

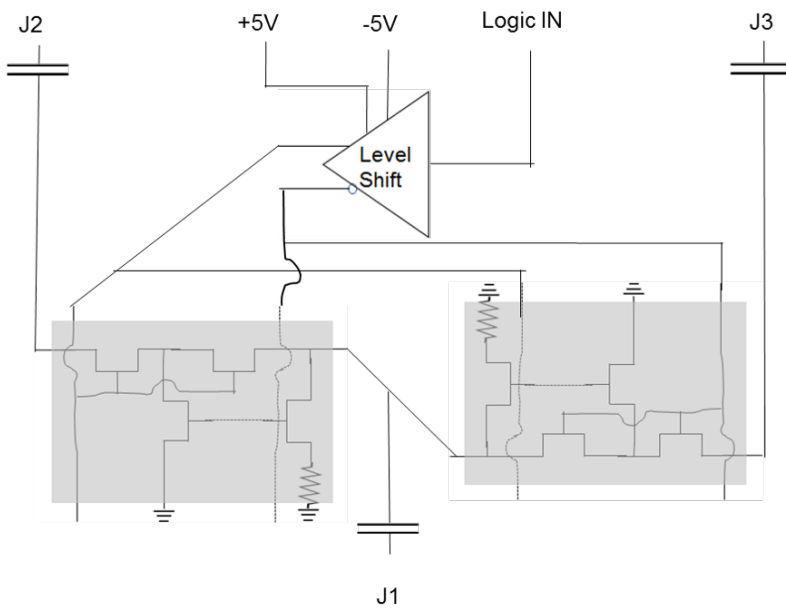
**GENERAL DESCRIPTION**

The 6020 is a GaAs FET non-reflective high speed switch covering 10 MHz to 1000 MHz. The input accepts 3.3 V CMOS logic. The switch is composed of an integral driver which converts logic levels into negative voltage to bias the GaAs FET both on and off. The switch is a series shunt configuration and is direct replacement for Alpha PN AC336-1

**MECHANICAL**

The 6020 is composed of alumina transmission line connected to 2 GaAs FET switch mmics with 1 mil Au wirebonds. The driver consists of discrete cmos level shift IC. All components housed in a 10 lead hermetic flatpack

**FUNCTION BLOCK DIAGRAM**



**PIN CONNECTIONS**

- 1 Ground
- 2 Ground
- 3 J1
- 4 Ground
- 5 Ground
- 6 J2
- 7 -5V
- 8 Input TTL
- 9 +5V
- 10 J2

**TRUTH TABLE**

E1    J1-J2    J1-J3

0	LOSS	ISO
1	ISO	LOSS

**ELECTRICAL SPECIFICATIONS**

Vpos +5V, Vpos2 , Vneg -5.2V, TEMP 25C, PRR 1MHz

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP	MAX	UNITS
<b>ABSOLUTE MAXIMUMS</b>						
Vpos	Supply Voltage Positive		0		+7	V
Vneg	Supply Voltage Negative		-7		0	V
To	Operating Temperature		-54		+125	Deg C
CW	CW Survival				+27	dBm
<b>INPUT</b>						
VI_hi	Voltage Input High	TTL	2		5.5	V
VI_low	Voltage Input Low	TTL	0	.3	.8	V
<b>SUPPLY</b>						
IQC_pos	Quiescent Current Positive	0.1KHz 50% duty cycle		.1	+12	mA
IQC_neg	Quiescent Current Negative	100MHz 50% duty cycle		2	-12	mA
<b>DYNAMIC</b>						
IP3	Intermodulation Distortion	2 tone 3rd order		+43		dBm
P1dB	1dB Compression		+10	+21		dBm
Tfall	Second Harmonic			-50		dBc
Td_rise	Video Transients	.5MHz PRR 100Mhz BW		5		Mv pk
Td_fall	Rise/Fall			3		nS
TSW_rise	Switching Speed On				20	nS
TSW_fall	Switching Speed Off				20	nS
PRR	Pulse Repetition Rate	Max, 5pF load		1		MHz
<b>RF CHARACTERISTICS LINEAR</b>						
ILOSS	Insertion Loss			.7	1.0	V
ISO	Isolation		40			V
VSWR	Match J0			1.3	1.7	:1
VSWR	Match Out J1, J2, J3, J4	LOSS & ISO State		1.3	1.7	:1

20 MHz to 1000 MHz

**MECHANICAL SPECIFICATIONS**

DRAWING NOT TO SCALE. DIMENSIONS ARE IN INCHES, UNLESS OTHERWISE NOTED.

Pins - Electro-less Gold  
 Finish - Paint Epoxy  
 Leadform: Q7322  
 Type: Housing; Lead Finish: Gold  
 Length .270 in MAX; Width .270 in MAX; Height .075 in MAX

**MARKING SPECIFICATIONS**

Logo: IMPELLIMAX  
 Part Number:  
 4606  
 95-3  
 1720

