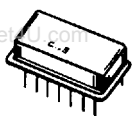
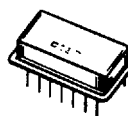




238



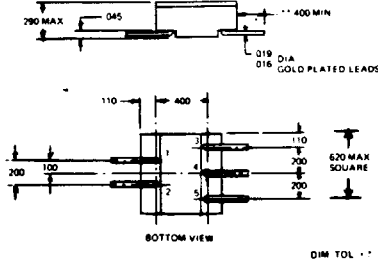
438

**FET Input Models**  
**C-438 & M-438**  
**C-238 & M-238**

**FET Input Models**  
**C-418 & M-418**

Conditions	Min.	Typ.	Max.	Conditions	Min.	Typ.	Max.
$R_L = 500\Omega$	$\pm 10\text{ V}$				$\pm 10\text{ V}$		
$R_L = 500\Omega$	$\pm 20\text{ mA}$				$\pm 5\text{ mA}$		
$R_L = 500\Omega$	90 db	100 db		Rated Load 2K	25,000	100,000	
Small Signal	10 MHz	12 MHz		Small Signal	0.5 MHz	1.0 MHz	
Large Signal	800 KHz	1,000 KHz		Large Signal	8.0 KHz	10.0 KHz	
Fig. 1A	50 V/ $\mu\text{sec.}$	80 V/ $\mu\text{sec.}$			0.5 V/ $\mu\text{sec.}$	1.0 V/ $\mu\text{sec.}$	
Fig. 2A	2 $\mu\text{sec.}$	1 $\mu\text{sec.}$			—	—	
		800 pF			—	—	
	$\pm 10\text{ V}$		$\pm 15\text{ V}$		$\pm 10\text{ V}$		$\pm 15\text{ V}$
Between Inputs			30 V	Between Inputs			30 V
@ 10V	86 db	96 db				80 db	
		$10^{11} \parallel 4\text{ pf}$			$10^{12} \parallel 3\text{ pf}$		
Either Input		$10^{11} \parallel 4\text{ pf}$		Either Input	$10^{12} \parallel 3\text{ pf}$		
{ Flicker .01 Hz — 2 Hz }		6 $\mu\text{V}$		Broad Band		3 $\mu\text{V}$	
		0.2 pA				3 pA	
{ Broad Band 2 Hz — 10 KHz }		3 $\mu\text{V}$		2 Hz to 10 KHz		3 pA	
		3 pA					
			300 $\mu\text{V/V}$				300 $\mu\text{V/V}$
	$\pm 10\text{ V}$	$\pm 15\text{ V}$	$\pm 22\text{ V}$		$\pm 10\text{ V}$	$\pm 15\text{ V}$	$\pm 18\text{ V}$
		$\pm 9\text{ mA}$				$\pm 2\text{ mA}$	$\pm 3.5\text{ mA}$
		$\pm 30\text{ mA}$					$\pm 8.0\text{ mA}$
	-55°C		+125°C		-55°C		+125°C
	-55°C		+125°C		-55°C		+125°C
Conditions	A	B	C	Conditions	A	B	C
25°C	1	1	2	-25°C	1	1	2
-55°C to +125°C	10	25	50	-55°C to +125°C	10	25	50
+25°C	—	—	—	+25°C	100 fA	100 fA	100 fA
+25°C	5 pA*	5 pA*	10 pA*	+25°C	1000 fA*	1000 fA*	1000 fA*

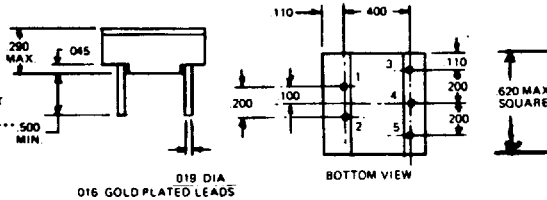
**Models  
C-007 &  
C-008**

- PIN 1: INVERTING INPUT
- PIN 2: NON INVERTING INPUT
- PIN 3: (+) 15 V DC
- PIN 4: (-) 15 V DC
- PIN 5: OUTPUT



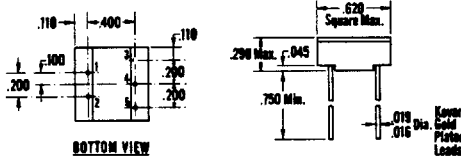
**Models  
C-107 &  
C-108**

- PIN 1: INVERTING INPUT
- PIN 2: NON INVERTING INPUT
- PIN 3: (+) 15 V DC
- PIN 4: (-) 15 V DC
- PIN 5: OUTPUT



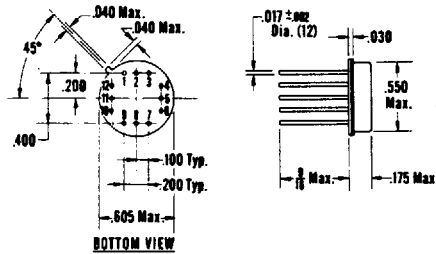
**Model  
C-018 &  
C-118**

- PIN 1: INVERTING INPUT
- PIN 2: NON INVERTING INPUT
- PIN 3: (+) 15 V DC
- PIN 4: (-) 15 V DC
- PIN 5: OUTPUT



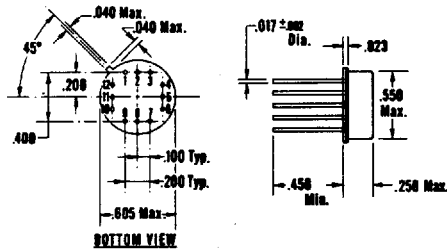
**Model  
C-218 &  
C-228**

- PIN 1: NON INVERTING INPUT
- PIN 2: INVERTING INPUT
- PIN 3: N.C.
- PIN 4: (+) 15 V DC
- PIN 5: TRIM
- PIN 6: (-) 15 V DC
- PIN 7: CASE GROUND
- PIN 8: OUTPUT
- PIN 9: TRIM
- [Other Pins - No Connection]



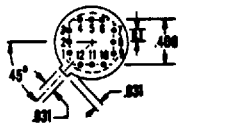
**Model  
C-238**

- PIN 1: (+) INPUT
- PIN 2: (-) INPUT
- PIN 3: N.C.
- PIN 4: (+) 15 V DC
- PIN 6: (-) 15 V DC
- PIN 7: CASE GROUND
- PIN 8: OUTPUT
- PIN 9: DO NOT USE
- PIN 10: DO NOT USE
- PIN 11: N.C.
- PIN 12: N.C.



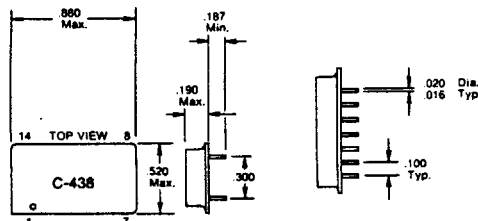
**Models  
C-247 &  
C-248**

- PIN 1: NON INVERTING INPUT
- PIN 2: INVERTING INPUT
- PIN 4: (+) 15 V DC
- PIN 5: COMMON
- PIN 6: (-) 15 V DC
- PIN 7: CASE
- PIN 8: OUTPUT
- [Other Pins - No Connection]



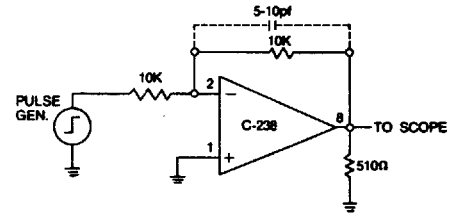
**Models  
C-418 &  
C-438**

- PIN 1: N.C.
- PIN 2: N.C.
- PIN 3: N.C.
- PIN 4: (-) INPUT
- PIN 5: (+) INPUT
- PIN 6: (-) 15 V DC
- PIN 7: N.C.
- PIN 8: CASE
- PIN 9: N.C.
- PIN 10: OUTPUT
- PIN 11: (+) 15 V DC
- PIN 12: N.C.
- PIN 13: N.C.
- PIN 14: N.C.



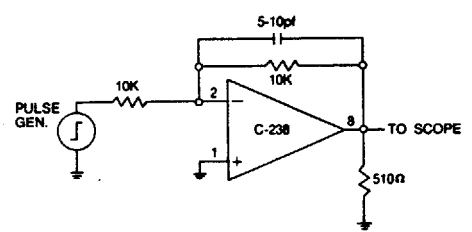
**FIG. 1**

**SLEW RATE MEASUREMENT CIRCUIT**



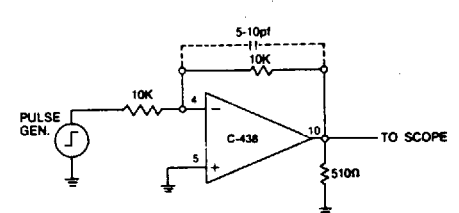
**FIG. 2**

**SETTLING TIME MEASUREMENT CIRCUIT**



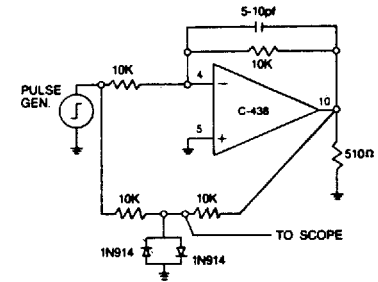
**FIG. 1A**

**SLEW RATE MEASUREMENT CIRCUIT**



**FIG. 2A**

**SETTLING TIME MEASUREMENT CIRCUIT**



**FIG. 3**

**UNITY GAIN FOLLOWER  
WITH VOLTAGE OFFSET NULL  
CIRCUIT**

