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[Fairchild Semiconductor](#)

[LF353N](#)

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LF353

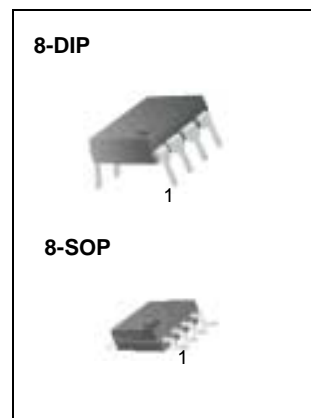
Dual Operational Amplifier (JFET)

Features

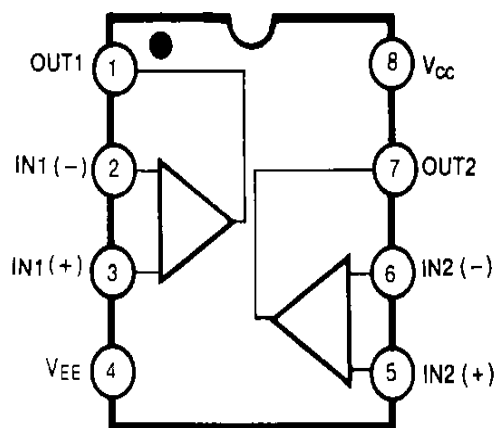
- Internally trimmed offset voltage: 10mV
- Low input bias current: 50pA
- Wide gain bandwidth: 4MHz
- High slew rate: 13V/μs
- High Input impedance: $10^{12}\Omega$

Description

The LF353 is a JFET input operational amplifier with an internally compensated input offset voltage. The JFET input device provides wide bandwidth, low input bias currents and offset currents.



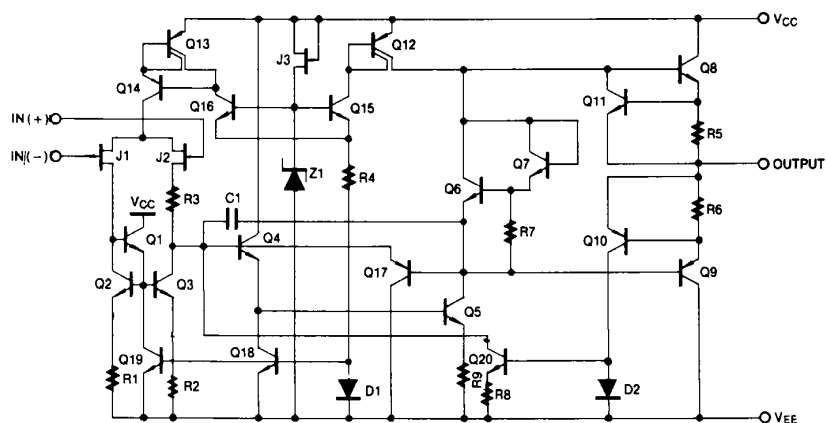
Internal Block Diagram



LF353

Schematic Diagram

(One Section Only)



Absolute Maximum Ratings

Parameter	Symbol	Value	Unit
Power Supply Voltage	VCC	±18	V
Differential Input Voltage	VI(DIFF)	30	V
Input Voltage Range	VI	±15	V
Output Short Circuit Duration	-	Continuous	-
Power Dissipation	PD	500	mW
Operating Temperature Range	TOPR	0 ~ +70	°C
Storage Temperature Range	TSTG	-65 ~ +150	°C

Electrical Characteristics

(VCC = +15V, VEE = -15V, TA = 25 °C, unless otherwise specified)

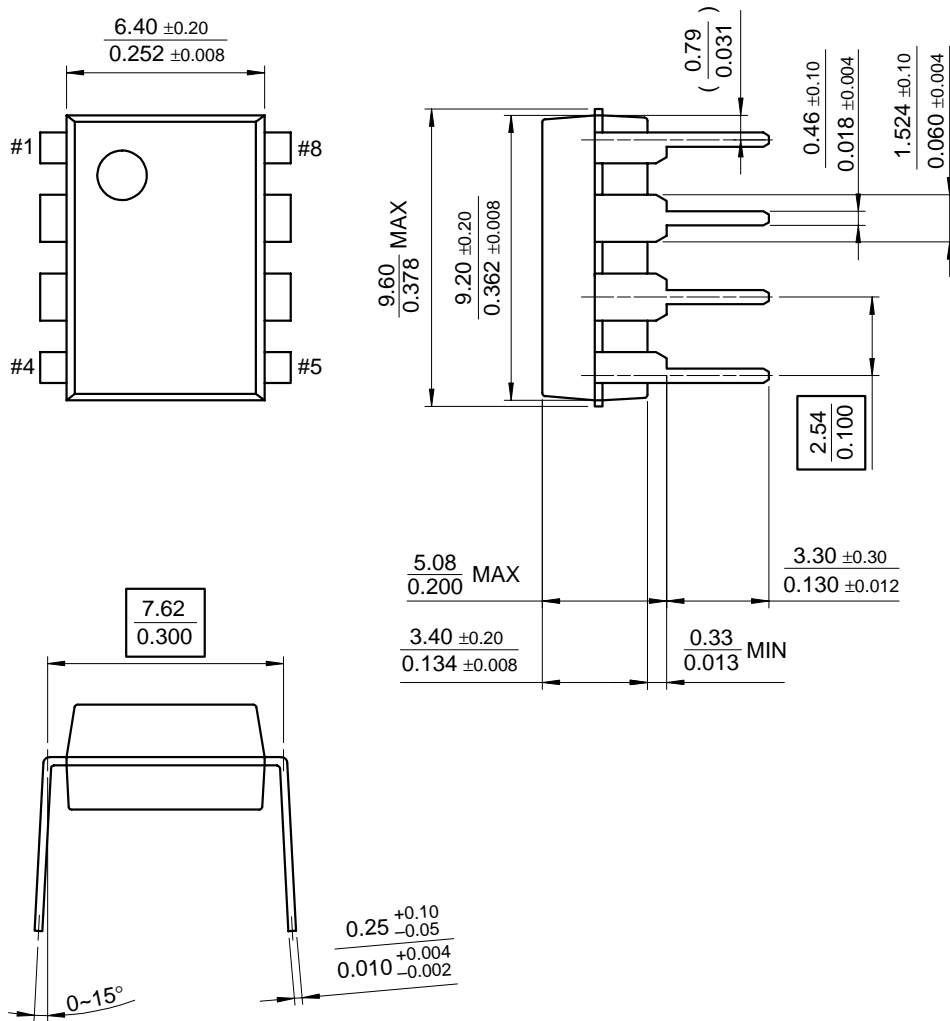
Parameter	Symbol	Conditions	Min.	Typ.	Max.	Unit
Input Offset Voltage	V _{IO}	RS=10KΩ	-	5.0	10	mV
		0 °C ≤ TA ≤ +70 °C	-	-	-	-
Input Offset Voltage Drift	ΔV _{IO} /ΔT	RS=10KΩ	-	10	-	μV/°C
Input Offset Current	I _{IO}		-	25	100	pA
		0 °C ≤ TA ≤ +70 °C	-	-	4	nA
Input Bias Current	I _{BIAS}		-	50	200	pA
		0 °C ≤ TA ≤ +70 °C	-	-	8	nA
Input Resistance	R _I	-	-	10 ¹²	-	Ω
Large Signal Voltage Gain	G _V	VO(P-P) = ±10V	25	100	-	V/mV
		RL = 2KΩ	15	-	-	-
		0 °C ≤ TA ≤ +70 °C				
Output Voltage Swing	VO(P_P)	RL = 10KΩ	±12	±13.5	-	V
Input Voltage Range	V _{I(R)}	-	±11	±15/-12	-	V
Common Mode Rejection Ratio	CMRR	RS ≤ 10KΩ	70	100	-	dB
Power Supply Rejection Ratio	PSRR	RS ≤ 10KΩ	70	100	-	dB
Power Supply Current	I _{CC}	-	-	3.6	6.5	mA
Slew Rate	SR	G _V = 1	-	13	-	V/μS
Gain-Bandwidth Product	GBW	-	-	4	-	MHz
Channel Separation	CS	f = 1Hz ~ 20KHz (Input referenced)	-	120	-	dB
Equivalent Input Noise Voltage	V _{NI}	RS = 100Ω f = 1KHz	-	16	-	nV/ √Hz
Equivalent Input Noise Current	I _{NI}	f = 1KHz	-	0.01	-	pA/ √Hz

LF353

Mechanical Dimensions

Package

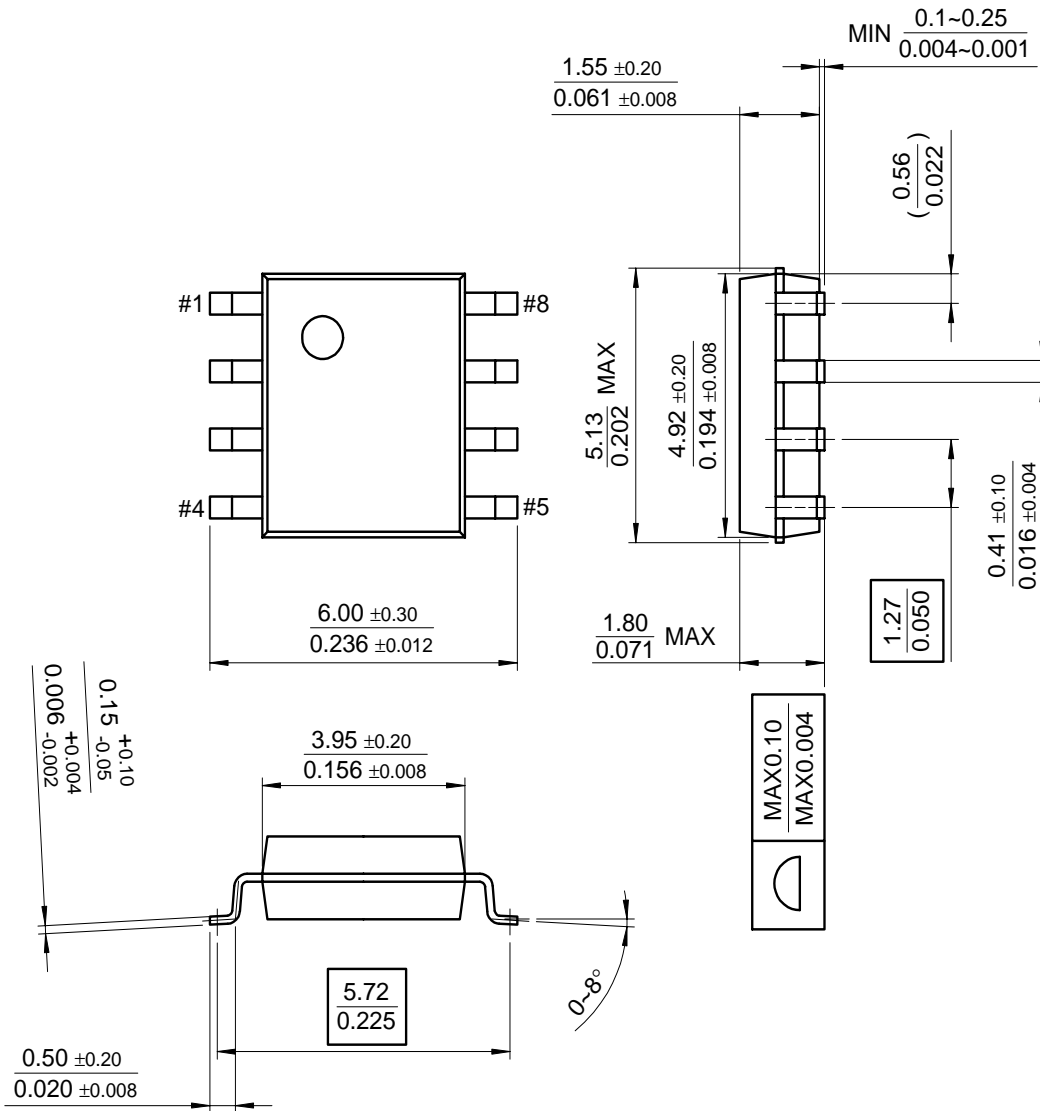
8-DIP



Mechanical Dimensions

Package

8-SOP



LF353

Ordering Information

Product Number	Package	Operating Temperature
LF353N	8-DIP	0 ~ + 70°C
LF353M	8-SOP	

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