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# LF353

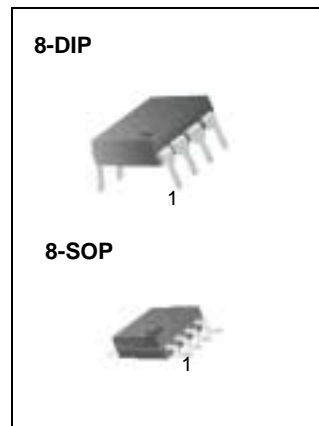
## Dual Operational Amplifier (JFET)

### Features

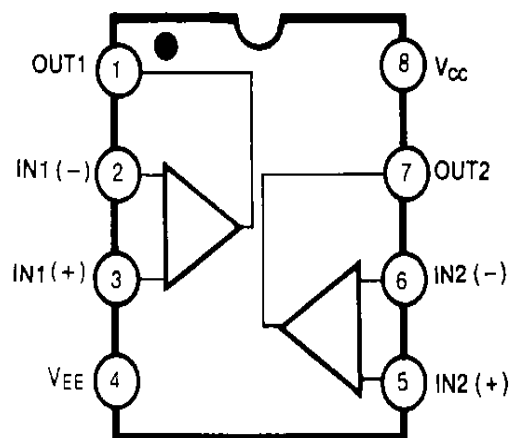
- Internally trimmed offset voltage: 10mV
- Low input bias current: 50pA
- Wide gain bandwidth: 4MHz
- High slew rate: 13V/μs
- High Input impedance:  $10^{12}\Omega$

### 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.

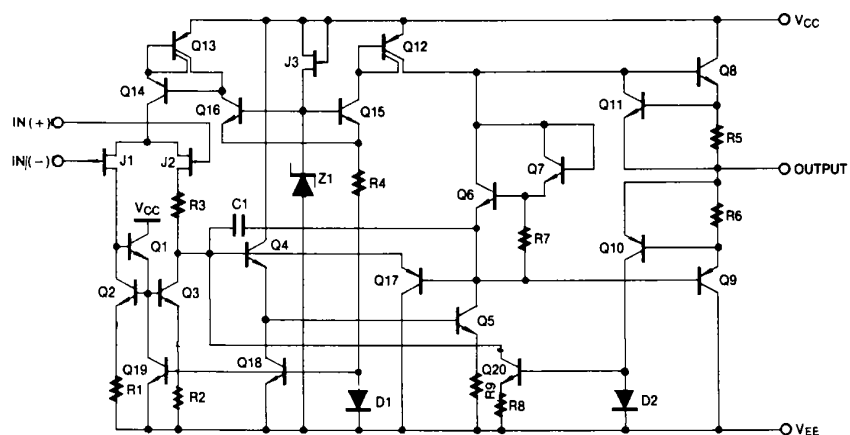


### Internal Block Diagram



## Schematic Diagram

(One Section Only)



## Absolute Maximum Ratings

Parameter	Symbol	Value	Unit
Power Supply Voltage	VCC	$\pm 18$	V
Differential Input Voltage	$V_{I(DIFF)}$	30	V
Input Voltage Range	$V_I$	$\pm 15$	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

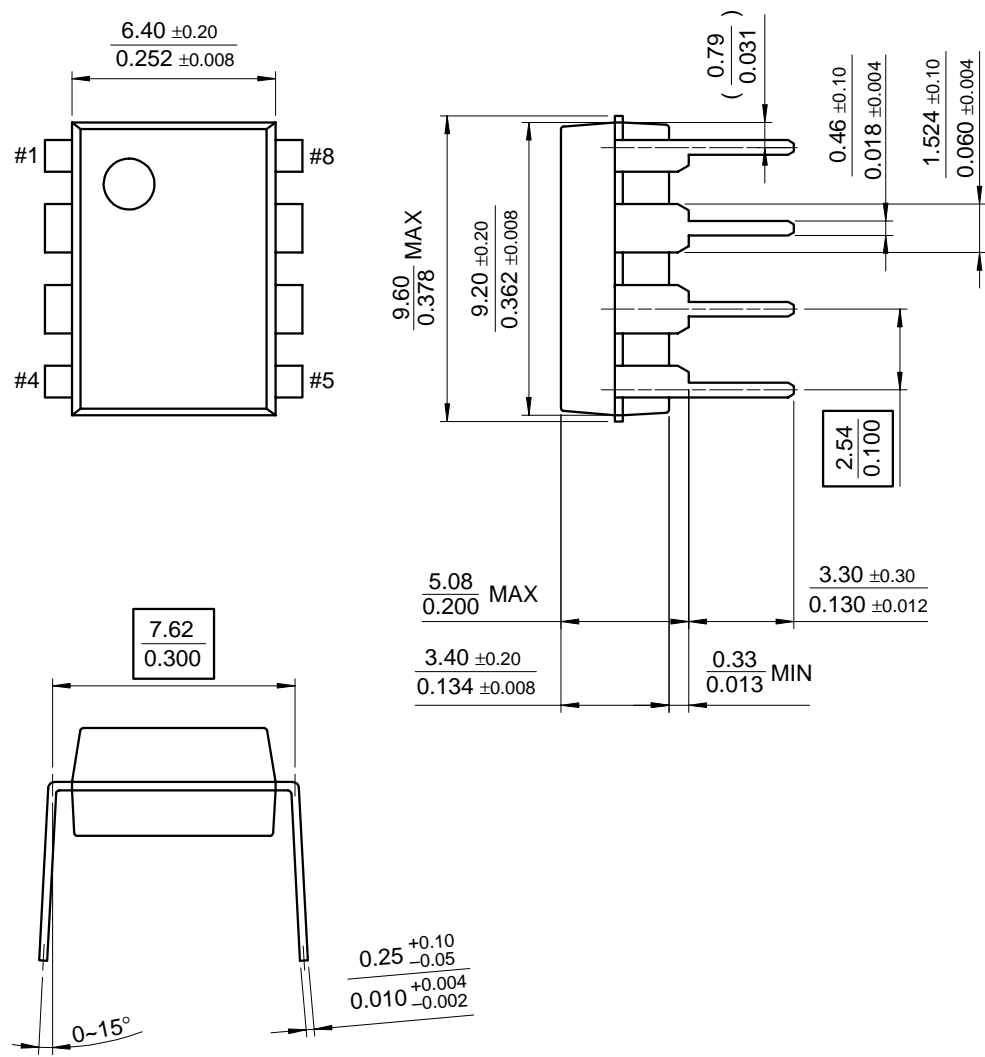
(VCC = +15V, VEE = -15V, TA = 25 °C, unless otherwise specified)

Parameter	Symbol	Conditions	Min.	Typ.	Max.	Unit
Input Offset Voltage	V <sub>IO</sub>	R <sub>S</sub> = 10KΩ	-	5.0	10	mV
		0 °C ≤ T <sub>A</sub> ≤ +70 °C	-	-	-	-
Input Offset Voltage Drift	ΔV <sub>IO</sub> /ΔT	R <sub>S</sub> = 10KΩ	-	10	-	μV/°C
Input Offset Current	I <sub>IO</sub>		-	25	100	pA
		0 °C ≤ T <sub>A</sub> ≤ +70 °C	-	-	4	nA
Input Bias Current	I <sub>BIAS</sub>		-	50	200	pA
		0 °C ≤ T <sub>A</sub> ≤ +70 °C	-	-	8	nA
Input Resistance	R <sub>I</sub>	-	-	10 <sup>12</sup>	-	Ω
Large Signal Voltage Gain	G <sub>V</sub>	V <sub>O</sub> (P-P) = ±10V	25	100	-	V/mV
		R <sub>L</sub> = 2KΩ	15	-	-	-
		0 °C ≤ T <sub>A</sub> ≤ +70 °C				
Output Voltage Swing	V <sub>O</sub> (P-P)	R <sub>L</sub> = 10KΩ	±12	±13.5	-	V
Input Voltage Range	V <sub>I</sub> (R)	-	±11	±15/-12	-	V
Common Mode Rejection Ratio	CMRR	R <sub>S</sub> ≤ 10KΩ	70	100	-	dB
Power Supply Rejection Ratio	PSRR	R <sub>S</sub> ≤ 10KΩ	70	100	-	dB
Power Supply Current	I <sub>CC</sub>	-	-	3.6	6.5	mA
Slew Rate	SR	G <sub>V</sub> = 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 <sub>NI</sub>	R <sub>S</sub> = 100Ω f = 1KHz	-	16	-	nV/ √Hz
Equivalent Input Noise Current	I <sub>NI</sub>	f = 1KHz	-	0.01	-	pA/ √Hz

Mechanical Dimensions

Package

8-DIP





## Ordering Information

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

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