

# KF351

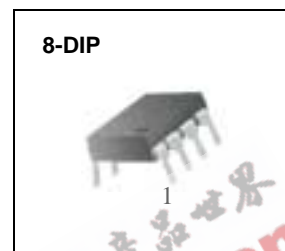
## Single Operational Amplifier (JFET)

### Features

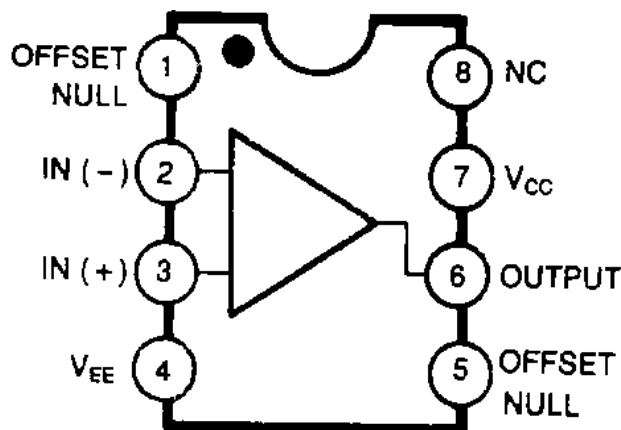
- Internally trimmed offset voltage: 10mV
- Low input bias current : 50pA
- Wide gain bandwidth : 4MHz
- High slew rate : 13V/ $\mu$ s
- High input impedance :  $10^{12}\Omega$

### Description

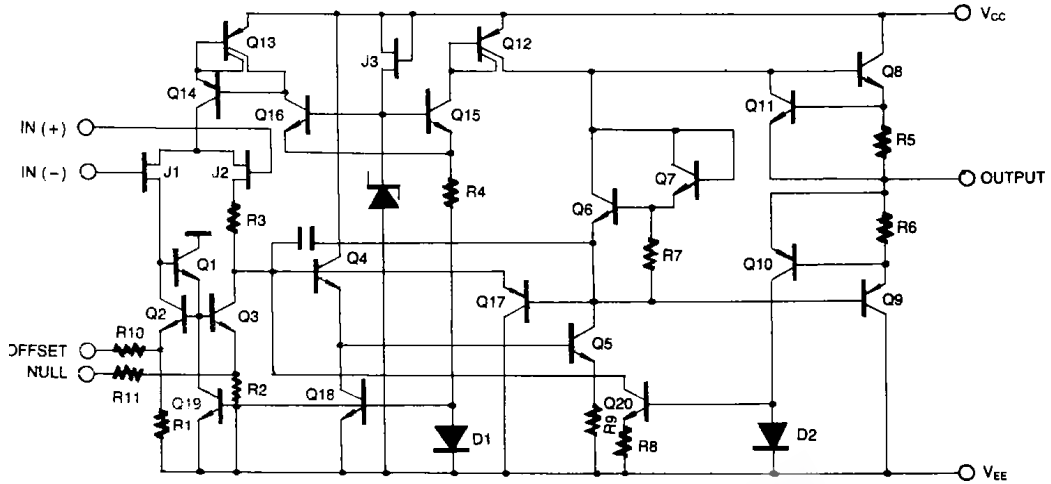
The KF351 is JFET input operational amplifier with an internally compensated input offset voltage. The JFET input device provides wide bandwidth, low input bias currents and offset currents.



### Internal Block Diagram



## Schematic Diagram



## Absolute Maximum Ratings

Parameter	Symbol	Value	Unit
Supply Voltage	V <sub>CC</sub>	±18	V
Differential Input Voltage	V <sub>I(DIFF)</sub>	30	V
Input Voltage Range	V <sub>I</sub>	±15	V
Output Short Circuit Duration	-	Continuous	-
Power Dissipation	P <sub>D</sub>	500	mW
Operating Temperature	T <sub>OPR</sub>	0 ~ +70	°C
Storage Temperature Range	T <sub>STG</sub>	-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
			-	-	13	
Input Offset Voltage Drift (Note1)	$\Delta V_{IO}/\Delta T$	$R_S = 10k\Omega$ $0\text{ }^\circ\text{C} \leq T_A \leq 70\text{ }^\circ\text{C}$	-	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	$I_{BAIS}$	$0\text{ }^\circ\text{C} \leq T_A \leq 70\text{ }^\circ\text{C}$	-	50	200	pA
			-	-	8	nA
Input Resistance (Note1)	$R_I$	-	-	$10^{12}$	-	$\Omega$
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	$V_{O(P-P)}$	$R_L = 10k\Omega$	$\pm 12$	$\pm 13.5$	-	V
Input Voltage Range	$V_{I(R)}$	-	$\pm 11$	+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	$I_{CC}$	-	-	2.3	3.4	mA
Slew Rate (Note1)	SR	$G_V = 1$	-	13	-	V/ $\mu\text{s}$
Gain-Bandwidth Product (Note1)	GBW	-	-	4	-	MHz

### Note :

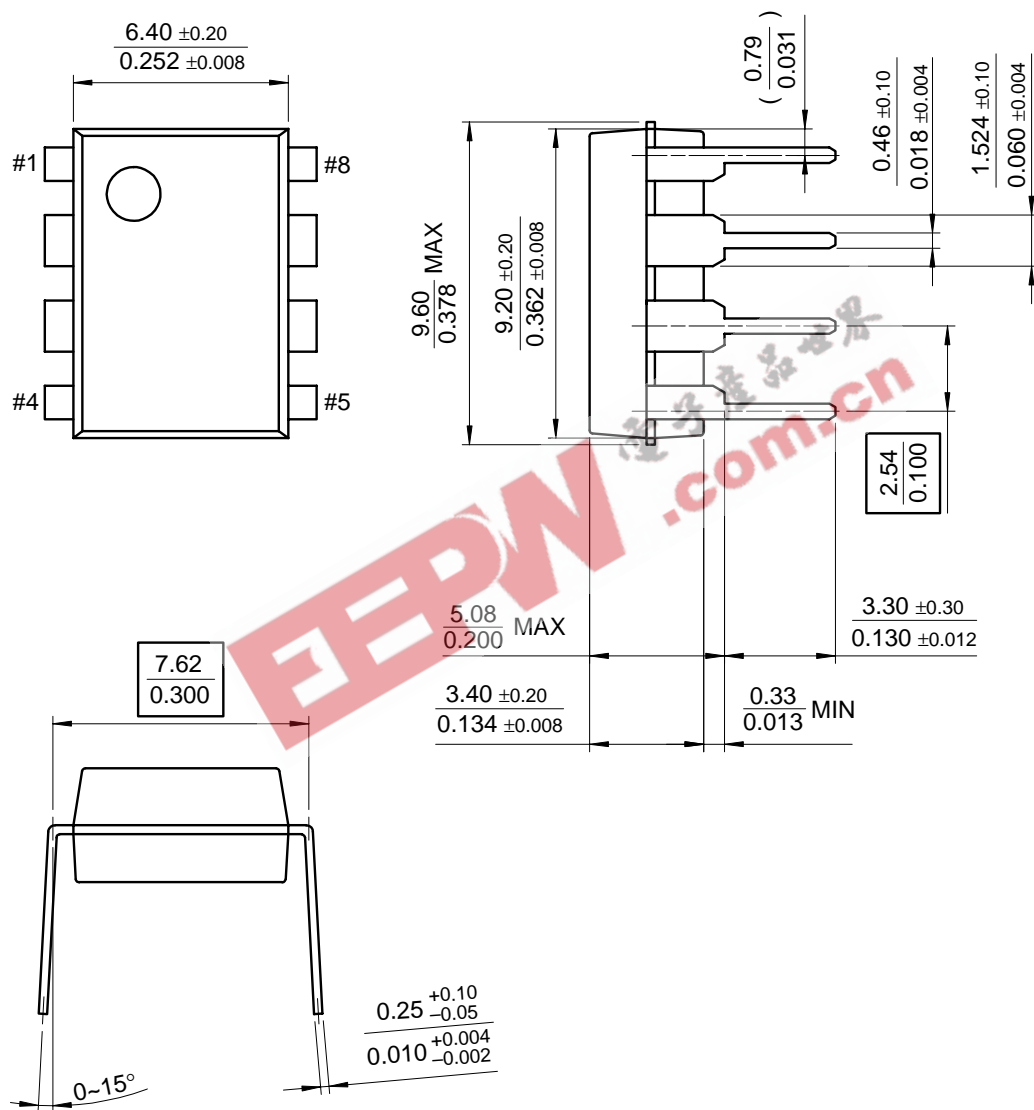
1. Guaranteed by design.

# Mechanical Dimensions

## Package

Dimensions in millimeters

### 8-DIP



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## Ordering Information

Product Number	Package	Operating Temperature
KF351	8-DIP	0 ~ + 70°C

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