Absolute Maximum Ratings

Supply Voltage (Between V+ and V- Terminal) 36V
Differential Input Voltage . . . . . 5V Input Voltage . . . . . V+ to V- Input Signal Current. . . . . 1mA Ampli?er Bias Current (I_{ABC}) 2mA

Output Short Circuit Duration (Note 1). . . . . No Limitation

Operating Conditions

Temperature Range
MR0832 . . . . . 0 ^{O}C to 70 ^{O}C
MR0832A . . . . . -55 ^{O}C to 125 ^{O}C

Thermal Information

Thermal Resistance (Typical, Note 2)	θ_{JA} (^{O}C/W)	θ_{JC} (^{O}C/W)
PDIP Package	130	N/A
SOIC Package	170	N/A
Metal Can Package	200	120

Maximum Junction Temperature (Metal Can). . . . . 175 ^{O}C
Maximum Junction Temperature (Plastic Package) . . . . . 150 ^{O}C
Maximum Storage Temperature Range. . . . . -65 ^{O}C to 150 ^{O}C
Maximum Lead Temperature (Soldering 10s) . . . . . 300 ^{O}C
(SOIC - Lead Tips Only)

CAUTION: Stresses above those listed in "Absolute Maximum Ratings" may cause permanent damage to the device. This is a stress only rating and operation of the device at these or any other conditions above those indicated in the operational sections of this speci?cation is not implied.

NOTES:

1. Short circuit may be applied to ground or to either supply.
2. θ_{JA} is measured with the component mounted on an evaluation PC board in free air.

Electrical Specifications

For Equipment Design, V_{SUPPLY} = ±15V, Unless Otherwise Speci?ed

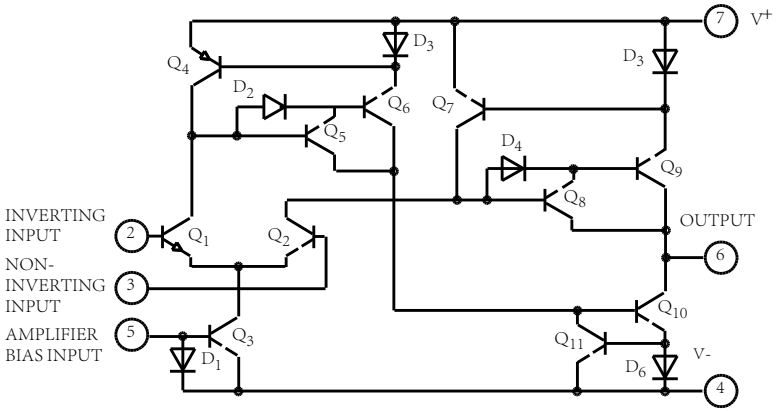
PARAMETER		TEST CONDITIONS	TEMP	MR0832			MR0832A			UNITS
				MIN	TYP	MAX	MIN	TYP	MAX	
Input Offset Voltage		I_{ABC} = 5∝A	25	-	0.3	-	-	0.3	2	mV
		I_{ABC} = 500∝A	25	-	0.4	5	-	0.4	2	mV
			Full	-	-	6	-	-	5	mV
Input Offset Voltage Change		I_{ABC} = 500∝A to 5∝A	25	-	0.2	-	-	0.1	3	mV
Input Offset Voltage Temp. Drift		I_{ABC} = 100∝A	Full	-	-	-	-	3.0	-	∝V/^{O}C
Input Offset Voltage Sensitivity	Positive	I_{ABC} = 500∝A	25	-	-	150	-	-	150	∝V/V
	Negative		25	-	-	150	-	-	150	∝V/V
Input Offset Current		I_{ABC} = 500∝A	25	-	0.12	0.6	-	0.12	0.6	∝A
Input Bias Current		I_{ABC} = 500∝A2	5	-	2	5	-	2	5	∝A
			Full	-	-	7	-	-	15	∝A
Differential Input Current		I_{ABC} = 0, V_{DIFF} = 4V	25	-	0.008	-	-	0.008	5	nA
Amplifier Bias Voltage		I_{ABC} = 500∝A	25	-	0.71	-	-	0.71	-	V
Input Resistance		I_{ABC} = 500∝A	25	10	26	-	10	26	-	kΩ
Input Capacitance		I_{ABC} = 500∝A, f = 1MHz	25	-	3.6	-	-	3.6	-	pF
Input-to-Output Capacitance		I_{ABC} = 500∝A, f = 1MHz	25	-	0.024	-	-	0.024	-	pF
Common-Mode Input-Voltage Range		I_{ABC} = 500∝A	25	12 to -12	13.6 to -14.6	-	12 to -12	13.6 to -14.6	-V	
Forward Transconductance (Large Signal)		I_{ABC} = 500∝A	25	6700	9600	13000	7700	9600	12000	∝S
			Full	5400	-	-	4000	-	-	∝S
Output Capacitance		I_{ABC} = 500∝A, f = 1MHz	25	-	5.6	-	-	5.6	-	pF
Output Resistance		I_{ABC} = 500∝A	25	-	15	-	-	15	-	MΩ
Peak Output Current		I_{ABC} = 5∝A, R_L = 0Ω	25	-	5	-	3	5	7	∝A
		I_{ABC} = 500∝A, R_L = 0Ω	25	350	500	650	350	500	650	∝A
			Full	300	-	-	300	-	-	∝A

Electrical Specifications

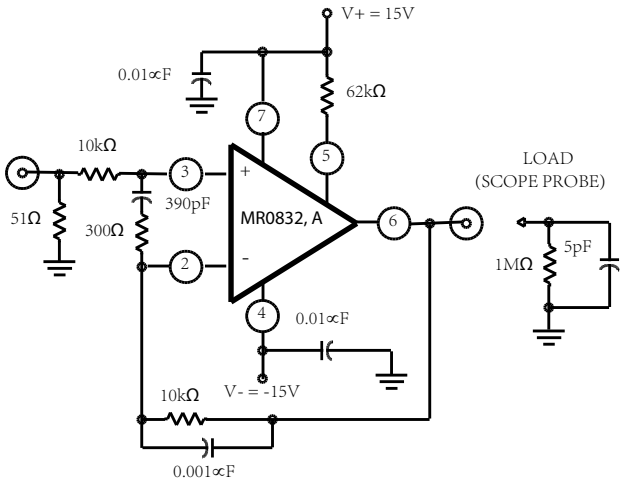
For Equipment Design, V_{SUPPLY} = ±15V, Unless Otherwise Speci?ed (Continued)

PARAMETER		TEST CONDITIONS	TEMP	MR0832			MR0832A			UNITS
				MIN	TYP	MAX	MIN	TYP	MAX	
Peak Output Voltage	Positive	I_{ABC}= 5∝A, R_L= ∞	25	-	13.8	-	12	13.8	-	V
	Negative		25	-	-14.5	-	-12	-14.5	-	V
	Positive	I_{ABC}= 500∝A, R_L= ∞	25	12	13.5	-	12	13.5	-	V
	Negative		25	-12	-14.4	-	-12	-14.4	-	V
Amplifier Supply Current		I_{ABC}= 500∝A	25	0.8	1	1.2	0.8	1	1.2	mA
Device Dissipation		I_{ABC}= 500∝A2	5	24	30	36	24	30	36	mW
Magnitude of Leakage Current		I_{ABC} = 0, V_{TP} = 0	25	-	0.08	-	-	0.08	5	nA
		I_{ABC} = 0, V_{TP} = 36V	25	-	0.3	-	-	0.3	5	nA
Propagation Delay		I_{ABC}= 500∝A	25	-	45	-	-	45	-	ns
Common-Mode Rejection Ratio		I_{ABC}= 500∝A	25	80	110	-	80	110	-	dB
Open-Loop Bandwidth		I_{ABC}= 500∝A	25	-	2	-	-	2	-	MHz
Slew Rate		Uncompensated	25	-	75	-	-	75	-	V/∝s
		Compensated	25	-	50	-	-	50	-	V/∝s

Schematic Diagram



Typical Applications



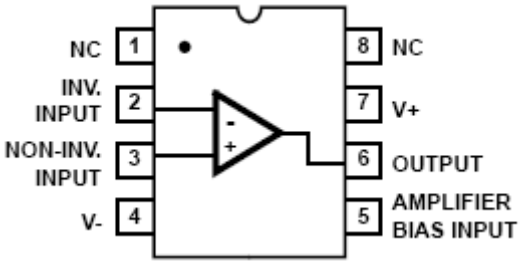


FIGURE 1. SCHEMATIC DIAGRAM OF THE MR0832AND MR0832A IN A UNITY-GAIN VOLTAGE FOLLOWER CONFIGURATION AND ASSOCIATED WAVEFORM

Typical Performance Curves (Continued)

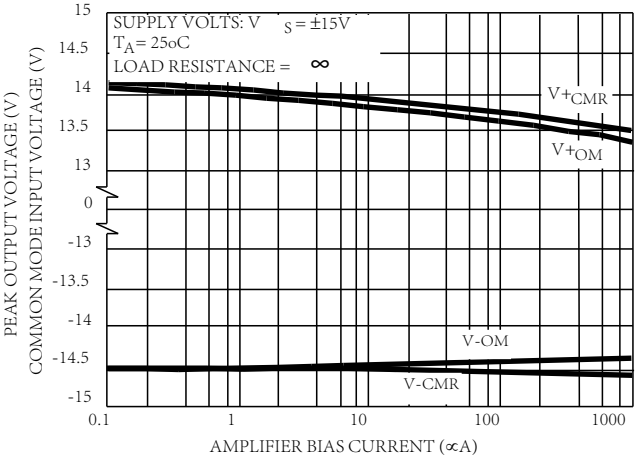


FIGURE 18. PEAK OUTPUT VOLTAGE vs AMPLIFIER BIAS CURRENT

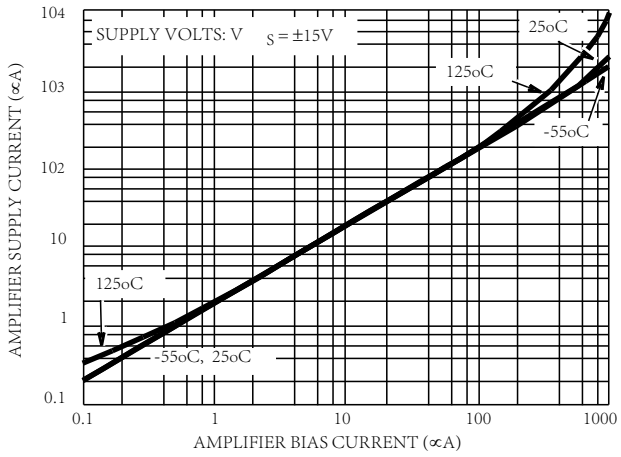


FIGURE 19. AMPLIFIER SUPPLY CURRENT vs AMPLIFIER BIAS CURRENT

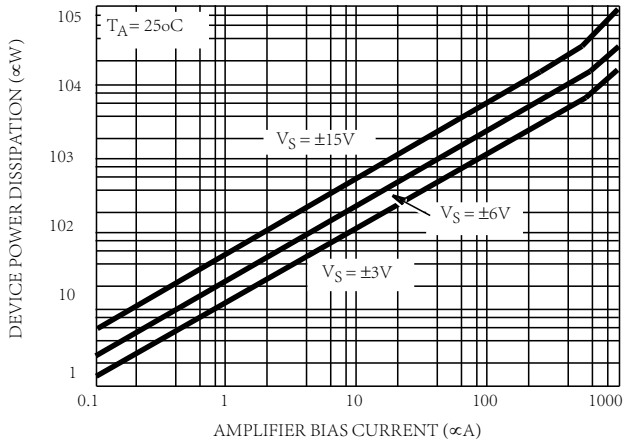


FIGURE 20. TOTAL POWER DISSIPATION vs AMPLIFIER BIAS CURRENT

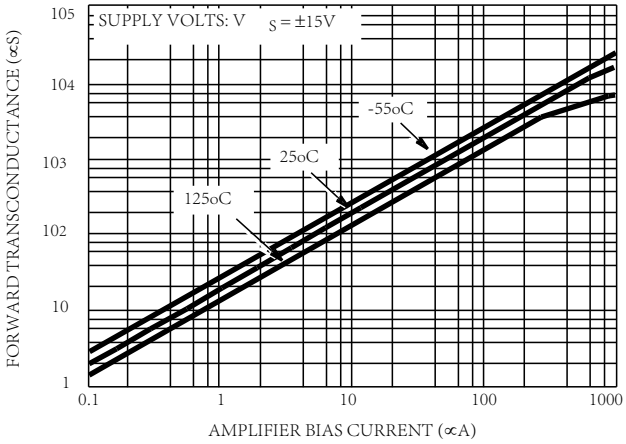


FIGURE 21. TRANSCONDUCTANCE vs AMPLIFIER BIAS CURRENT

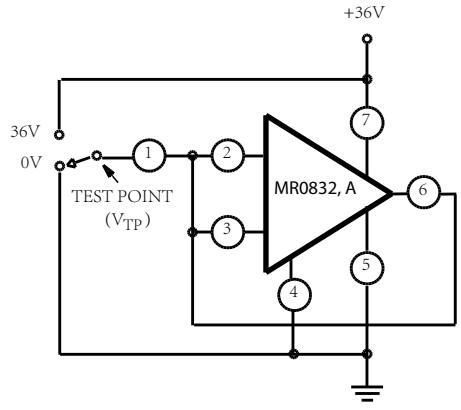


FIGURE 22. LEAKAGE CURRENT TEST CIRCUIT

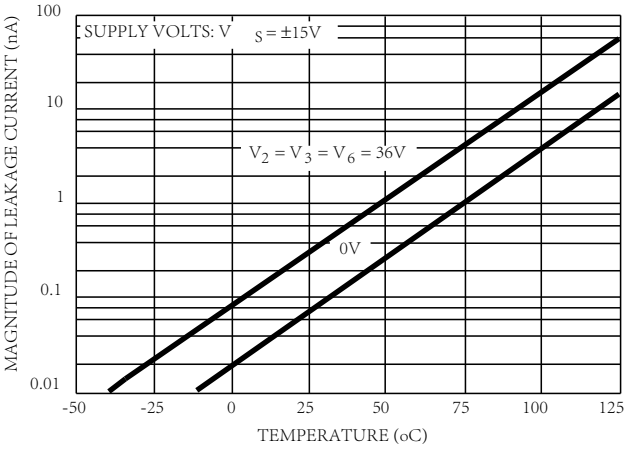


FIGURE 23. LEAKAGE CURRENT vs TEMPERATURE

Typical Performance Curves (Continued)

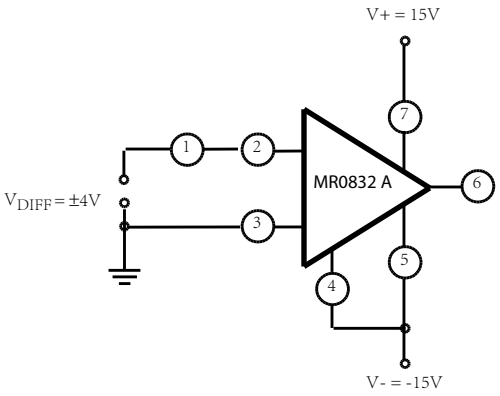


FIGURE 24. DIFFERENTIAL INPUT CURRENT TEST CIRCUIT

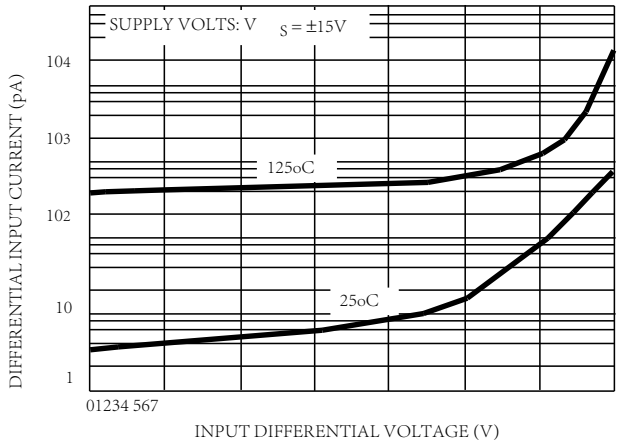


FIGURE 25. INPUT CURRENT vs INPUT DIFFERENTIAL VOLTAGE

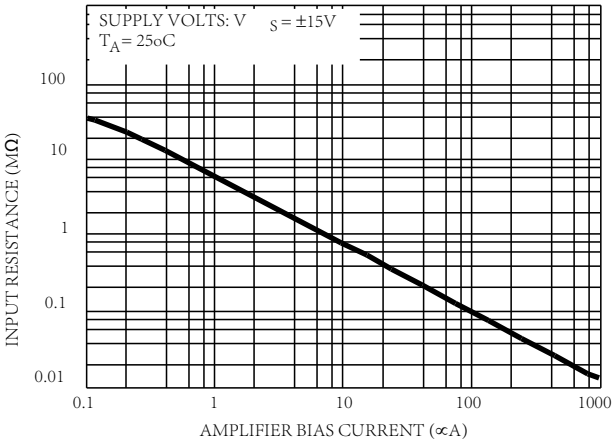


FIGURE 26. INPUT RESISTANCE vs AMPLIFIER BIAS CURRENT

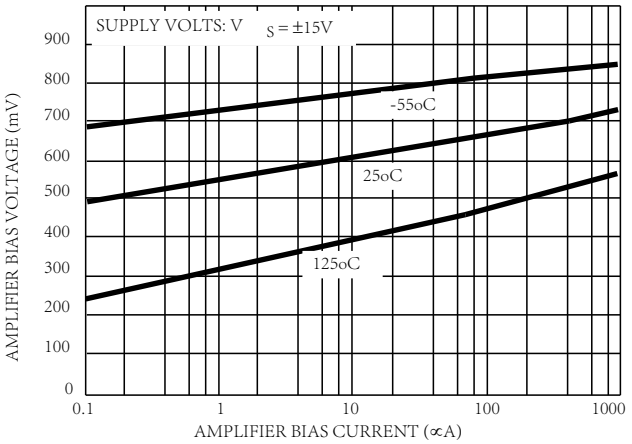


FIGURE 27. AMPLIFIER BIAS VOLTAGE vs AMPLIFIER BIAS CURRENT

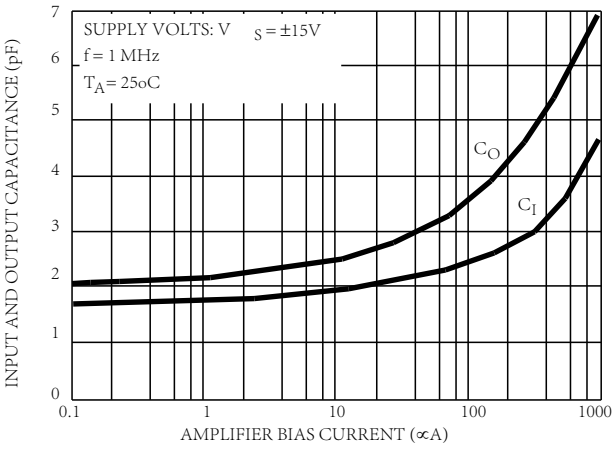


FIGURE 28. INPUT AND OUTPUT CAPACITANCE vs AMPLIFIER BIAS CURRENT

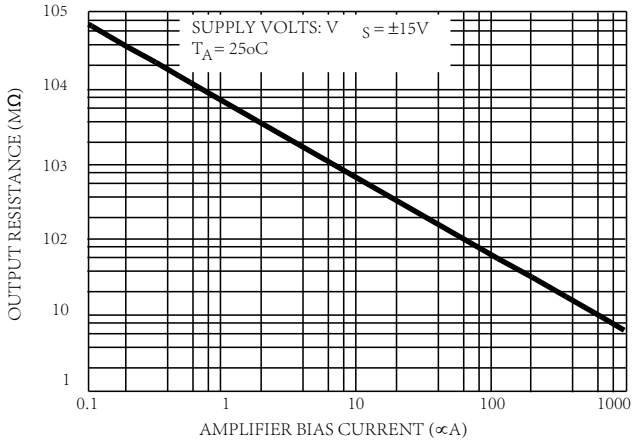
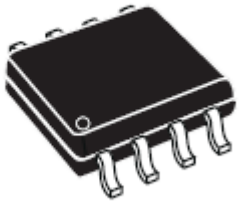


FIGURE 29. OUTPUT RESISTANCE vs AMPLIFIER BIAS CURRENT

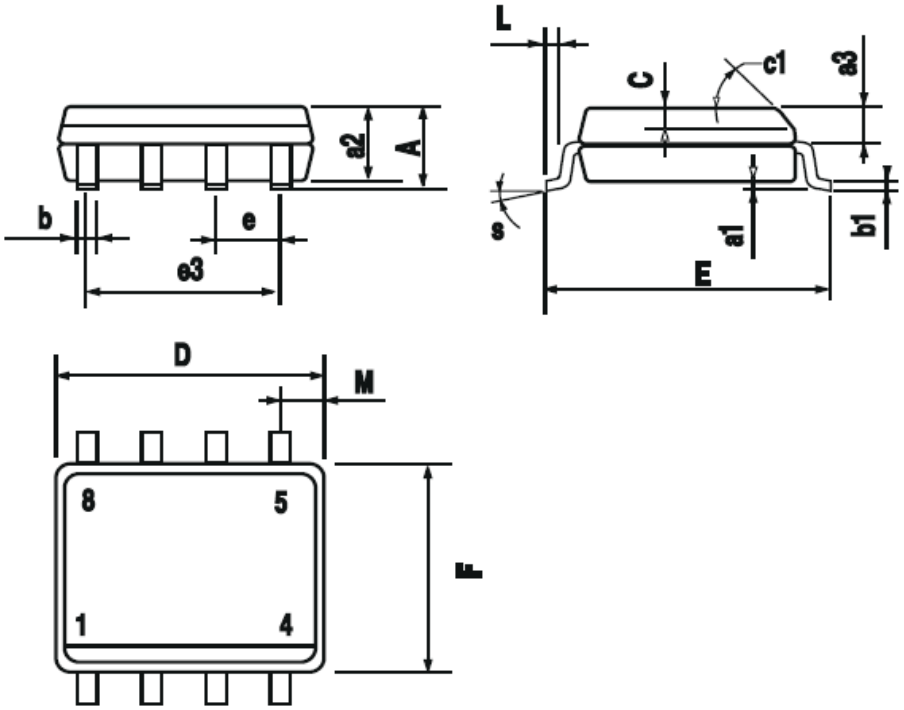
DIM.	mm			inch		
	MIN.	TYP.	MAX.	MIN.	TYP.	MAX.
A			1.75			0.069
a1	0.1		0.25	0.004		0.010
a2			1.65			0.065
a3	0.65		0.85	0.026		0.033
b	0.35		0.48	0.014		0.019
b1	0.19		0.25	0.007		0.010
C	0.25		0.5	0.010		0.020
c1	45° (typ.)					
D (1)	4.8		5.0	0.189		0.197
E	5.8		6.2	0.228		0.244
e		1.27			0.050	
e3		3.81			0.150	
F (1)	3.8		4.0	0.15		0.157
L	0.4		1.27	0.016		0.050
M			0.6			0.024
S8	° (max.)					

(1) D and F do not include mold flash or protrusions. Mold flash or potrusions shall not exceed 0.15mm (.006inch).

OUTLINE AND
MECHANICAL DATA



SO8



DIM.	mm			inch		
	MIN.	TYP.	MAX.	MIN.	TYP.	MAX.
A		3.32			0.131	
a1	0.51			0.020		
B	1.15		1.65	0.045		0.065
b	0.356		0.55	0.014		0.022
b1	0.204		0.304	0.008		0.012
D			10.92			0.430
E	7.95		9.75	0.313		0.384
e		2.54			0.100	
e3		7.62			0.300	
e4		7.62			0.300	
F			6.6			0.260
I			5.08			0.200
L	3.18		3.81	0.125		0.150
Z			1.52			0.060

OUTLINE AND
MECHANICAL DATA



Minidip

