

250-600MHz,60W, 50V, 2 stage UHF Pallet

Description

I2A60V0206 is a rugged 50V 60W RF LDMOS Amplifier Module operating in the 250 to 600MHz range.

This module is designed for Pulsed CW amplifier within UHF

Features

- Rugged LDMOS technology with ITGV20080C6 and ITGV22010P3
- Pout>60W (Pulsed CW), Eff>40% typical @ Vds=50V
- Broadband Frequency Range: 250-600MHz
- Size: 47.5 x 18.4 x 9.9 mm
- DC block capacitor integrated
- Linear and non linear operation supported

Table 1. Maximum Ratings

Rating	Symbol	Value	Unit
Drain--Source Voltage	V_{DS}	+115	Vdc
Gate--Source Voltage	V_{GS}	-10 to +10	Vdc
Operating Voltage	V_{DD}	+32	Vdc
Storage Temperature Range	T_{stg}	-65 to +150	°C
Case Operating Temperature	T_c	+150	°C
Operating Junction Temperature	T_J	+225	°C

Figure 1: Network analyzer Output S11/S21

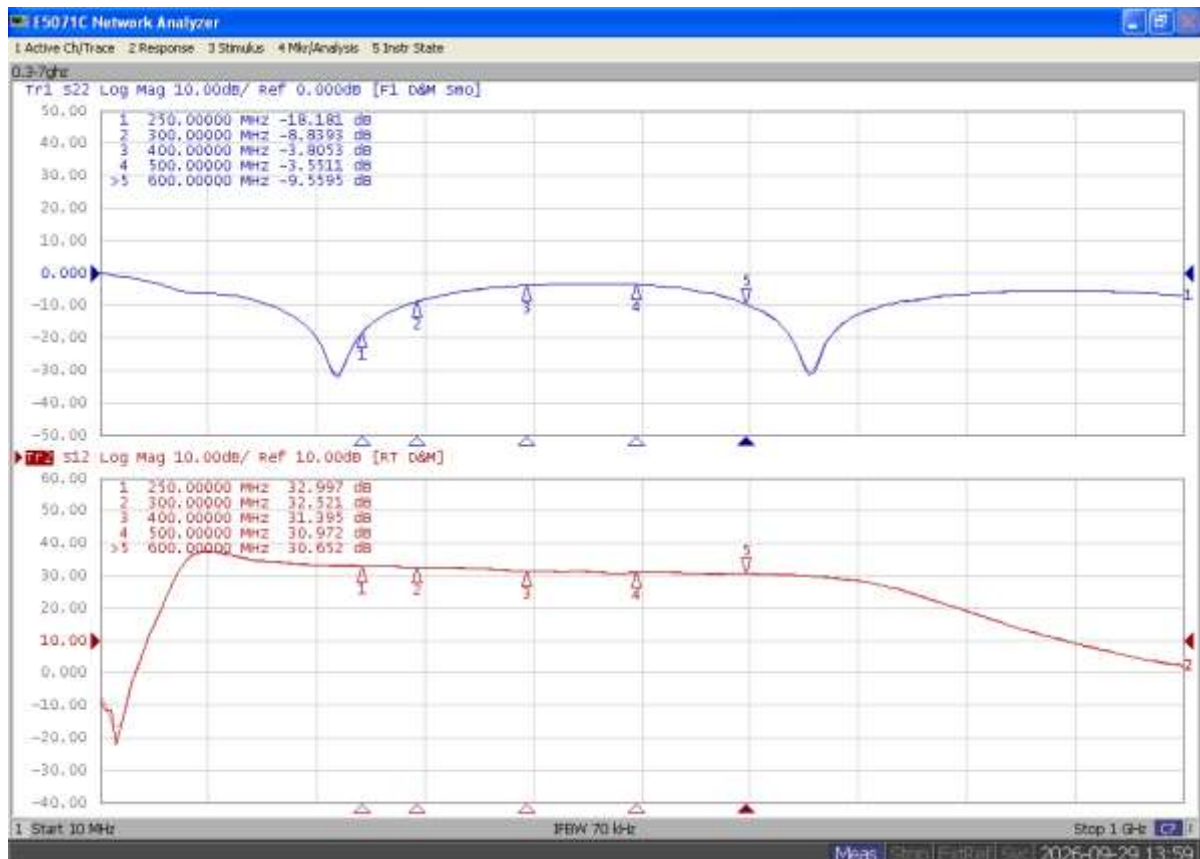
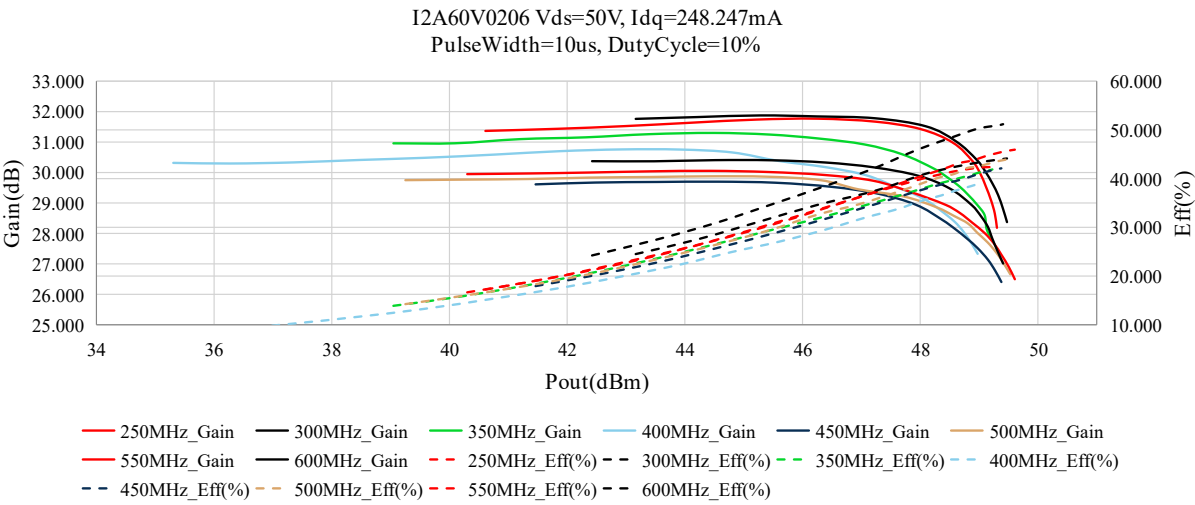
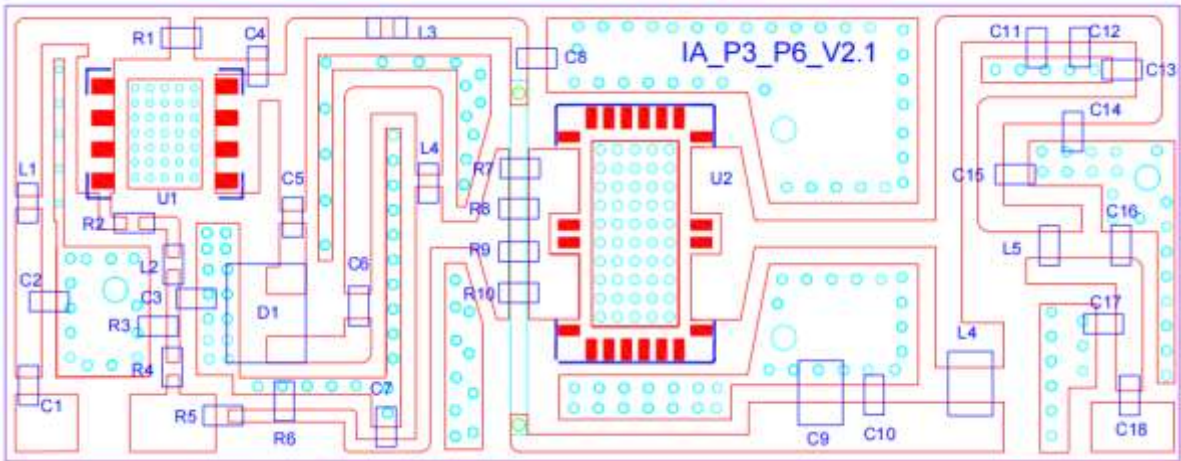


Figure 2: Pulsed CW Power gain, Efficiency as function of output Power



I2A60V0206 Vds=50V, Idq=250mA PulseWidth=10us, DutyCycle=10%							
Freq (MHz)	P1dB (dBm)	P1dB (W)	P1dB Eff (%)	P1dB Gain (dB)	P3dB (dBm)	P3dB (W)	P3dB Eff (%)
250	48.663	73.507	41.643	30.780	49.249	84.112	42.321
300	48.687	73.909	42.639	30.884	49.392	86.942	44.059
350	48.020	63.394	37.910	30.312	49.117	81.596	41.901
400	47.261	53.227	32.620	29.772	48.838	76.530	40.360
450	48.129	64.992	38.022	28.717	49.291	84.931	41.918
500	48.216	66.310	39.789	28.895	49.457	88.239	43.908
550	48.245	66.760	41.398	29.072	49.455	88.200	45.625
600	48.535	71.374	48.440	29.425	49.314	85.381	50.908

Figure 3: Test circuit



I2A60V0206 PA Pallet

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Advanced Datasheet V1.0

Comment	Designator	Footprint	Quantity
68PF	C1, C5, C6, C10, C18	Beijing Yuan Lu 0603	5
5. 6PF	C2	Beijing Yuan Lu 0603	1
2. 2UF	C3, C7, C8	0603/100V	3
3PF	C4	Beijing Yuan Lu 0603	1
10UF	C9	1210/100V	1
2. 2PF	C11, C17	Beijing Yuan Lu 0603	2
3. 9PF	C12, C14	Beijing Yuan Lu 0603	2
6. 8PF	C13	Beijing Yuan Lu 0603	1
3. 3PF	C15	Beijing Yuan Lu 0603	1
0. 5PF	C16	Beijing Yuan Lu 0603	1
2. 2NH	L1	0603	1
10NH	L2	0603	1
47NH	L3	0603	1
36NH	L4	TB__0. 35mm*1. 5mm*6T	1
14. 5NH	L5	TB__0. 35mm*1. 4mm*2. 5T	1
200 Ω	R1	0805	1
10 Ω	R2, R7, R8, R9, R10	0603	5
2. 4K	R3, R6	0603	2
1. 3K	R4, R5	0603	2
1dB	D1	FAC0601	1
ITGV22010P3	U1	DFN 6*5	1
ITGV20080C6	U2	QFN 10*6	1

Revision history

Table 5. Document revision history

Date	Revision	Datasheet Status
2026/9/29	Rev 1.0	Advanced Datasheet Creation

Application data based on LBG-26-40

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