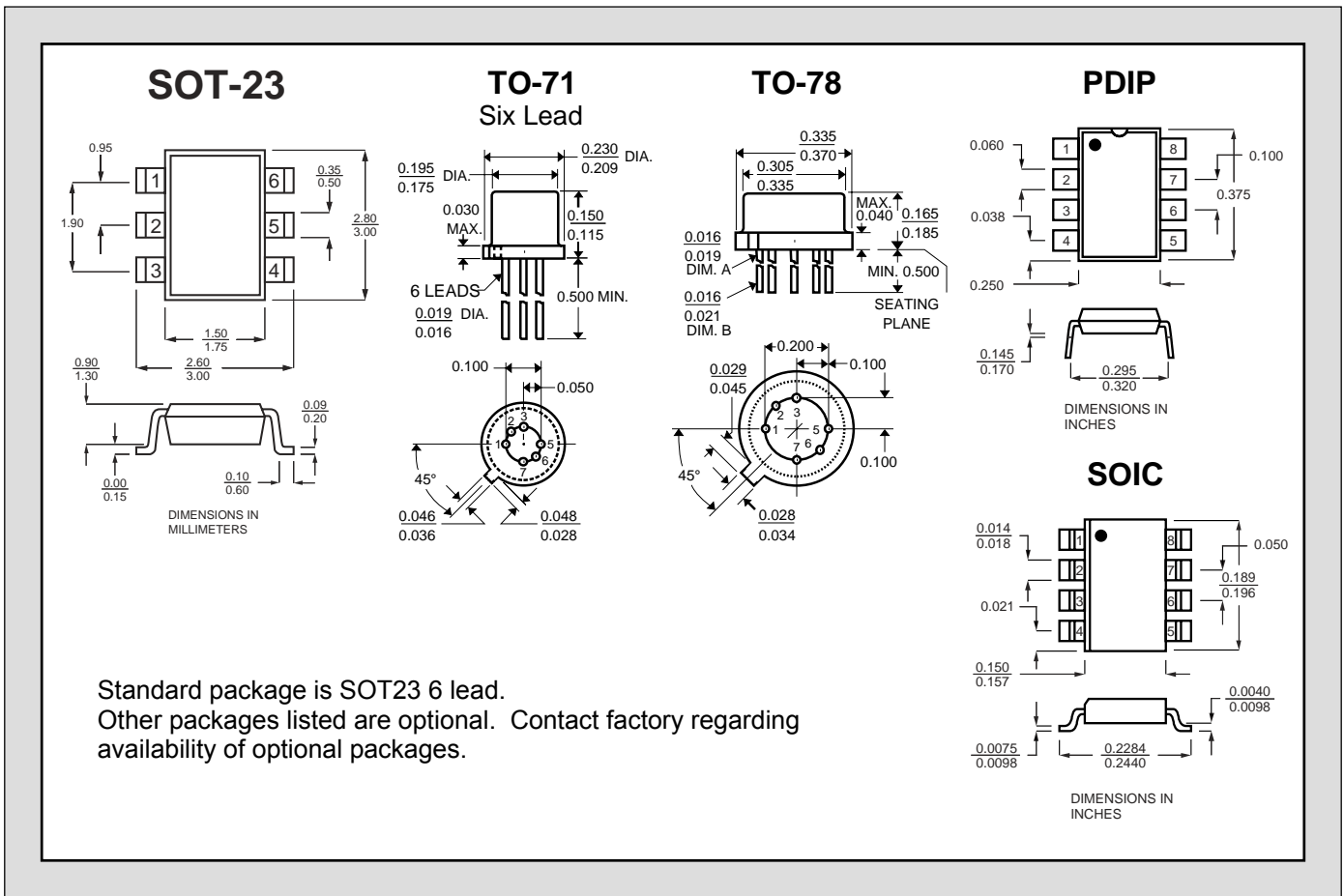
	CHARACTERISTIC	LS3250A						UNIT	CONDITIONS
		MIN	MAX	MIN	MAX	MIN	MAX		
$ V_{BE1} - V_{BE2} $	Base to Emitter Voltage Differential		2		5		10	mV	$I_C = 10\text{mA}, V_{CE} = 5\text{V}$
$\frac{ V_{BE1} - V_{BE2} }{\Delta T}$	Base to Emitter Voltage Differential Change with Temperature		3		5		15	μV/°C	$I_C = 10\text{mA}, V_{CE} = 5\text{V}$ $T_A = -40^\circ\text{C to } +85^\circ\text{C}$
$ I_{B1} - I_{B2} $	Base Current Differential		10		10		10	nA	$I_C = 10\mu\text{A}, V_{CE} = 5\text{V}$
$\frac{ I_{B1} - I_{B2} }{\Delta T}$	Base Current Differential Change with Temperature		0.5		0.5		1.0	nA/°C	$I_C = 10\mu\text{A}, V_{CE} = 5\text{V}$ $T_A = -40^\circ\text{C to } +85^\circ\text{C}$
$\frac{h_{FE1}}{h_{FE2}}$	Current Gain Differential		10		10		15	%	$I_C = 10\mu\text{A}, V_{CE} = 5\text{V}$

ELECTRICAL CHARACTERISTICS @25 °C (unless otherwise stated)

SYMBOL	CHARACTERISTIC	LS3250A		LS3250B		LS3250C		UNIT	CONDITIONS
		MIN	MAX	MIN	MAX	MIN	MAX		
BV_{CBO}	Collector to Base Breakdown Voltage	45		40		20		V	$I_C = 10\text{mA}, I_E = 0\text{A}$
BV_{CEO}	Collector to Emitter Breakdown Voltage	45		40		20			$I_C = 10\mu\text{A}, I_E = 0\text{A}$
BV_{CCO}	Collector to Collector Breakdown Voltage	80		80		80			$I_E = 10\mu\text{A}, I_C = 0\text{A}$
BV_{EBO}	Emitter to Base Breakdown Voltage ³	6.2		6.2		6.2			$I_C = 100\text{mA}, I_B = 10\text{mA}$
$V_{CE(SAT)}$	Collector to Emitter Saturation Voltage		0.25		0.25		1.2		

ELECTRICAL CHARACTERISTICS CONT. @25 °C (unless otherwise stated)

SYMBOL	CHARACTERISTIC	LS3250A		LS3250B		LS3250C		UNIT	CONDITIONS
		MIN	MAX	MIN	MAX	MIN	MAX		
h _{FE}	DC Current Gain	150		100		50			I _C = 1mA, V _{CE} = 5V
		120		80		40			I _C = 10mA, V _{CE} = 5V
		100		80		40			I _C = 50mA, V _{CE} = 5V
I _{CBO}	Collector Cutoff Current		0.2		0.2			nA	I _E = 0A, V _{CB} = 30V
I _{EBO}	Emitter Cutoff Current		0.2		0.2	0.2			I _E = 0A, V _{CB} = 20V
I _{C1C2}	Collector to Collector Leakage Current		1		1	1			V _{CC} = ±80V
C _{OBO}	Output Capacitance		2		2		2	pF	I _E = 0A, V _{CB} = 10V
f _T	Gain Bandwidth Product (Current)		600		600		600	MHz	I _C = 1mA, V _{CE} = 5V
NF	Noise Figure (Narrow Band)		3		3		3	dB	I _C = 100μA, V _{CE} = 5V BW = 200Hz R _B = 10Ω, f = 1kHz



NOTES:

1. Maximum rating for LS3250A, SOT23-6.
2. Absolute maximum ratings are limiting values above which serviceability may be impaired.
3. The reverse Base to Emitter voltage must never exceed 6.2 Volts. The reverse Base to Emitter current must never exceed 10μA.

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