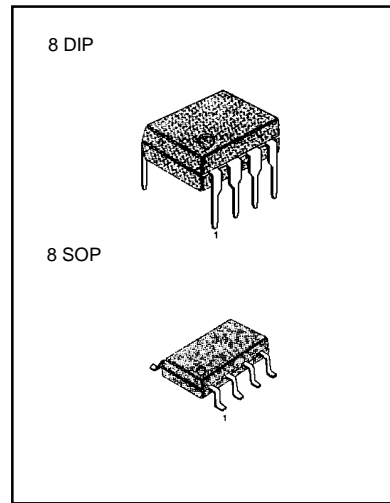


**DUAL OPERATIONAL AMPLIFIER**

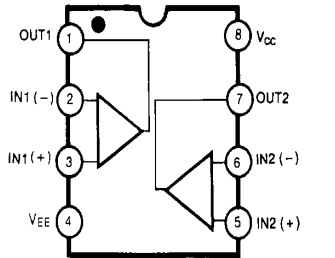
The KF353 is a JFET input operational amplifier with an internally compensated input offset voltage. The JFET input device provides with bandwidth, low input bias currents and offset currents.

**FEATURES**

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



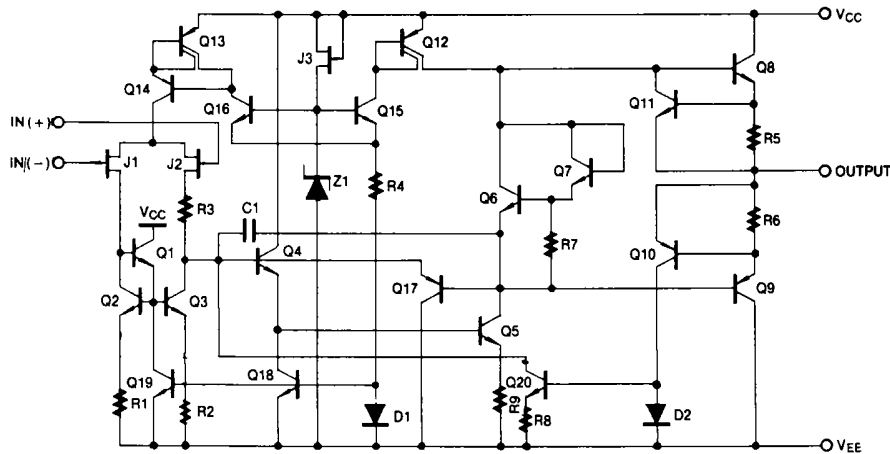
**BLOCK DIAGRAM**



**ORDERING INFORMATION**

Device	Package	Operating Temperature
KF353	8 DIP	0 ~ + 70 °C
KF353D	8 SOP	
KF353S	9 SIP	

**SCHEMATIC DIAGRAM (One Section Only)**



## ABSOLUTE MAXIMUM RATINGS

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

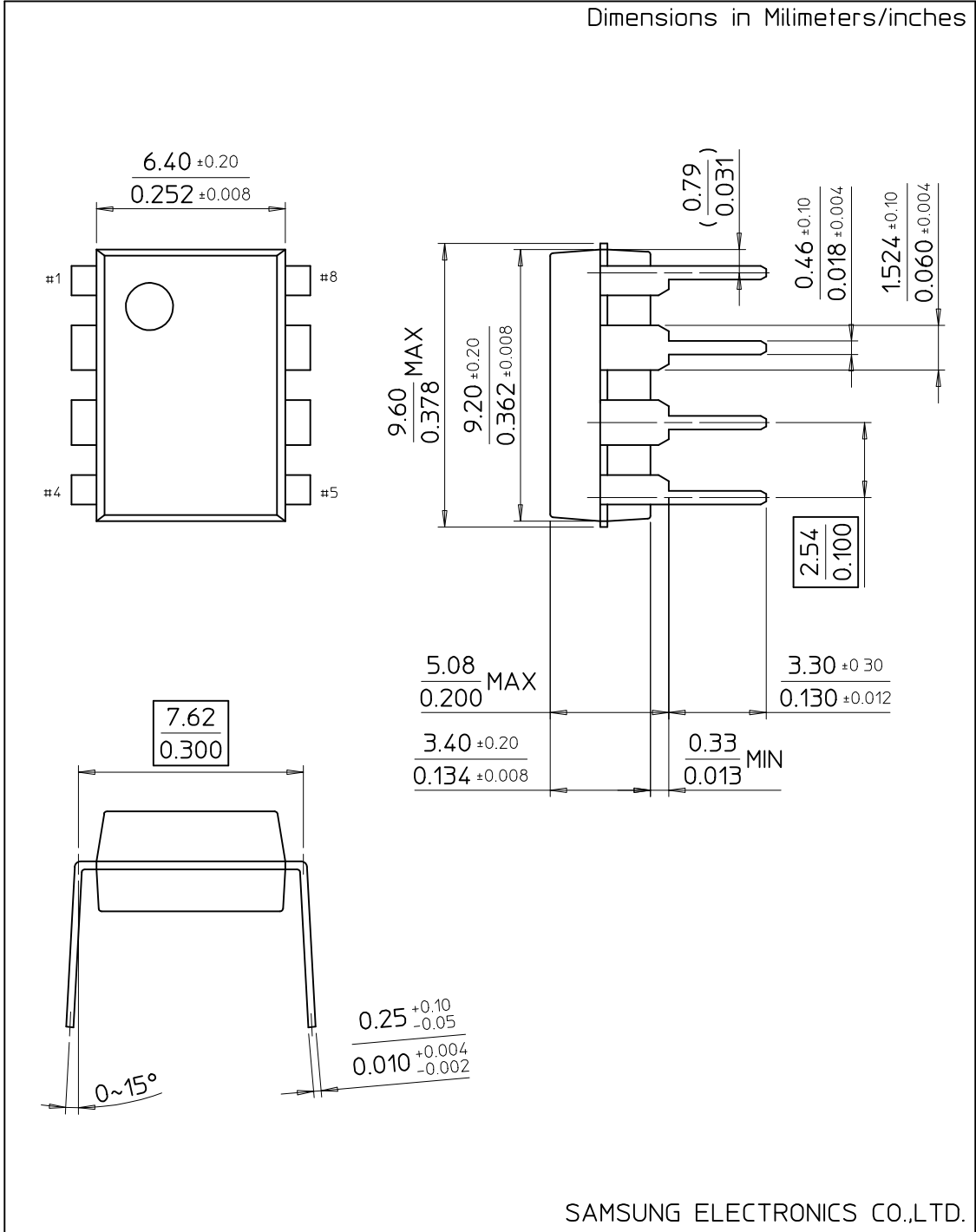
## ELECTRICAL CHARACTERISTICS

(V<sub>CC</sub> = +15V, V<sub>EE</sub> = -15V, T<sub>A</sub> = 25°C, unless otherwise specified)

Characteristic	Symbol	Test Conditions	Min	Typ	Max	Unit
Input Offset Voltage	$V_{IO}$	$R_S = 10K\Omega$ $0^\circ C \geq T_A \geq +70^\circ C$		5.0	10	mV
Input Offset Voltage Drift	$\Delta V_{IO} / \Delta T$	$R_S = 10K\Omega$ $0^\circ C \geq T_A \geq +70^\circ C$		10		$\mu V / ^\circ C$
Input Offset Current	$I_{IO}$	$0^\circ C \geq T_A \geq +70^\circ C$		25	100	pA
Input Bias Current	$I_{BIAS}$	$0^\circ C \geq T_A \geq +70^\circ C$		50	200	pA
Input Resistance	$R_i$			$10^{12}$		$\Omega$
Large Signal Voltage Gain	$G_V$	$V_{O(P-P)} = \pm 10V$ $R_L = 2K\Omega$ $0^\circ C \geq T_A \geq +70^\circ C$	25	100		V/mV
Output Voltage Swing	$V_{O(P,P)}$	$R_L = 10K\Omega$	$\pm 12$	$\pm 13.5$		V
Input Voltage Range	$V_{I(R)}$		$\pm 11$	$\pm 15/-12$		V
Common Mode Rejection Ratio	<b>CMRR</b>	$R_S \geq 10K\Omega$	70	100		dB
Power Supply Rejection Ratio	<b>PSRR</b>	$R_S \geq 10K\Omega$	70	100		dB
Power Supply Current	$I_{CC}$			3.6	6.5	mA
Slew Rate	<b>SR</b>	$G_V = 1$		13		V/ $\mu$ S
Gain-Bandwidth Product	<b>GBM</b>			4		MHz
Channel Separation	<b>CS</b>	$f = 1Hz \sim 20KHz$ (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		$pA \sqrt{Hz}$

# 8-DIP-300

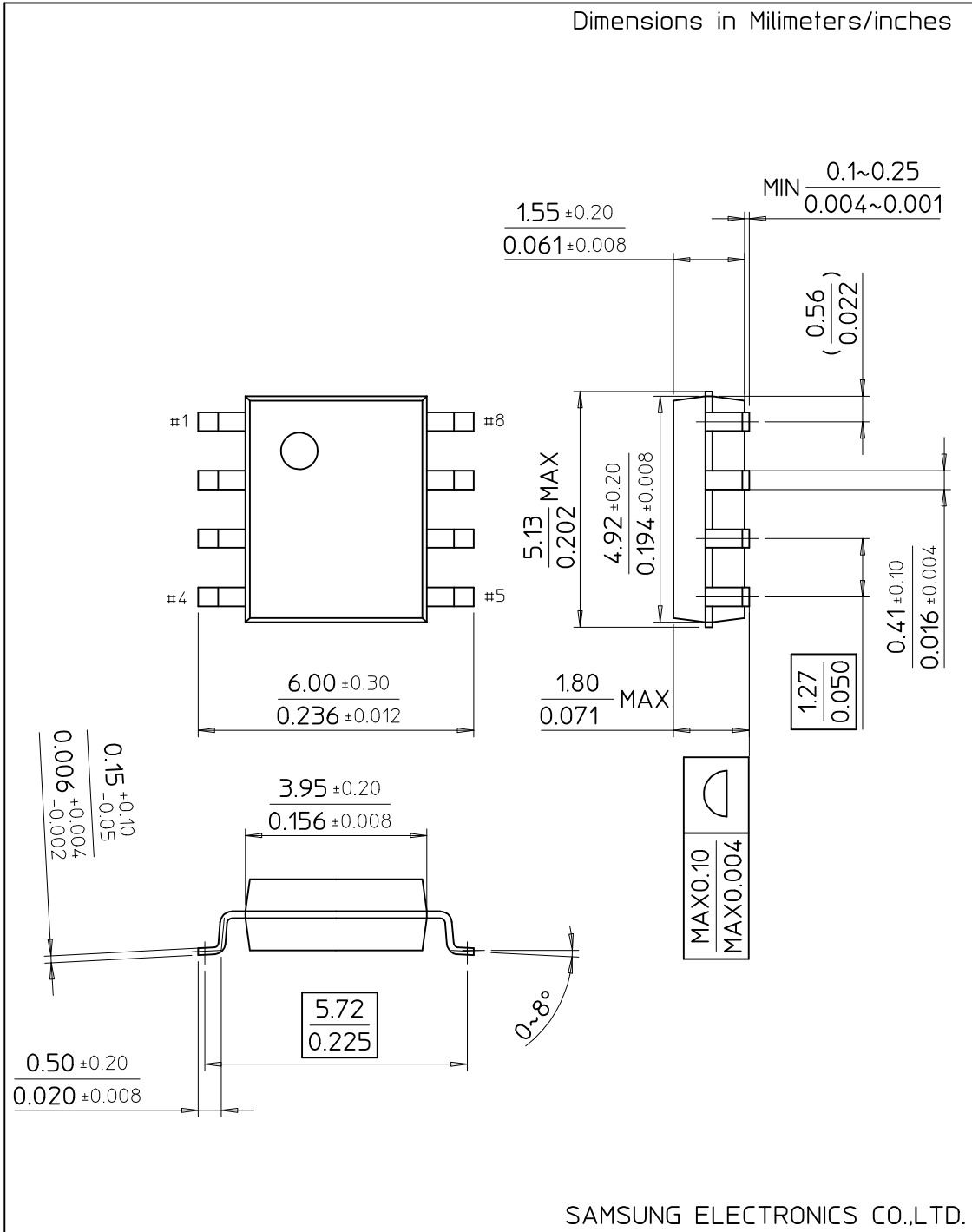
Dimensions in Millimeters/inches



SAMSUNG ELECTRONICS CO.,LTD.

# 8-SOP-225

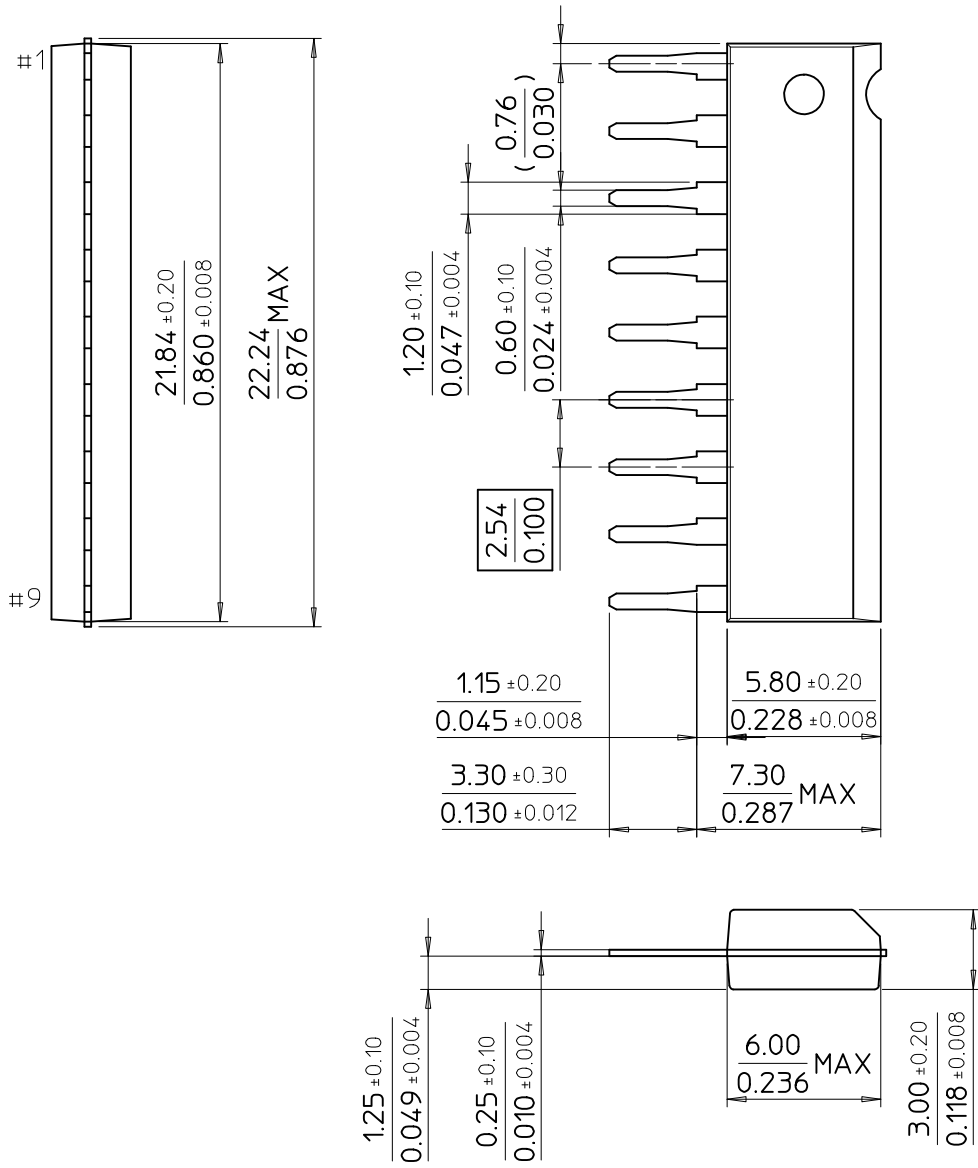
Dimensions in Millimeters/inches



SAMSUNG ELECTRONICS CO.,LTD.

# 9-SIP

Dimensions in Milimeters/Inches



SAMSUNG ELECTRONICS CO.,LTD.