

TOSHIBA BIPOLAR LINEAR INTEGRATED CIRCUIT SILICON MONOLITHIC

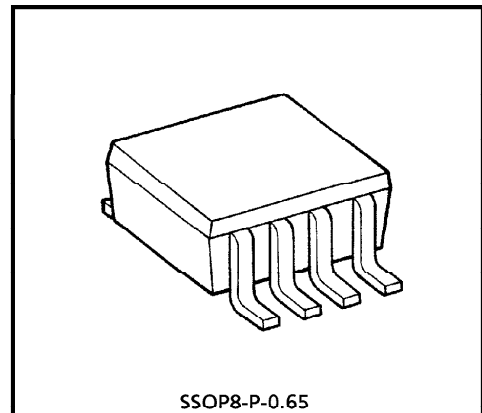
# TA75W558FU

## DUAL OPERATIONAL AMPLIFIER

TA75W558FU is a low-noise monolithic precision operational amplifier.

### FEATURES

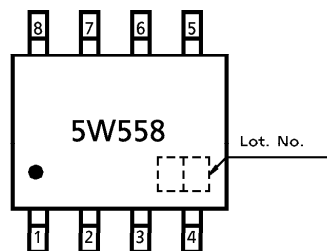
- Internal Frequency Compensation Type.
- Pin Compatible with TA75W01FU.
- Wide Band Range :  $f_T = 3\text{MHz}$  (Typ.)
- Noise Voltage Range :  $V_{NI} = 2.5\mu\text{V}_{\text{rms}}$  (Typ.)
- Power Supply Range :  $\pm 4\text{V}_{\text{DC}}$  to  $\pm 18\text{V}_{\text{DC}}$
- Suitable Application for Active Filter Equalizer Amplifier and Headphone Amplifier.



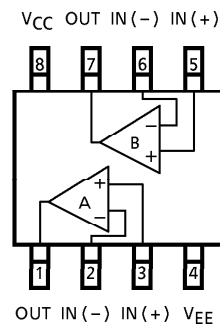
SSOP8-P-0.65

Weight : 0.021g (Typ.)

### MARKING (TOP VIEW)



### PIN CONNECTION (TOP VIEW)



961001EBA2

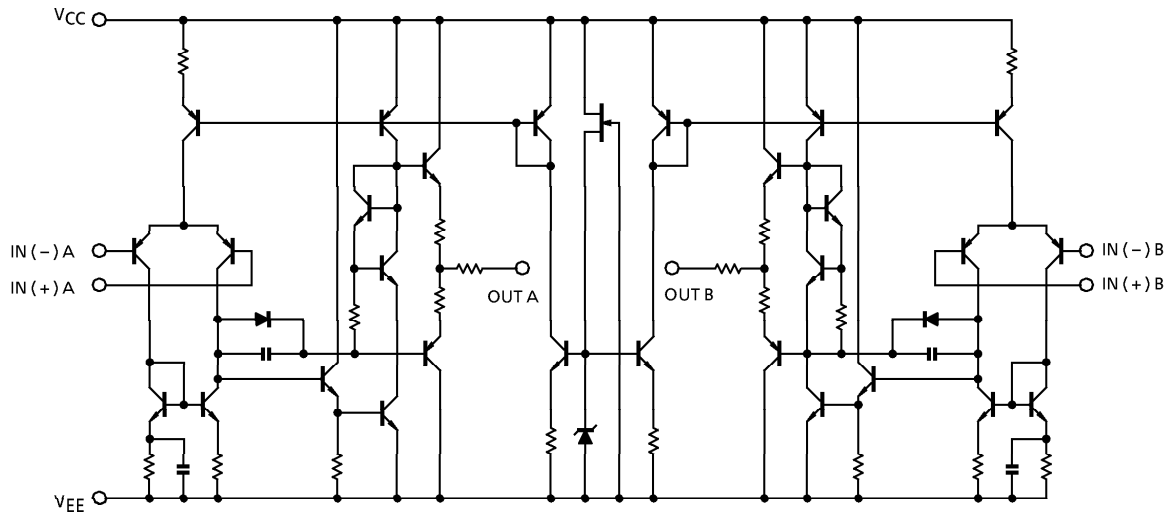
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**EQUIVALENT CIRCUIT**



**MAXIMUM RATINGS (Ta = 25°C)**

CHARACTERISTIC	SYMBOL	RATING	UNIT
Supply Voltage	V <sub>CC</sub> , V <sub>EE</sub>	± 18	V
Differential Input Voltage	DV <sub>IN</sub>	± 30	V
Input Voltage	V <sub>IN</sub>	V <sub>EE</sub> ~V <sub>CC</sub>	V
Power Dissipation	P <sub>D</sub>	250	mW
Operating Temperature	T <sub>opr</sub>	- 40~85	°C
Storage Temperature	T <sub>stg</sub>	- 55~125	°C

ELECTRICAL CHARACTERISTICS ( $V_{CC} = 15V$ ,  $V_{EE} = -15V$ ,  $T_a = 25^\circ C$ )

CHARACTERISTICS	SYMBOL	TEST CIR-CUIT	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Input Offset Voltage	$V_{IO}$	—	$R_g \leq 10k\Omega$	—	0.5	6	mV
Input Offset Current	$I_{IO}$	—	—	—	5	200	nA
Input Bias Current	$I_I$	—	—	—	60	500	nA
Common Mode Input Voltage	$CMV_{IN}$	—	—	$\pm 12$	$\pm 14$	—	V
Maximum Output Voltage	$V_{OM}$	—	$R_L = 10k\Omega$	$\pm 12$	$\pm 14$	—	V
	$V_{OMR}$	—	$R_L = 2k\Omega$	$\pm 10$	$\pm 13$	—	
Source Current	$I_{source}$	—	—	—	40	—	mA
Sink Current	$I_{sink}$	—	—	—	40	—	mA
Voltage Gain (Open Loop)	$G_V$	—	$V_{OUT} = \pm 10V$ , $R_L = 2k\Omega$	86	100	—	dB
Common Mode Input Signal Rejection Ratio	CMRR	—	$R_g \leq 10k\Omega$	70	90	—	dB
Supply Voltage Rejection Ratio	SVRR	—	$R_g \leq 10k\Omega$	—	30	150	$\mu V/V$
Slew Rate	SR	—	$G_V = 1$ , $R_L = 2k\Omega$	—	1.0	—	V / $\mu s$
Unity Gain Cross Frequency	$f_T$	—	—	—	3.0	—	MHz
Supply Current	$I_{CC}$	—	—	—	4.0	6.0	mA
Equivalent Input Noise Voltage	$V_{NI}$	—	$R_S = 1k\Omega$ , $f = 30Hz \sim 30kHz$	—	2.5	—	$\mu V_{rms}$

