

**NEW**

## CMOS Operational Amplifier TK62002F

### DESCRIPTION

The TK62002F is dual CMOS operational amplifier. It operated on a single supply 1.8V~5.5V, Rail-to-Rail input and output.

We achieved the class AB operational amplifier which operated by extremely low supply currents (4.0  $\mu$ A per amp) securing the gain bandwidth product of 200kHz.

The TK62002F is suitable for the battery powered application to a small portable equipment.

### FEATURES

- Rail-to-Rail Input and Output :  $V_{SS}+0.1V \sim V_{DD}-0.1V$
- Low Supply Current : 4.0 $\mu$ A ( per amp )
- Gain Bandwidth : 200 kHz
- High Output Short Circuit Current : 9 mA  
( at  $V_{DD}=3.0V$  ,  $V_{SS}=0V$  )
- Single Supply Operation : 1.8V ~ 5.5V

### APPLICATIONS

- Battery Powered Small Portable Equipment  
Cellular phone, Portable Audio System, DSC etc.

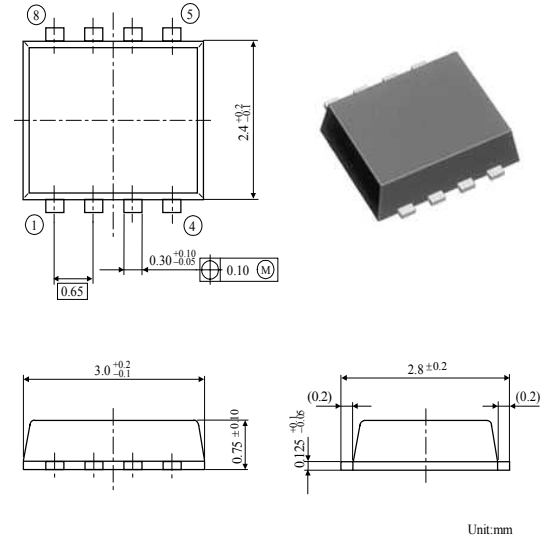
### ELECTRICAL CHARACTERISTICS

Condition :  $V_{DD}=3.0V$  ,  $V_{SS}=0V$

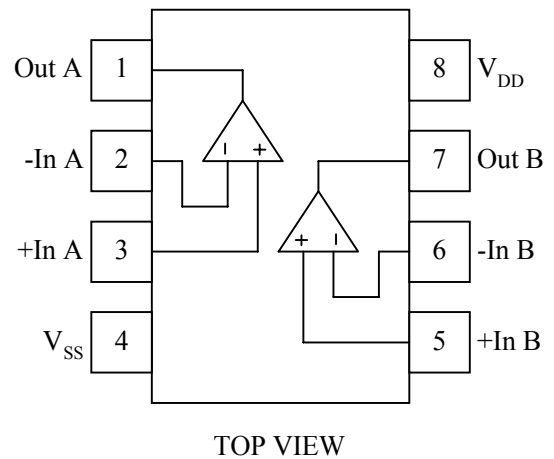
Parameter	Symbol	Value (TYP)	Unit
Operating Voltage Range	$V_{OP}$	1.8 ~ 5.5	V
Supply Current	$I_{SS}$	8.0 $\mu$	A
Maximum Output Voltage	High	$V_{OH}$	2.9 V
	Low	$V_{OL}$	0.1 V
Output Short Circuit Current	Sink	$I_{OS(-)}$	9 m A
	Source	$I_{OS(+)}$	9 m A
Open Loop Voltage Gain	$A_{VO}$	90	dB
Common Mode Rejection Ratio	CMRR	70	dB
Supply Voltage Rejection Ratio	SVRR	65	dB
Gain Bandwidth	GBW	200 k	Hz
Srew Rate	SR	0.05	V/ $\mu$ sec
Operating Temp. Range	$T_{OP}$	-40 ~ +85	$^{\circ}C$

### PACKAGE OUTLINE

- SON-8



### BLOCK DIAGRAM



⚠ Note that the contents are subject to change or discontinuation without notice. When placing orders, please confirm specifications and delivery condition in writing.