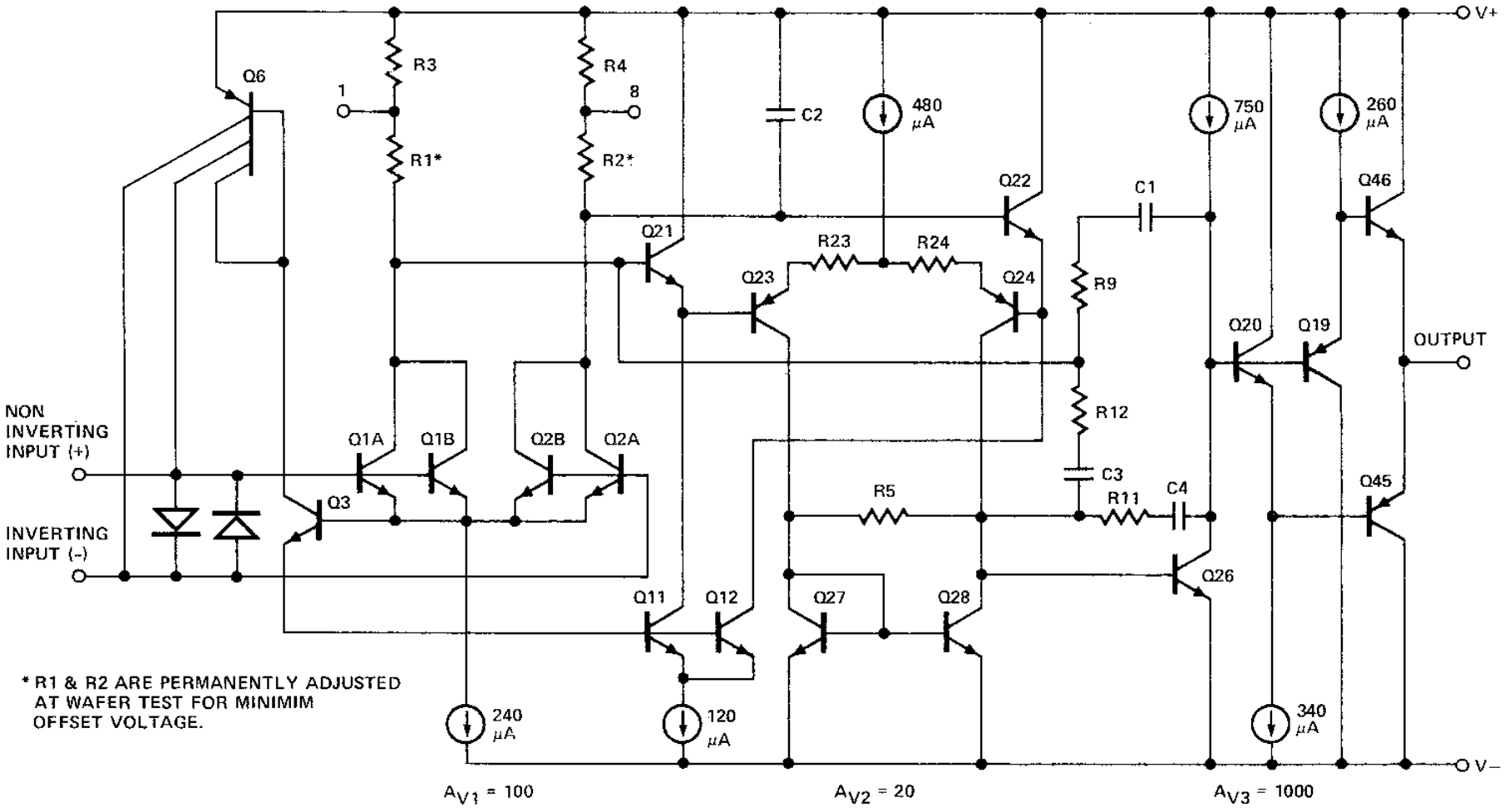
Rauscharmer Operationsverstärker OP-27



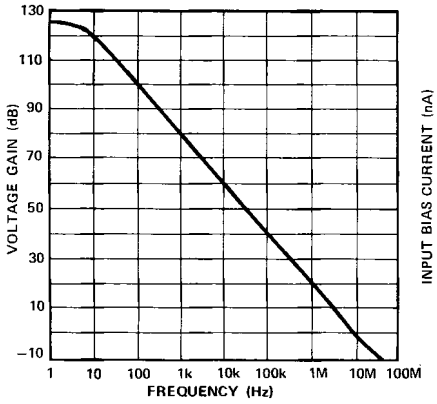
* R1 & R2 ARE PERMANENTLY ADJUSTED AT WAFER TEST FOR MINIMIM OFFSET VOLTAGE.

ELECTRICAL CHARACTERISTICS at $V_S = \pm 15V$, $T_A = 25°C$, unless otherwise noted.

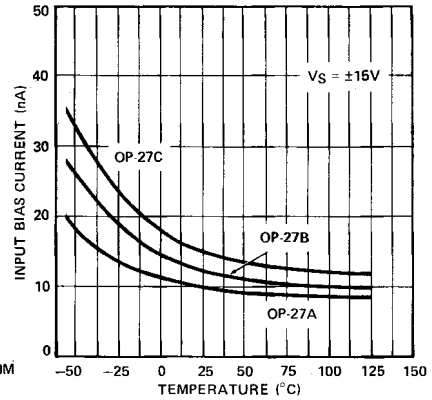
PARAMETER	SYMBOL	CONDITIONS	OP-27A/E MIN	TYP	MAX	UNITS
Input Offset Voltage	V_{OS}	(Note 1)	–	10	25	μV
Long Term V_{OS} Stability	$\frac{V_{OS}}{Time}$	(Note 2)	–	0.2	1.0	μV/Mo
Input Offset Current	I_{OS}		–	7	35	nA
Input Bias Current	I_B		–	±10	±40	nA
Input Noise Voltage	e_{np-p}	0.1Hz to 10Hz	–	0.08	0.18	μVp-p
Input Noise Voltage Density	e_n	f_o = 10Hz (Note 3)	–	3.5	5.5	nV/√Hz
		f_o = 30Hz (Note 3)	–	3.1	4.5	
		f_o = 1000Hz (Note 3)	–	3.0	3.8	
Input Noise Current Density	I_n	f_o = 10Hz (Note 3, 6)	–	1.7	4.0	pA/√Hz
		f_o = 30Hz (Note 3, 6)	–	1.0	2.3	
		f_o = 1000Hz (Note 3, 6)	–	0.4	0.6	
Input Voltage Range	IVR		±11.0	±12.3	–	V
Common Mode Rejection Ratio	CMRR	$V_{CM} = \pm 11V$	114	126	–	dB
Power Supply Rejection Ratio	PSSR	$V_S = \pm 4V$ to $\pm 18V$	100	120	–	dB
Large Signal Voltage Gain	A_{VO} R_L= 600Ω,	$R_L \geq 2k\Omega$, $V_O = \pm 10V$	1000	1800	–	V/mV
		$R_L \geq 1k\Omega$, $V_O = \pm 10V$	800	1500	–	
		$V_O = \pm 1V$, $V_S = \pm 4V$	250	700	–	
Maximum Output Voltage Swing	V_{OM}	$R_L \geq 2k\Omega$	±12.0	±13.8	–	V
		$R_L \geq 600\Omega$	±10.0	±11.5	–	
Slew Rate	SR	$R_L \geq 2k\Omega$ (Note 4)	1.7	2.8	–	V/μS
Gain Bandwidth Prod.	GBW	(Note 4)	5.0	8.0	–	MHz
Open Loop Output Resistance	R_O	$V_O = 0$, $I_O = 0$	–	70	–	Ω
Power Consumption	P_d		–	90	140	mW
Offset Adjustment Range		$R_P = 10k\Omega$	–	±4.0	–	mV

TYPICAL PERFORMANCE CURVES

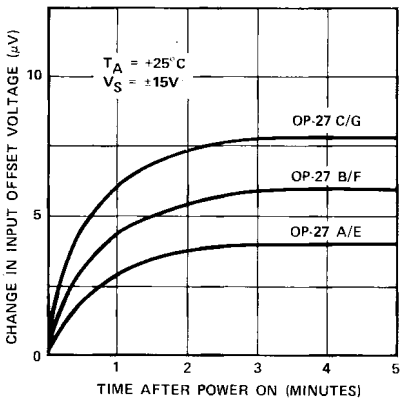
OPEN LOOP GAIN vs FREQUENCY



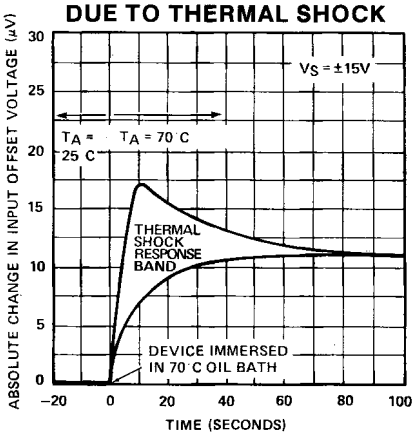
INPUT BIAS CURRENT vs TEMPERATURE



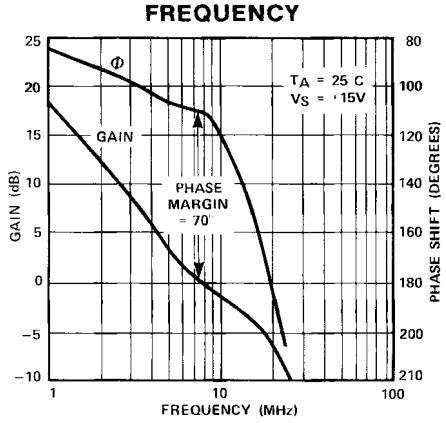
WARM-UP DRIFT



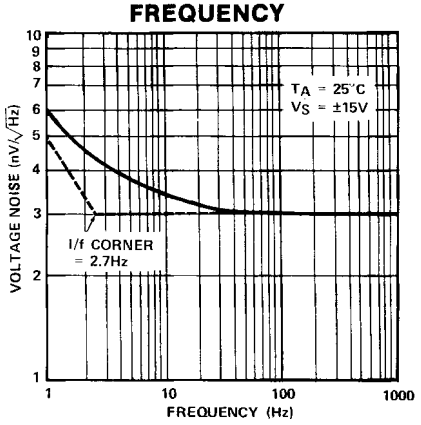
OFFSET VOLTAGE CHANGE DUE TO THERMAL SHOCK



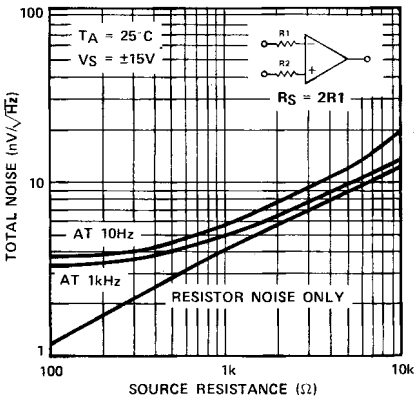
GAIN, PHASE SHIFT vs FREQUENCY



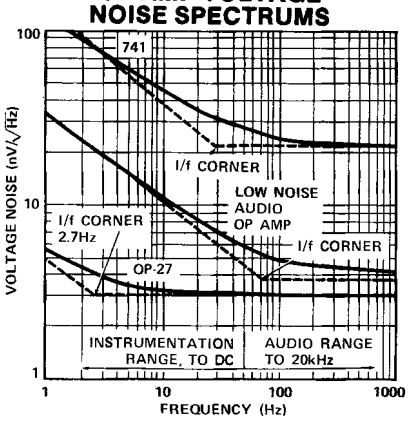
OP-27 VOLTAGE NOISE vs FREQUENCY



TOTAL NOISE vs SOURCE RESISTANCE



A COMPARISON OF OP AMP VOLTAGE NOISE SPECTRUMS



CURRENT NOISE vs FREQUENCY