

SPECIFICATIONS:

- INPUT FREQUENCY: 6 – 18GHz
- INPUT VSWR: 2.0:1 MAXIMUM
- NOISE FIGURE: 8dB MAXIMUM
- INPUT POWER: 1 WATT CW, 100 WATT PEAK @ PW=1uSEC & DUTY CYCLE = 1%

SP3T SWITCH SPECIFICATIONS:

- SWITCH MODE: (1) RF INPUT MODE, (2) BIT MODE, (3) CHOP MODE
- ISOLATION: 60dBm MINIMUM (ALL PORTS)
- SWITCHING SPEED: 100nSEC MAXIMUM

OUTPUT TO 8-WAY POWER COMBINER SPECIFICATIONS:

- LINEAR GAIN: +33dB MINIMUM
- FREQUENCY FLATNESS: ±2.5dB MAXIMUM
- 1dB COMPRESSION POINT: +3dBm MINIMUM
- SATURATED POWER: +14 dBm MAXIMUM
- SECOND HARMONIC: -9dBc MINIMUM
- THIRD HARMONIC: -12dBc MINIMUM
- GAIN MATCHING AMONG ALL PORTS: ±2.5dB MAXIMUM
- I/O VSWR: 2:1 MAXIMUM @ IMPEDANCE = 50HMS

OUTPUT TO SWITCH MATRIX SPECIFICATIONS:

- LINEAR GAIN: +7dB MINIMUM
- FREQUENCY FLATNESS: ±1.5dB MAXIMUM
- 1dB COMPRESSION POINT: +3dBm MINIMUM
- SATURATED POWER: +9 dBm MAXIMUM
- SECOND HARMONIC: -9dBc MINIMUM
- THIRD HARMONIC: -12dBc MINIMUM
- GAIN MATCHING AMONG ALL PORTS: ±2.5dB MAXIMUM
- I/O VSWR: 2:1 MAXIMUM @ IMPEDANCE = 50HMS

SWITCH CONTROL TTL LOGIC TABLE:

COMMAND MODE	PIN 4 (TTL CTL COMMAND 1)	PIN 5 (TTL CTL COMMAND 2)
RF INPUT MODE	TTL LOW	TTL LOW
BIT INPUT MODE	TTL HIGH	TTL LOW
RF INPUT CHOP MODE	TTL LOW	TTL HIGH
BIT INPUT CHOP MODE	TTL HIGH	TTL HIGH

REVISIONS				
ZONE	REV.	DESCRIPTION	DATE	APPROVED
	A	SEE ER# 074-12	10/6/12	RA
	B	SEE ER# 12-049	11/8/12	RA

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 ISO 9001:2000 CERTIFIED



TTL					
PRODUCT FEATURE					
LVD-618-70-CW-SWM					
APPROVALS	DATE	SIZE	FSCM NO.	DWG NO.	REV.
DRAWN K JSMMS	10/6/12	A	60483	100-8382	B
ENG RA	10/6/12	SCALE N:S		SHEET 1 OF 4	
QAE K JSMMS	10/6/12				

LOG VIDEO OUTPUT SPECIFICATIONS:

- TSS: -71dBm MINIMUM
- DYNAMIC RANGE: -65 TO +0dBm
- LOG SLOPE: 70mV/dB NOMINAL
- LOG LINEARITY: ±1.0dB MAXIMUM
(DEVIATION FROM 70mV/dB STRAIGHT LINE @ 10GHz & 25°C)
- LOG ACCUARACY: ±1.75dB MAXIMUM
(DEVIATION FROM 70mV/dB STRAIGHT LINE AT FIXED TEMP (25°C) AND TEMPERATURE RANGE)
- ABSOLUTE LOG ACCURACY: ±2.5dB MAXIMUM
(DEVIATION FROM 70mV/dB STRAIGHT LINE OVER FREQUENCY (6-18GHz) AND TEMP RANGE (0°C TO +85°C))
- MATCHING: ±1.5dB MAXIMUM (BETWEEN ANY 2 6-18 EW DETECTORS)
(OVER FREQUENCY AND TEMP RANGE)
- DC OFFSET @ RF INPUT IS TERMINATED & DC POWER IS ON: ±70mV
- PULSE RESPONSE: 100nSEC TO CW
- RISE TIME: 25nSEC MAXIMUM
- SETTLLING TIME: 50nSEC MAXIMUM (WITHIN ±35mV OF FINAL VALUE)
- RECOVERY TIME: 500nSEC MAXIMUM. MEASURED FROM 1dB BELOW PEAK OF THE (0dBm, 300uSEC) PULSE TO WHERE (-60dBm, 100nSEC) PULSE IS MEASURED WITHIN ±1dB ERROR AS WHEN THE FIRST 0dBm PULSE IS NOT PRESENT. MEASURED FROM 1dB BELOW PEAK TO WITHIN ±1dB OF THE BASELINE. TWO SPECIFICATIONS MEET

- OUTPUT IMPEDANCE: 75±1 OHM
- VIDEO OUTPUT: 330±123mV
(@-65dBm WITH FREQUENCY VARYING FROM 6-18GHz MIDDLE POINT OF WINDOW)
- OUTPUT VIDEO DRIVER CAPABILITY: DRIVING 150 FEET RG11 INTO 75 OHM LOAD
- VIDEO FREQUENCY FLATNESS: ±1.75dB MAXIMUM, ANY CONSTANT INPUT POWER FROM -65dBm TO 0dBm, AS FREQUENCY IS VARIED FROM 6 TO 18GHz.
- OUTPUT PULSE PEAK VARIATION VERSUS DUTY CYCLE: ±70mV MAXIMUM. POWER CHANGES FROM -60dBm TO 0dBm, PULSE WIDTH CHANGES FROM 100nSEC TO 330uSEC FOR DUTY CYLCE UP TO 50%, EXCEPT MINIMUM TIME BETWEEN 1ST AND 2ND PULSE IS 2uSEC
- SIGNAL PROCESSING CAPABILTY: PULSE (100nSEC TO 330uSEC DUTY CYCLE UP TO 50%)
- COUPLED MODE: PSEUDO AC COUPLED MODE
- NOISE LEVEL: 120mV MAXIMUM
- CW IMMUNITY: -40dBm MAXIMUM. THE MAX ALLOWED FALSE ALARM COUNT IS 40/SECOND WITH 400mV THRESHOLD. TO BE DONE WITH A PULSE FREQUENCY AND CW FREQUENCY DIFFERENCE OF 500MHz MIN (COMBINED SIGNALS ARE IMPUTTED TO DLVA) THE MEASURMENT IS MADE WITH 1.0uS WIDE PULSE AT 10.0uS PRI, USING UNIVERSAL COUNTER AND COMPARATOR WTH A THRESHOLD SET AT 400mV. IN THE PRESENCE OF CW SIGNAL, THE PEAK AMPLITUDE LOSS BELOW AT CW LEVEL ≤ -45dBm, 1dB LOSS (MAX). PULSE LEVEL UNDER ABOVE TEST IS FROM -60dBm TO 0dBm. WHEN CW OVER -40dBm, ONE DETECTOR SATURATED AND STABLE DC APPEAR AT OUTPUT, IF PULSE POWER OVER CW, A STABLE PULSE CARRIED ON DC AT THE OUTPUT

- DROP OF THE OUTPUT VIDEO PULSE AT LOWER POWER 70mV MAXIMUM (1dB)
-65dBm FOR PULSE WIDTH 330uS (mV)
- PROPAGATION DELAY: 80 nSEC MAXIMUM @ SWITCH IS "ON" POSITIVE FROM 50% INPUT RF TO 10% OUTPUT VIDEO

- DC POWER REQUIREMENT: ±15V±5%
- RIPPLE FROM DC TO 10MHz: 100mV MAXIMUM
- CURRENT: 1.0A FOR +15VDC
0.5A FOR -15VDC

- BIT IN, SW, RF OUT, RF IN, VIDEO OUT CONNECTORS: SMA FEMALE
- CONTROL CONNECTOR: 9 PIN D FEMALE
DE-9S

REVISIONS				
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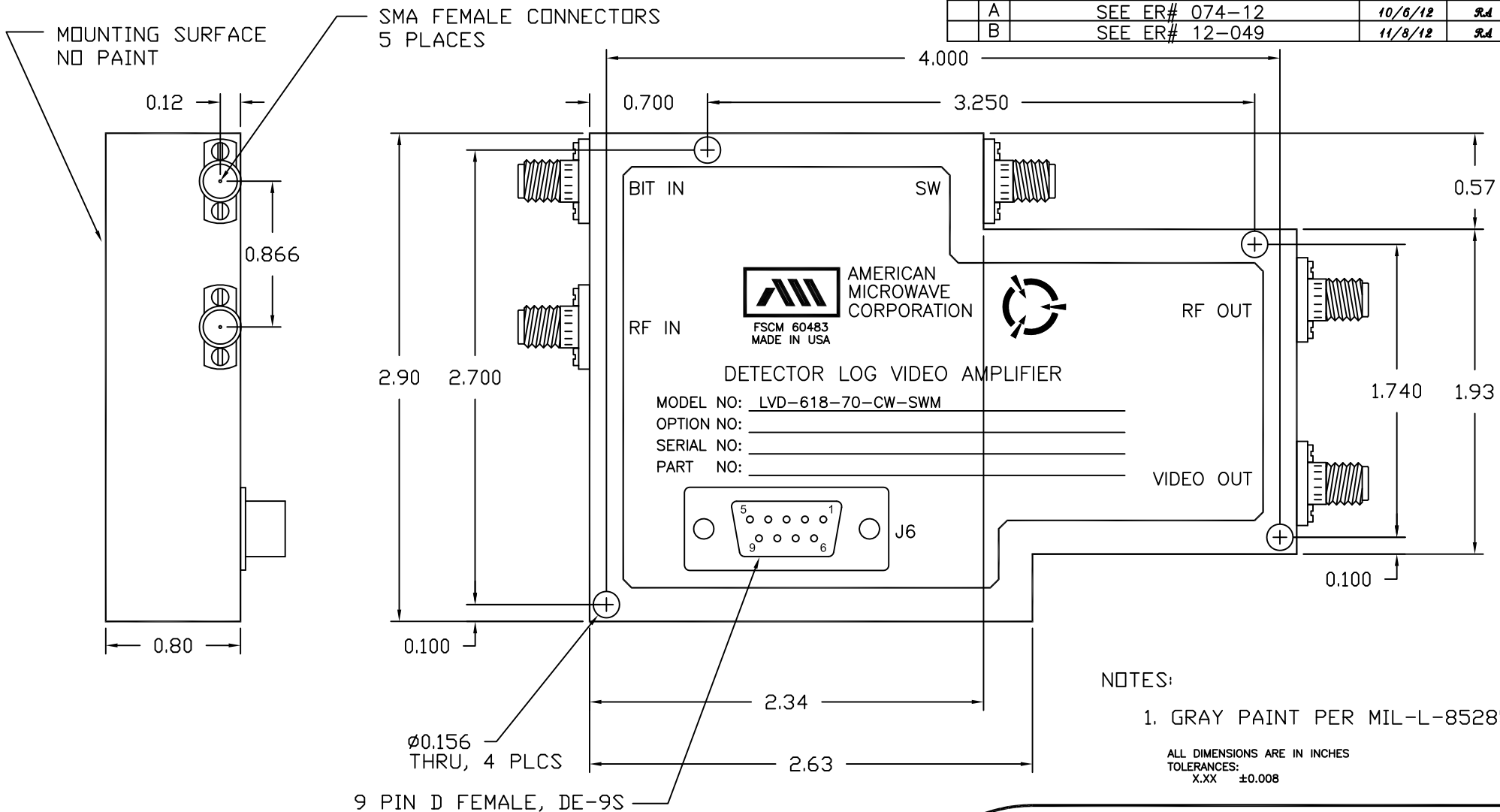
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APPROVALS		DATE	TITLE		
DRAWN <i>K JMM</i>		10/6/12	PRODUCT FEATURE LVD-618-70-CW-SWM		
ENG <i>Rd</i>		10/6/12	SIZE A	FSCM NO. 60483	DWG NO. 100-8382
QAE <i>K JMM</i>		10/6/12	SCALE N:S		SHEET 2 OF 4
					REV. B

REVISIONS				
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NOTES:
 1. GRAY PAINT PER MIL-L-85285
 ALL DIMENSIONS ARE IN INCHES
 TOLERANCES:
 X.XX ±0.008

ENVIRONMENTAL RATINGS:

- STABILIZATION BAKE: 24 HOURS @ +85°C
- THERMAL SHOCK: 0°C TO +85°C, 5 CYCLES, DWELL TIME 2 HOURS
- RANDOM VIBRATION: 20Hz to 2000Hz, RANDOM AT 16.8GRMS IN ALL 3 AXIS FOR 15 MINUTES
- BURN IN: @ +85°C FOR 48 HOURS WITH DC POWER ON
- OPERATING TEMPERATURE: 0°C TO +85°C

NOTE: SPECIFICATIONS WILL VARY OVER OPERATING TEMPERATURE
 NOTE: THE ABOVE SPECIFICATIONS ARE SUBJECT TO CHANGE OR REVISION
 * Units are designed to meet Environmental ratings but not tested. If Environmental Testing is required, please contact Sales Department.

PIN OUT TABLE	
PIN NO.	FUNCTION
1	+15VDC
2	GND
3	N/C
4	SWITCH CTL TTL, COMMAND 1
5	SWITCH CTL TTL, COMMAND 2
6	+15VDC
7	-15VDC
8	-15VDC
9	GND

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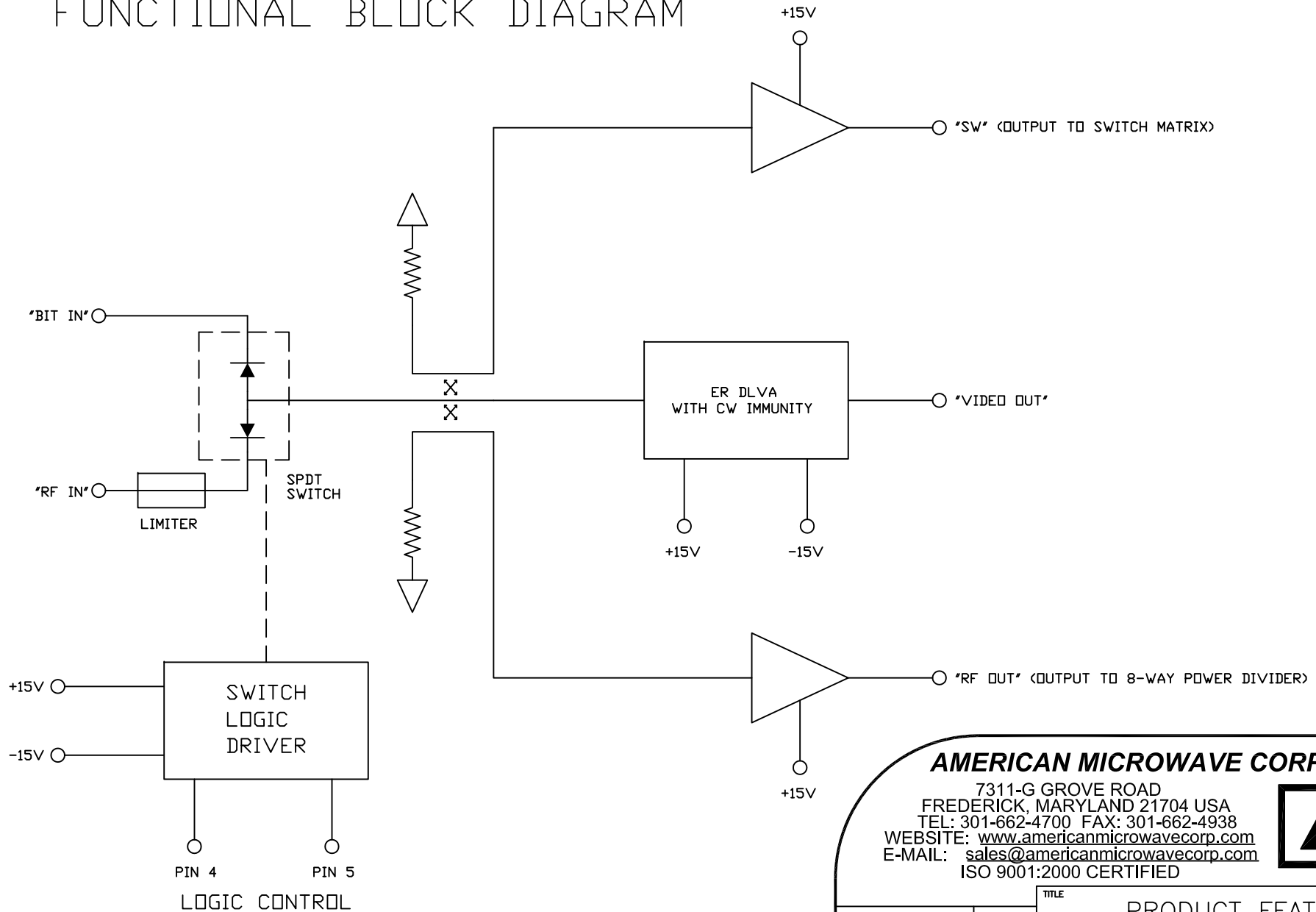


APPROVALS		DATE	TITLE		
DRAWN	<i>K JPMMS</i>	10/6/12	PRODUCT FEATURE		
ENG	<i>Rd</i>	10/6/12	LVD-618-70-CW-SWM		
QAE	<i>K JPMMS</i>	10/6/12	SIZE	FSCM NO.	DWG NO.
			A	60483	100-8382
			SCALE	N:S	
				SHEET 3 OF 4	

REVISIONS

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FUNCTIONAL BLOCK DIAGRAM



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 LVD-618-70-CW-SWM

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SIZE	FSCM NO.	DWG NO.	REV.
A	60483	100-8382	B
SCALE N:S			SHEET 4 OF 4

ALL DIMENSIONS ARE IN INCHES
 TOLERANCES:
 X.XX ±0.008