

LF353 (LM353, KA353)

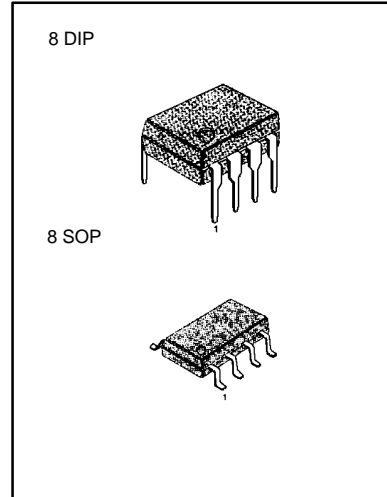
DUAL OPERATIONAL AMPLIFIER (JFET)

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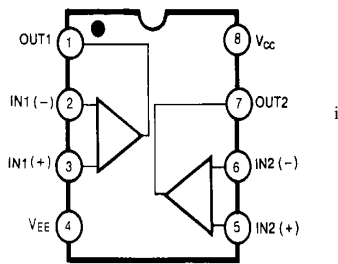
The LF353 is a JFET input operational amplifier with an internally compensated input offset voltage. The JFET input device provides with bandwidth, low input bias currents and offset currents.

FEATURES

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



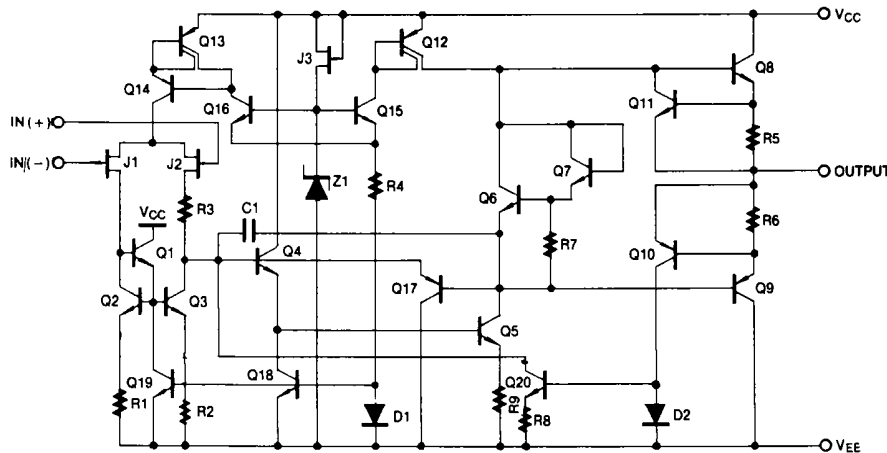
BLOCK DIAGRAM



ORDERING INFORMATION

Device	Package	Operating Temperature
LF353N	8 DIP	0 ~ +70°C
LF353M	8 SOP	
LF353S	9 SIP	

SCHEMATIC DIAGRAM (One Section Only)



ABSOLUTE MAXIMUM RATINGS

Characteristics	Symbol	Value	Unit
Power Supply Voltage	V_{CC}	± 18	V
Differential Input Voltage	$V_{I(DIFF)}$	30	V
Input Voltage Range	V_I	± 15	V
Output Short Circuit Duration		Continuous	
Power Dissipation	P_D	500	mW
Operating Temperature Range	T_{OPR}	0 ~ +70	°C
Storage Temperature Range	T_{STG}	-65 ~ +150	°C

ELECTRICAL CHARACTERISTICS

(V_{CC} = +15V, V_{EE} = -15V, T_A = 25°C, unless otherwise specified)

Characteristic	Symbol	Test Conditions	Min	Typ	Max	Unit
Input Offset Voltage	V_{IO}	$R_S = 10K\Omega$ $0^\circ C \leq T_A \leq +70^\circ C$		5.0	10	mV
Input Offset Voltage Drift	$\Delta V_{IO}/\Delta T$	$R_S = 10K\Omega$ $0^\circ C \leq T_A \leq +70^\circ C$		10		$\mu V/^\circ C$
Input Offset Current	I_{IO}	$0^\circ C \leq T_A \leq +70^\circ C$		25	100	pA
Input Bias Current	I_{BIAS}	$0^\circ C \leq T_A \leq +70^\circ C$		50	200	pA
Input Resistance	R_I			10^{12}		Ω
Large Signal Voltage Gain	G_V	$V_{O(P-P)} = \pm 0V$ $R_L = 2K\Omega$ $0^\circ C \leq T_A \leq +70^\circ C$	25	100		V/mV
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	$R_S \geq 10K\Omega$	70	100		dB
Power Supply Rejection Ratio	PSRR	$R_S \geq 10K\Omega$	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	GBM			4		MHz
Channel Separation	CS	$f = 1Hz \sim 20KHz$ (Input referenced)	120	120		dB
Equivalent Input Noise Voltage	V_{NI}	$R_S = 100\Omega$ $f = 1KHz$	16	16		nV/ \sqrt{Hz}
Equivalent Input Noise Current	I_{NI}	$f = 1KHz$	0.01	0.01		pA/ \sqrt{Hz}

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FACT™	QS™
FACT Quiet Series™	Quiet Series™
FAST®	SuperSOT™-3
FASTr™	SuperSOT™-6
GTO™	SuperSOT™-8
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