

LF353

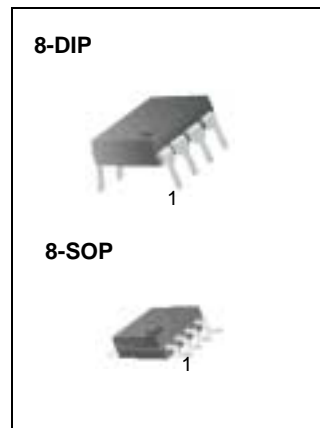
Dual Operational Amplifier (JFET)

Features

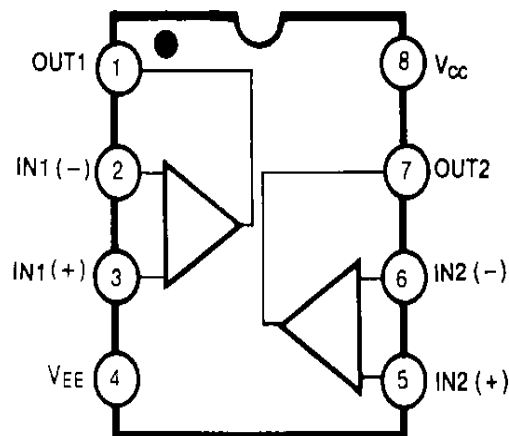
- Internally trimmed offset voltage: 10mV
- Low input bias current: 50pA
- Wide gain bandwidth: 4MHz
- High slew rate: 13V/μs
- High Input impedance: $10^{12}\Omega$

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.

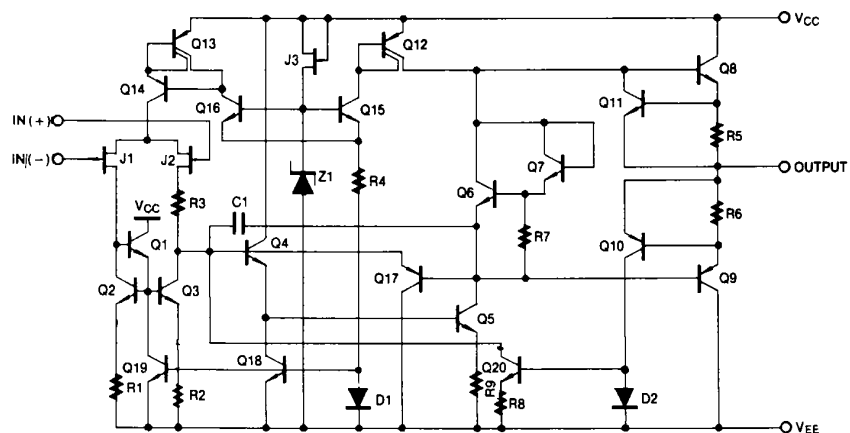


Internal Block Diagram



Schematic Diagram

(One Section Only)



Absolute Maximum Ratings

Parameter	Symbol	Value	Unit
Power Supply Voltage	VCC	±18	V
Differential Input Voltage	V _{I(DIFF)}	30	V
Input Voltage Range	V _I	±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

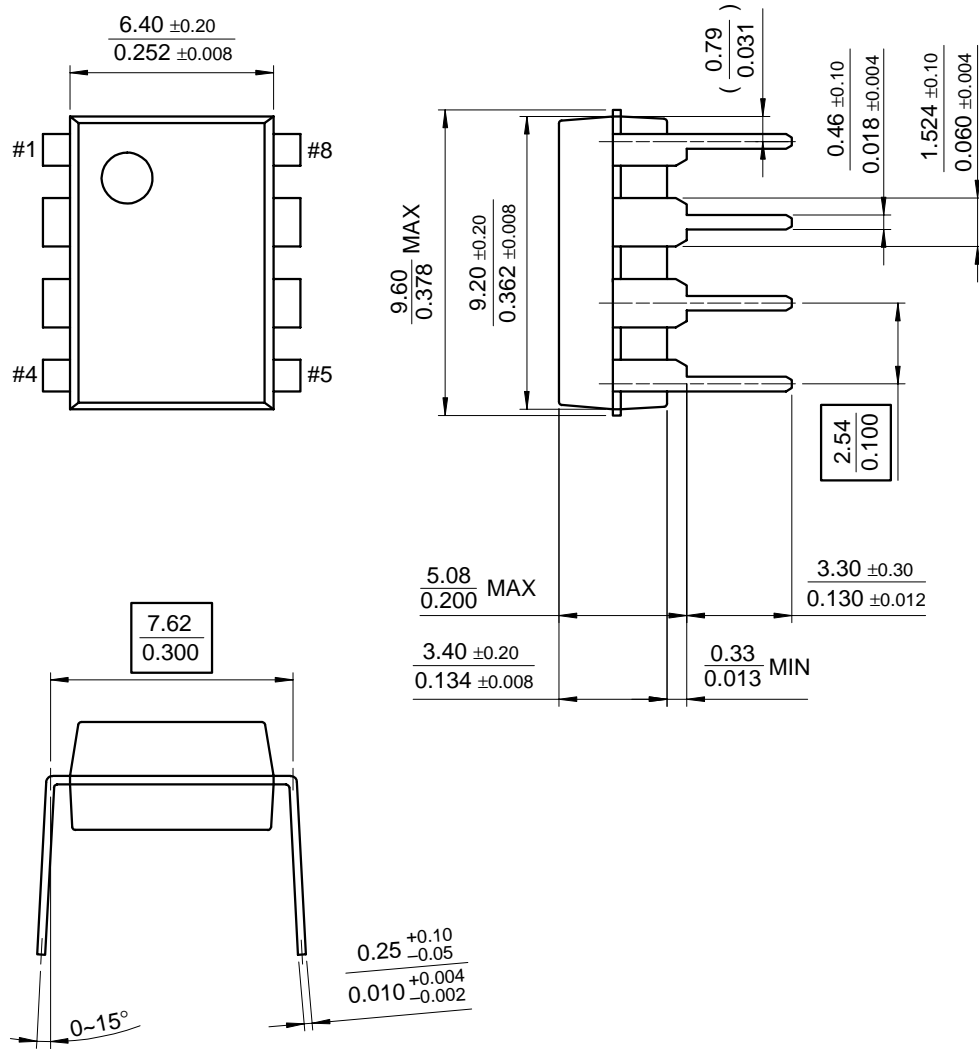
($V_{CC} = +15V$, $V_{EE} = -15V$, $T_A = 25\text{ }^\circ\text{C}$, unless otherwise specified)

Parameter	Symbol	Conditions	Min.	Typ.	Max.	Unit
Input Offset Voltage	V_{IO}	$R_S = 10K\Omega$ $0\text{ }^\circ\text{C} \leq T_A \leq +70\text{ }^\circ\text{C}$	-	5.0	10	mV
			-	-	-	-
Input Offset Voltage Drift	$\Delta V_{IO}/\Delta T$	$R_S = 10K\Omega$ $0\text{ }^\circ\text{C} \leq T_A \leq +70\text{ }^\circ\text{C}$	-	10	-	$\mu\text{V}/^\circ\text{C}$
Input Offset Current	I_{IO}	$0\text{ }^\circ\text{C} \leq T_A \leq +70\text{ }^\circ\text{C}$	-	25	100	pA
			-	-	4	nA
Input Bias Current	I_{BIAS}	$0\text{ }^\circ\text{C} \leq T_A \leq +70\text{ }^\circ\text{C}$	-	50	200	pA
			-	-	8	nA
Input Resistance	R_I	-	-	10^{12}	-	Ω
Large Signal Voltage Gain	G_V	$V_{O(P-P)} = \pm 10V$ $R_L = 2K\Omega$ $0\text{ }^\circ\text{C} \leq T_A \leq +70\text{ }^\circ\text{C}$	25	100	-	V/mV
			15	-	-	-
Output Voltage Swing	$V_{O(P-P)}$	$R_L = 10K\Omega$	± 12	± 13.5	-	V
Input Voltage Range	$V_{I(R)}$	-	± 11	$\pm 15/-12$	-	V
Common Mode Rejection Ratio	CMRR	$R_S \leq 10K\Omega$	70	100	-	dB
Power Supply Rejection Ratio	PSRR	$R_S \leq 10K\Omega$	70	100	-	dB
Power Supply Current	I_{CC}	-	-	3.6	6.5	mA
Slew Rate	SR	$G_V = 1$	-	13	-	$\text{V}/\mu\text{S}$
Gain-Bandwidth Product	GBW	-	-	4	-	MHz
Channel Separation	CS	$f = 1\text{Hz} \sim 20\text{KHz}$ (Input referenced)	-	120	-	dB
Equivalent Input Noise Voltage	V_{NI}	$R_S = 100\Omega$ $f = 1\text{KHz}$	-	16	-	$\text{nV}/\sqrt{\text{Hz}}$
Equivalent Input Noise Current	I_{NI}	$f = 1\text{KHz}$	-	0.01	-	$\text{pA}/\sqrt{\text{Hz}}$

Mechanical Dimensions

Package

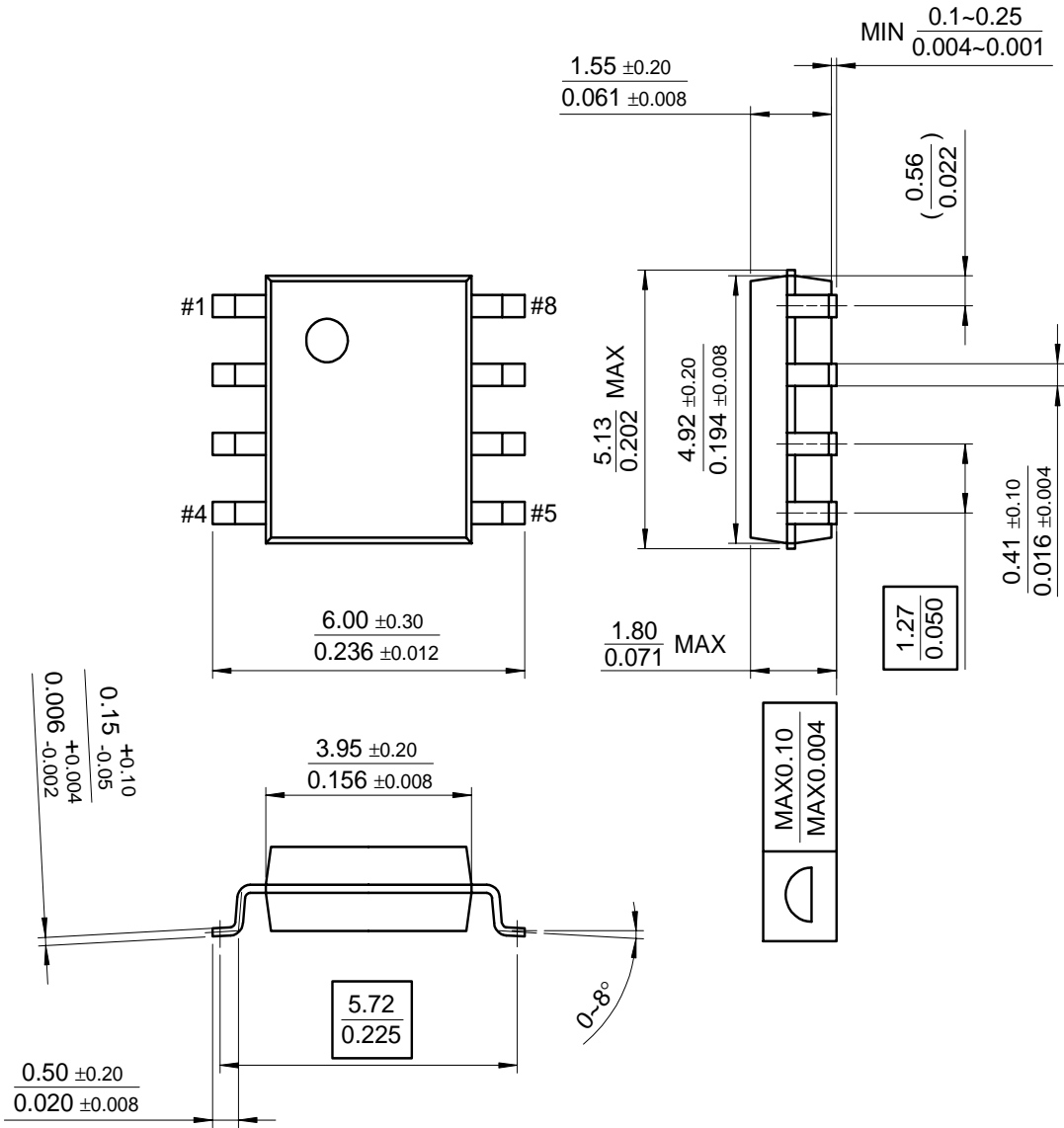
8-DIP



Mechanical Dimensions

Package

8-SOP



Ordering Information

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

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