AN1741 (AN6570), AN1741S (AN6570S), AN6573

Single Operational Amplifiers

■ Overview

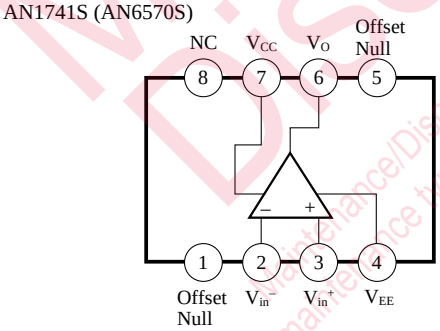
The AN1741(AN6570), the AN1741S (AN6570S), and the AN6573 are single-type operational amplifier with a phase compensation circuit built-in and also an output short-circuit protection circuit built-in, so that they are highly stable and can be used widely in various electronic circuits

■ Features

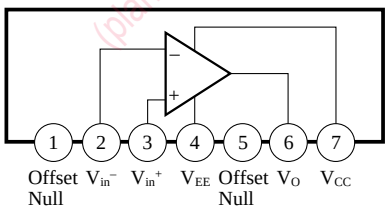
- Phase compensation circuit built-in
- High common mode input range, no latch-up
- Short circuit protection
- Low input offset voltage:$V_{I\,(offset)}$= 0.5mV typ.
- Low input offset current:I_{IO}=10nA typ.
- Offset null circuit

■ Block Diagram

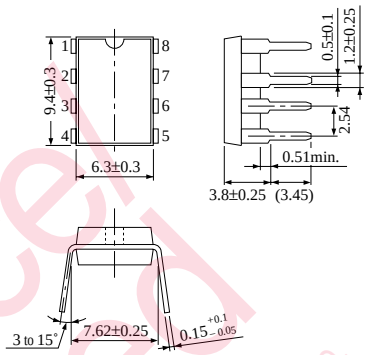
AN1741 (AN6570)
AN1741S (AN6570S)



AN6573

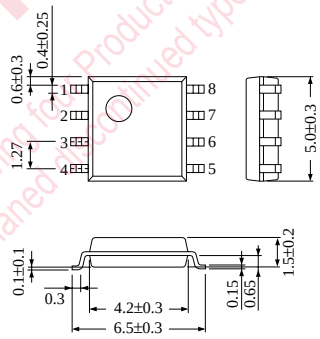


AN1741 (AN6570) Unit:mm



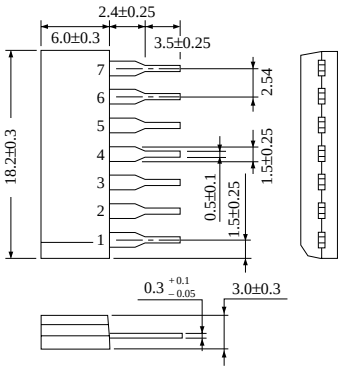
8-pin DIL Plastic Package (DIP008-P-0300B)

AN1741S (AN6570S) Unit:mm



8-pin PANAFLAT Plastic Package (SOP008-P-0225A)

AN6573 Unit:mm



7-pin SIL Plastic Package (SIP007-P-0000)

■ Pin Descriptions

〈AN1741 (AN6570), AN1741S (AN6570S)〉

Pin No.	Pin name
1	Offset Null
2	inverting input
3	Non inverting input
4	V_{EE}
5	Offset Null
6	Output
7	V_{CC}
8	NC

〈AN6573〉

Pin No.	Pin name
1	Offset Null
2	inverting input
3	Non inverting input
4	V_{EE}
5	Offset Null
6	Output
7	V_{CC}

■ Absolute Maximum Ratings (Ta=25˚C)

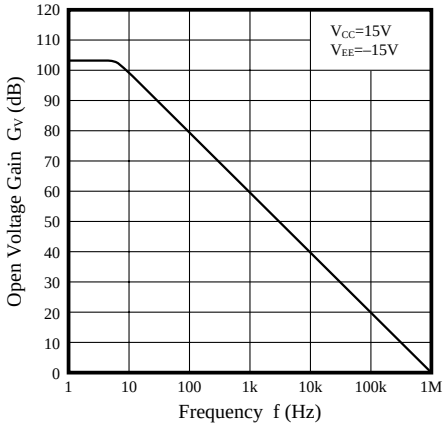
Parameter		Symbol	Rating	Unit
Voltage	Supply voltage	V_{CC}	±18	V
	Differential input voltage	V_{ID}	±30	V
	Common-mode input voltage	V_{ICM}	±15	V
Power dissipation	AN1741 (AN6570), AN6573	P_D	500	mW
	AN1741S (AN6570S)		360	
Operating ambient temperature		T_{opr}	–20 to +75	˚C
Storage temperature	AN1741 (AN6570), AN6573	T_{stg}	–55 to +150	˚C
	AN1741S (AN6570S)		–55 to +125	

■ Electrical Characteristics (V_{CC}=15V, V_{EE}=–15V, Ta=25˚C)

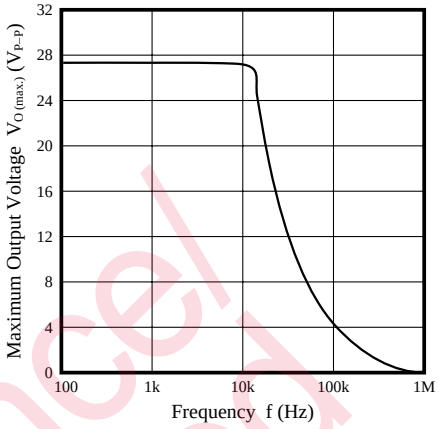
Parameter	Symbol	Condition	min	typ	max	Unit
Input offset voltage	$V_{I\ (offset)}$	R_S≧10kΩ	—	0.5	4	mV
Input offset current	I_{IO}		—	10	100	nA
Input bias current	I_{bias}		—	50	250	nA
Voltage gain	G_V	R_L≧2kΩ, V_O=±10V	86	106	—	dB
Maximum output voltage	$V_{O\ (max.)}$	R_L≧10kΩ	±12	±14	—	V
		R_L≧2kΩ	±10	±13	—	V
Common-mode input voltage width	V_{CM}		±12	±13	—	V
Common-mode rejection ratio	CMR	R_S≧10kΩ	70	90	—	dB
Supply voltage rejection ratio	SVR	R_S≧10kΩ	—	30	150	µV/V
Supply current	I_{CC}	R_L=∞	—	—	2.8	mA
Power consumption	P_C	R_L=∞	—	—	85	mW
Output short-circuit current	$I_{O\ (short)}$		—	±20	—	mA
Slew rate	SR		—	0.7	—	V/µs

■ Characteristics Curve

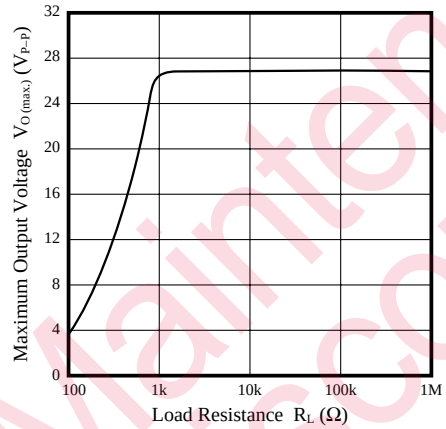
G_V–f



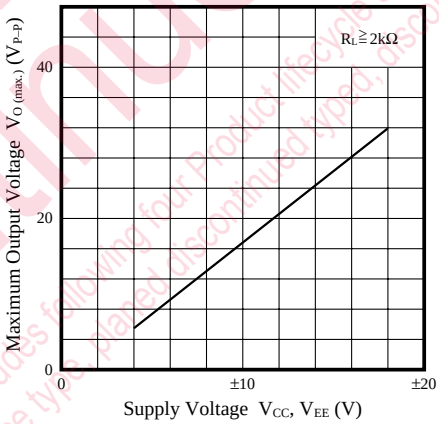
$V_{O\,(max.)}$–f



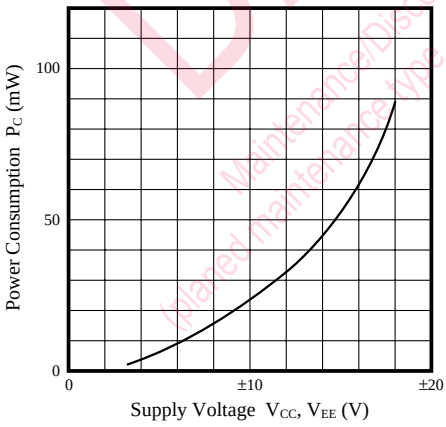
$V_{O\,(max.)}$–R_L



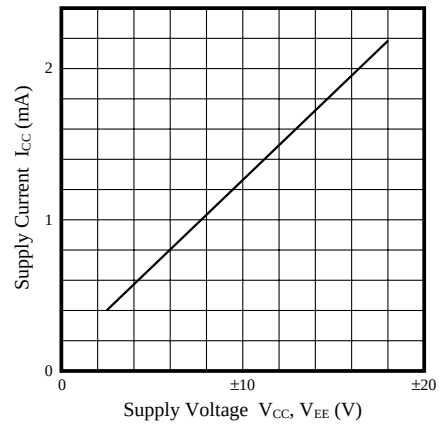
$V_{O\,(max.)}$–V_{CC}, V_{EE}



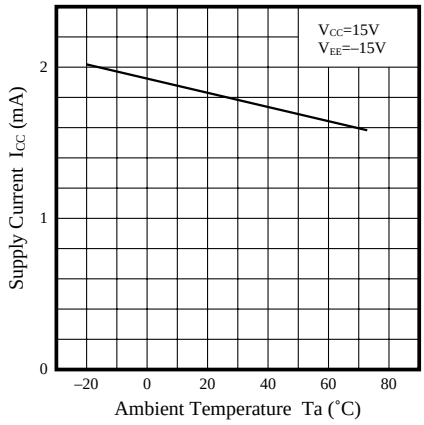
P_C–V_{CC}, V_{EE}



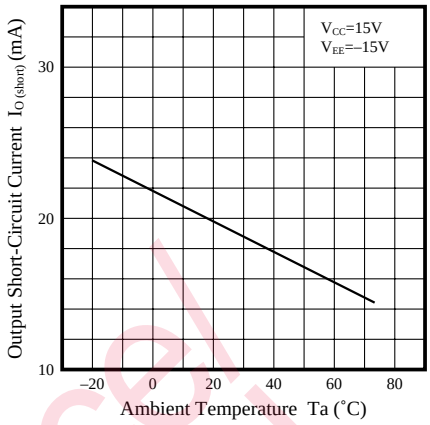
I_{CC}–V_{CC}, V_{EE}



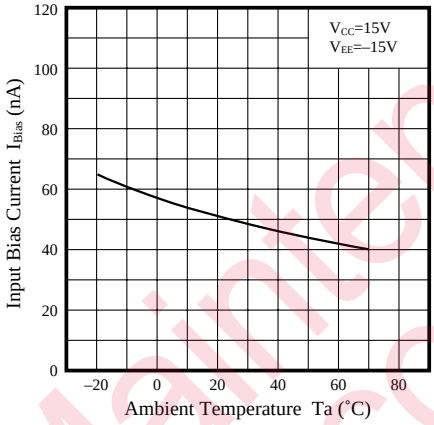
I_{CC}–Ta



$I_{O\ (short)}$–Ta

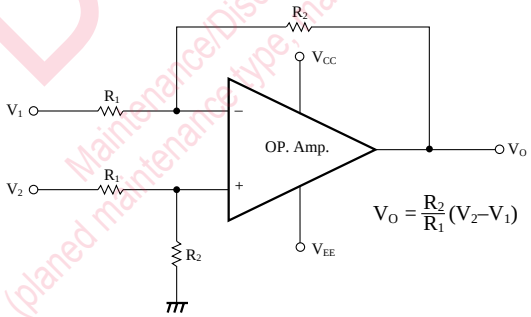


I_{Bias}–Ta



■ Application Circuit

Differential Amplifier



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