TOSHIBA BIPOLAR LINEAR INTEGRATED CIRCUIT SILICON MONOLITHIC

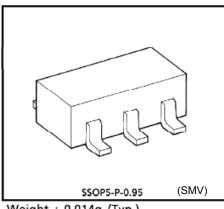
T A 7 5 S 5 5 8 F

Single Low-Noise Operational Amplifier

TA75S558F is a low-noise monolithic precision operational amplifier.

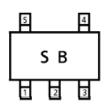
Features

- Internal Frequency Compensation Type.
- Pin Compatible with TA75S01F.
- Wide Band Range : f_T = 3MHz (Typ.)
- Noise Voltage Range : V_{NI} = 2.5µV_{rms} (Typ.)
- Power Supply Range : ±4V_{DC} to ±18V_{DC}
- Suitable Application for Active Filter Equalizer Amplifier and Headphone Amplifier.

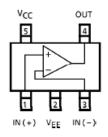


Weight: 0.014g (Typ.)

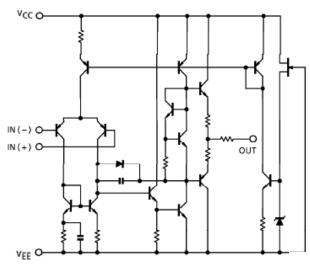
Marking (TOP VIEW)



Pin Assignment (TOP VIEW)



Equivalent Circuit



Start of commercial production 1992-03

Absolute Maximum Ratings (Ta=25°C)

CHARACTERISTIC	SYMBOL	RATING	UNIT
Supply Voltage	VCC, VEE	± 18	V
Differential Input Voltage	DVIN	± 30	V
Input Voltage	VIN	V _{EE} ~V _{CC}	V
Power Dissipation	PD	200	mW
Operating Temperature	Topr	- 40~~85	°C
Storage Temperature	T _{stg}	- 55~125	°C

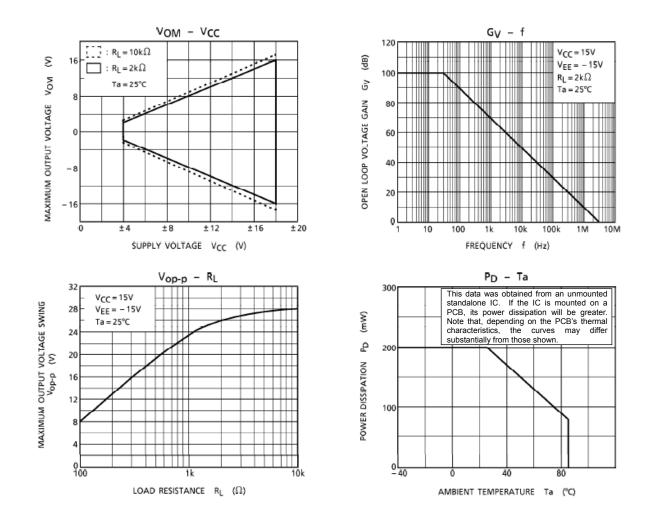
Note: Using continuously under heavy loads (e.g. the application of high temperature/current/voltage and the significant change in temperature, etc.) may cause this product to decrease in the reliability significantly even if the operating conditions (i.e. operating temperature/current/voltage, etc.) are within the absolute maximum ratings and the operating ranges.

Please design the appropriate reliability upon reviewing the Toshiba Semiconductor Reliability Handbook ("Handling Precautions"/"Derating Concept and Methods") and individual reliability data (i.e. reliability test report and estimated failure rate, etc).

Electrical Characteristics (V_{CC} = 15 V, V_{EE} = -15V, Ta=25°C)

CHARACTERISTIC	SYMBOL	TEST CIR- CUIT	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Input Offset Voltage	VIO	-	Rg≦10kΩ	—	0.5	6	mV
Input Offset Current	^I IO	—	—	—	5	200	nA
Input Bias Current	Ч	-	—	—	60	500	nA
Common Mode Input Voltage	CMVIN	—	_	± 12	± 14	_	v
Maximum Output Voltage	∨ом	-	$R_L = 10k\Omega$	± 12	±14	—	v
	VOMR	—	$R_L = 2k\Omega$	± 10	±13	—	
Source Current	Isource	—	—	—	40	—	mA
Sink Current	l _{sink}	—	—	_	40	_	mA
Voltage Gain (Open Loop)	Gv	—	$V_{OUT} = \pm 10V, R_L = 2k\Omega$	86	100	—	dB
Common Mode Input Signal Rejection Ratio	CMRR	-	Rg≤10kΩ	70	90	_	dB
Supply Voltage Rejection Ratio	SVRR	-	Rg≦10kΩ	_	30	150	μV/V
Slew Rate	SR	-	$G_V = 1$, $R_L = 2k\Omega$	_	1.0	_	V/μs
Unity Gain Cross Frequency	fT	—	_	—	3.0	—	MHz
Supply Current	lcc	—	—	—	2.5	4.0	mA
Equivalent Input Noise Voltage	V _{NI}	_	$R_s = 1k\Omega$, f = 30Hz~30kHz	_	2.5	_	μV _{rms}

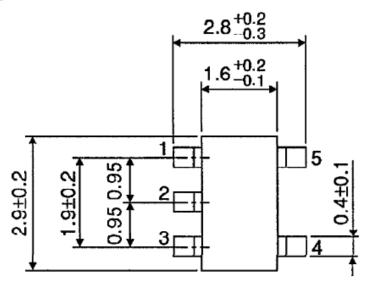
TOSHIBA

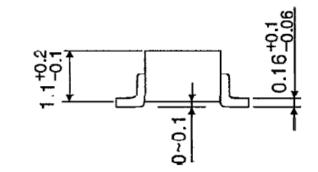


Package Dimension

SSOP5-P-0.95

Unit : mm





Weight : 0.014g (Typ.)

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