Solid State Power Amplifier (SSPA)

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INTRODUCTION of SSPA PRODUCT LINES

ZDTECH is a leading SSPA provider in RF & Microwave field operated by tens of

experienced senior engineers and experts in SSPAs and TWTAs. ZDTECH has a very wide range of stand-alone modules, IMAs and integrated SSPA chassis products, meanwhile specific turn-key

systems are available to satisfy customers demanding the most reliable products. We have served for defense, commercial and government entities and their affiliates worldwide, and devote ourselves to high quality and reliability products and good after-sales service for professional customers and business partners based on long-term mutual benefits cooperation

| Frequency Range from | 10KHz to 65GHz |
|----------------------|----------------|
|----------------------|----------------|

Output Power Range from Watts to Kilowatts

Ruggedized Modules/IMAs/Chassis Types (optional)

Wideband/Narrowband, CW/Pulse (optional)

FEATURES LDMOS, GaN & GaAs Chips Available

Compatible with the Mil-Standard

Customer-designed products Available

State-of-art DPD Technologies Available

Well-done Heat Dissipation Employed

2+ years Warranty Guaranteed

APPLICATIONS

Radar/ EW, Satcom, Land/Shipboard/Airborne, Data-link, UAVs, Missile, Homeland Security, ISM

Professional R&D team in RF /microwave over 30 years

Quick response from blueprints to ready-made products

Powerful R&D tools: ADS, Microwave OFFICE, HFSS

OUR CAPABILITIES

| More than 2 | 0+ R&D | professional | hard-working | engineers |
|-------------|--------|--------------|--------------|-----------|
| | | | | 0.0.000.0 |

In-house engineering capabilities

Fully equipped manufacturing facilities

Full line of Testing and Verification Capabilities

GENERAL SPECIFICATIONS of SSPA PRODUCT (P2)

| Items | Specifications and Functions |
|------------------|---|
| Protection | Over Current, Overheating, Over reflection |
| Monitor | Current, Temp., Input Power, Output Power, Reflect Power |
| Control | Gain Adjustment, Power Control, RF Switch, Remote Control, ALC, AGC |
| Status Indicator | Power-on, Working, Failure, etc. |
| Operating Temp. | -40°C∼ +60°C |
| Storage Temp. | -50℃~ +70℃ |
| | |

10~18000MHz, 20W, SSPA



1

| Specification | Parameter | Value |
|------------------------------|-------------------|----------------------|
| 1,0 | Frequency Range | 10~18000MHz |
| | Pout | 20W min. |
| | P1dB | 12W min. |
| | Pin | 0dBm max. |
| | Input VSWR | 2:1 |
| | Power Gain | 48dB min. |
| Electrical Specifications | Gain Flatness | ±3dB |
| | Gain Adjustment | 20dB |
| | Harmonics | -20dBc |
| | Spurious | -50dBc |
| | Power Supply | 90~260VAC (50~60Hz) |
| | Power Consumption | 250W |
| ALC: NOT | Dimensions | 19 inch, chassis, 3U |
| | Weight | 20Kg |
| , Š | RF Connectors | Input/ Output: N |
| Mechanical Specifications | Monitor Interface | N |
| | Control Interface | GPIB/LAN/RS-232 |
| | Cooling | Air-cooling |
| Environmental | Operating Temp. | -10°C~ +40°C |
| Specifications | Storage Temp. | -55℃~ +70℃ |

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|-------------------|--|
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1~18GHz, 100W, SSPA



Specification

Electrical Specifications

Mechanical Specifications

Environmental Specifications

| Parameter | Value | |
|----------------------|----------------------|-----------------|
| Frequency Range | 1~18GHz | |
| Pout | 100W min. | |
| P1dB | 60W min. | OT C |
| Pin | 1dBm max. | |
| Input VSWR | 2:1 | |
| Power Gain | 54dB min. | |
| Gain Flatness | ±4dB | |
| Gain Adjustment | 30dB | , ji |
| Harmonics | -20dBc | |
| Spurious | -60dBc | 12 |
| Power Supply | 90~260VAC (50~60Hz) | |
| Power Consumption | 950W | |
| Dimensions | 19 inch, chassis, 4U | |
| Weight | 40Kg | \$ ⁶ |
| RF Connectors | Input/ Output: N | |
| Monitor Interface | N | 121 |
| Control Interface | GPIB/LAN/RS-232 | |
| Cooling | Air-cooling | |
| Operating Temp. | -10℃~ +40℃ | |
| Storage Temp. | -55℃~ +70℃ | |

Storage Temp.

6~18GHz, 20W, SSPA



| | <u> </u> | |
|----------------|--------------------|--------------------------|
| Specification | Parameter | Value |
| > | Frequency Range | 6~18GHz |
| | Psat | 20W min. |
| | Pin | 10dBm max. |
| | VSWR | 2:1 max. |
| | Gain | 50dB typ. |
| | Gain Flatness@P1dB | ±2dB typ. |
| Electrical | Harmonics | -10dBc typ. |
| Specifications | Spurious | -40dBc max. |
| | | Input: 50 ohms |
| | Impedance | Output: 50 ohms nominal |
| | | Pulse Width: 3nS~CW |
| | Pulse Test | Pulse Repetition: 1Us~CW |
| | Power Supply | 28VDC |
| | Power Consumption | 325W max. |
| | Dimensions | 155×95×50mm |
| Mechanical | Weight | ≤2Kg |
| Specifications | 19 | Input: SMA-F |
| | RF Connectors | Output: N-F |
| Environmental | Operating Temp. | -40°C~ +60°C |
| Specifications | Storage Temp | -55°C~ +85°C |

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ZDTEEH°

6~18GHz, 50W, SSPA



| Specification | Parameter | Value | |
|----------------|-------------------|------------------------|-----|
| 12 | Frequency Range | 6~18GHz | |
| | Psat | ≥50W | |
| | Gain | ≥50dB | |
| | Gain Flatness | _≤±5dB | 6 |
| Flectrical | VSWR | ≤2.5:1 | 1.2 |
| Specifications | Harmonics | ≤-15dBc | Å. |
| | Spurious | ≤-55dBc | |
| | Impedance | Input/ Output: 50 ohms | |
| | Supply Voltage | +28VDC | |
| | Power Consumption | ≤600W | |
| | Dimensions | 200×120×23mm | 10 |
| Machanical | Weight | ≤1.5Kg | ~ |
| Specifications | | Input: SMA-F | |
| 12 | RF Connectors | Output: N-F | |
| Environmental | Operating Temp. | -40℃~ +50℃ | |
| Specifications | Storage Temp. | -55℃~ +70℃ | |
| <u>></u> | 12 | D' O' | |

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6~18GHz, 100W, SSPA



| | 10TELH | 10TELH | |
|----------------|--------------------|---|-----|
| Specification | Parameter | Value | |
| OTE | Frequency Range | 6~18GHz | |
| | Psat | 100W min. | |
| | Pin | 10dBm max. | ° |
| | VSWR | 2:1 max. | |
| | Gain | 50dB typ. | 1,0 |
| | Gain Flatness@P1dB | ±2dB typ. | |
| Electrical | Harmonics | -10dBc typ. | |
| Specifications | Spurious | -60dBc max. | |
| | Impedance | Input: 50 ohms Output: 50 ohms nominal | Å. |
| | A.C. | Pulse Width: 3nS~CW | |
| | Pulse Test | Pulse Repetition: 1Us~CW | 10 |
| | Power Supply | 28VDC | |
| | Power Consumption | 1300W max. | |
| 19 | Dimensions | 260×220×120mm | |
| Mashaniart | Weight | ≤6Kg | |
| Specifications | | Input: SMA-F | |
| 10 | RF Connectors | Output: N-F | .01 |
| Environmental | Operating Temp. | -40°C∼ +60°C | V |
| Specifications | Storage Temp. | -55℃~ +85℃ | |

Ku Band, 40W, SSPA

| 1 | | |
|---|---|--|
| | - | |
| * | | |

Value

Specification

Electrical Specifications

Mechanical

Specifications

Parameter Frequency Range Input Power Rated Power Gain Adjustment Gain Flatness Spurious Harmonic IM3 Noise Power Density Power Supply Power Consumption Phase Noise

Dimensions

RF Connectors

Communication Interface

Weight

Cooling

| 13~15GHz |
|---------------------------------|
| S band optional |
| +46dBm/40W |
| 0~25dB (step 0.1dB) |
| 0.5dBp-p |
| ≤-60dBc |
| ≤-60dBc |
| -26dBc |
| ≤-135dBW/4kHz |
| 24VDC |
| 250W |
| ≤65dBc/Hz@100Hz |
| ≤-75dBc/Hz@1kHz |
| ≤85dBc/Hz@10kHz |
| 235×150×110mm |
| 4.3Kg |
| Input: N |
| Output: WR62/BJ140 |
| LAN/RS485/RS422/RS232(optional) |
| Forced Air Cooling |

Ku Band, 50W, SSPA



Specification

Electrical Specifications

Mechanical Specifications

Parameter **Frequency Range Rated Power** Gain Adjustment **Gain Flatness** Gain Gain Stability IM3 Spurious **Noise Power Density** AM/PM Group Delay **Power Supply Power Consumption** Dimensions Weight **RF** Connectors **Communication Interface**

| Value | 1 ¹ |
|-----------------------|----------------|
| 13~15GHz | |
| +47dBm/50W | |
| 0~25dB (Step 0.1dB) | ž, |
| 0.5dBp-p | |
| ≥60dB | 10 |
| ±0.5dB/24h | ×. |
| -26dBc | |
| ≤-60dBc | |
| ≤-135dBW/4kHz | . ¹ |
| ≤3°/dB | |
| ≤0.5nS (p-p) | |
| 220VAC | <i></i> |
| 280W | Ç ^e |
| 205×120×100mm | |
| 4.0Kg | |
| Input: SMA | |
| Output: WR62/BJ140 | OT |
| LAN/RS485/RS422/RS232 | (optional) |
| Forced Air Cooling | |

Note: Function and environmental characteristics, please see P2.

Cooling

Ku Band, 200W, SSPA



| Specification | Parameter | Value |
|------------------------------|-------------------------|---------------------------------|
| | Frequency Range | 13~15GHz |
| | Rated Power | +53dBm/200W |
| | Gain Adjustment | 0~25dB (Step 0.1dB) |
| | Gain Flatness | 0.5dBp-p |
| | Gain | ≥60dB |
| | Gain Stability | ±0.5dB/24h |
| Electrical Specifications | IM3 | -26dBc |
| specifications | Spurious | ≤-60dBc |
| | Noise Power Density | ≤-135dBW/4kHz |
| | AM/PM | ≤3°/dB |
| | Group Delay | ≤0.5nS (p-p) |
| | Power Supply | 220VAC |
| | Power Consumption | 1200W |
| DIFERN | Dimension | 350×220×160mm |
| | Weight | 18Kg |
| | 10 ¹ | Input: SMA |
| Specifications | RF Connectors | Output: WR62/BJ140 |
| AN AN | Communication Interface | LAN/RS485/RS422/RS232(optional) |
| | Cooling | Forced Air Cooling |

Ku Band, 1000W, SSPA



Parameter

Rated Power

Frequency Range

Specification

Electrical Specifications

Mechanical Specifications Gain Adjustment Gain Flatness Gain Gain Stability IM3 Spurious Noise Power Density AM/PM Group Delay Power Supply Power Consumption Dimension RF Connectors

| Communication | Interface |
|---------------|-----------|
|---------------|-----------|

Cooling

| Value | |
|---------------------|------------------|
| 13~15GHz | |
| +60dBm/1000W | , L ^X |
| 0~30dB (Step 0.1dB) | ALL L |
| 0.5dBp-p | 12 |
| ≥65dB | Å. |
| ±0.5dB/24h | |
| -26dBc | |
| ≤-60dBc | 2 |
| ≤-135dBW/4kHz | |
| ≤3°/dB | 10 |
| ≤0.5nS (p-p) | |
| 220VAC | ET. |
| 6500W | |
| 8U, 19inch, Chassis | |
| Input: SMA | |
| Output: WR62/BJ140 | DI |
| LAN/RS485/RS422/RS2 | 32(optional) |
| Forced Air Cooling | J ^A |

K Band, 50W, SSPA



Electrical Specifications

Mechanical Specifications

Parameter Frequency Range **Rated Power** Gain Adjustment **Gain Flatness** Gain Gain Stability IM3 Spurious Noise Power Density AM/PM **Group Delay** Power Supply **Power Consumption** Dimension Weight **RF** Connectors

| ×° | |
|----------------------------|----------------|
| Value | |
| 22~26GHz | |
| +47dBm/50W | |
| 0~25dB (Step 0.1dB) | J [×] |
| 0.5dBp-p | STR. |
| ≥55dB | V |
| ±0.5dB/24h | |
| -25dBc | |
| ≤-60dBc | |
| ≤-135dBW/4kHz | Ż. |
| ≤3°/dB | |
| ≤0.5nS (p-p) | 10 |
| 220VAC (47~63Hz) | |
| 320W | |
| 300×245×120mm | |
| 9Kg | ~ |
| Input: 2.92mm-F | |
| Output: WR42/BJ220 | 10 |
| LAN/RS485/RS422/RS232(opti | onal) |
| Forced Air Cooling | |

Note: Function and environmental characteristics, please see P2.

Communication Interface

Cooling

ZDTECH°

K Band, 400W, SSPA



Specification

Electrical Specifications

Mechanical Specifications

Parameter **Frequency Range Rated Power** Gain Adjustment **Gain Flatness** Gain Gain Stability IM3 Spurious **Noise Power Density** AM/PM Group Delay **Power Supply Power Consumption** Dimension Weight **RF** Connectors **Communication Interface**

| Value | |
|-----------------------|-------------------|
| 22~26GHz | |
| +56dBm/400W | |
| 0~25dB (Step 0.1dB) | ž, |
| 0.5dBp-p | ALL N |
| ≥68dB | 1.2 |
| ±0.5dB/24h | ž. |
| -25dBc | |
| ≤-60dBc | |
| ≤-135dBW/4kHz | 5 |
| ≤3°/dB | |
| ≤0.5nS (p-p) | |
| 220VAC (47~63Hz) | 4 |
| 2800W | |
| 640×425×225mm | |
| 55Kg | |
| Input: 2.92mm-F | |
| Output: WR42/BJ220 | 10 ¹ V |
| LAN/RS485/RS422/RS232 | (optional) |

Note: Function and environmental characteristics, please see P2.

Cooling

Forced Air Cooling

Ka Band, 10W, SSPA



Specification

| Electrical |
|----------------|
| Specifications |

Mechanical

Specifications

| Parameter | 19 | |
|------------------|---------|--|
| Output Frequency | | |
| Input Frequency | | |
| Rated Power | | |
| Gain Adjustment | | |
| Gain Flatness | | |
| Spurious | Spuriou | |
| Harmonics | | |
| Gain Stability | | |
| IM3 | | |
| se Power Density | N | |
| | | |

- Power Supply Power Consumption Dimensions
 - Weight

RF Connectors Communication Interface

- Value 29GHz~31GHz S band (optional) +40dBm/10W 0~25 dB (Step 0.1dB) 0.5dBp-p ≤-60dBc ≤-60dBc ±0.5dB/24h -25dBc ≤-135dBW/4kHz ≤-63dBc/Hz@100Hz ≤-73dBc/Hz@1kHz ≤-83dBc/Hz@10kHz +24 VDC 80W 210×160×100mm 3.9kg Input: N/SMA (optional) Output: WR28/BJ320 LAN/RS485/RS422/RS232(optional)
- Forced Air Cooling

Note: Function and environmental characteristics, please see P2.

Cooling



Ka Band, 40W, SSPA

| | 1 | 10 |
|----------------|-------------------------|---------------------------------|
| 1.DTELLIN | DIFFIN | - OTELH |
| Specification | Parameter | Value |
| | Output Frequency | 29GHz~31GHz |
| | Input Frequency | S band (optional) |
| | Rated Power | +46dBm/40W |
| | Gain Adjustment | 0~25 dB (Step 0.1dB) |
| | Gain Flatness | 0.5dBp-p |
| | Spurious | ≤-60dBc |
| | Harmonics | ≤-60dBc |
| Electrical | Gain Stability | ±0.5dB/24h |
| Specifications | IM3 | -25dBc |
| | Noise Power Density | ≤-135dBW/4kHz |
| | | ≤-63dBc/Hz@100Hz |
| | Phase Noise | ≤-73dBc/Hz@1kHz |
| | | ≤-83dBc/Hz@10kHz |
| | Power Supply | 220VAC |
| 10 | Power Consumption | 350W |
| | Dimensions | 260×180×110mm |
| | Weight | 4.9Kg |
| Machanical | 101 | Input: N |
| Specifications | RF Connectors | Output: WR28/BJ320 |
| | Communication Interface | LAN/RS485/RS422/RS232(optional) |
| | Cooling | Forced Air Cooling |

ZDTECH

Ka Band, 20 W, SSPA

Specification Parameter Value **Frequency Range** 26GHz~31GHz **Rated Power** +43dBm/20W Gain Adjustment 0~25dB (Step 0.1dB) **Gain Flatness** 0.5dBp-p Gain ≥55dB Gain Stability ±0.5dB/24h Electrical IM3 -25dBc Specifications Spurious ≤-60dBc ≤-135dBW/4kHz **Noise Power Density** AM/PM ≤3°/dB **Group Delay** ≤0.5nS (p-p) **Power Supply** 220VAC (47-63 Hz) **Power Consumption** 160W Dimensions 262×191×111mm Weight 5.0Kg Input: 2.92mm-F Mechanical **RF** Connectors Output: WR28/BJ320 Specifications LAN/RS485/RS422/RS232(optional) **Communication Interface**

Note: Function and environmental characteristics, please see P2.

Cooling

Forced Air Cooling

ZDTECH

Ka Band, 50 W, SSPA



Specification Value Parameter **Frequency Range** 26GHz~31GHz **Rated Power** +47dBm/50W Gain Adjustment 0~25 dB (Step 0.1dB) **Gain Flatness** 0.5dBp-p Gain ≥60dB Gain Stability ±0.5dB/24h Electrical -25dBc IM3 Specifications **Spurious** ≤-60dBc **Noise Power Density** ≤-135dBW/4kHz AM/PM ≤3°/dB ≤0.5nS (p-p) Group Delay **Power Supply** 220VAC (47-63 Hz) **Power Consumption** 350W 303×237×116mm Dimensions 8.5Kg Weight Input: 2.92mm-F Mechanical **RF** Connectors Output: WR28/BJ320 **Specifications** LAN/RS485/RS422/RS232(optional) **Communication Interface** Cooling Forced Air Cooling

Ka Band, 150 W, SSPA



Specification

Electrical Specifications

Mechanical Specifications

Parameter **Frequency Range Rated Power** Gain Adjustment **Gain Flatness** Gain Gain Stability IM3 **Spurious** Noise Power Density AM/PM Group Delay **Power Supply Power Consumption** Dimensions Weight **RF** Connectors **Communication Interface**

| Value | |
|--------------------------|---------|
| 26GHz~31GHz | |
| +51.8dBm/150W | A. |
| 0~25 dB (Step 0.1dB) | TEX |
| 0.5dBp-p | 12 |
| ≥65dB | |
| ±0.5dB/24h | |
| -25dBc | |
| ≤-60dBc | |
| ≤-135dBW/4kHz | |
| ≤3°/dB | 10 |
| ≤0.5nS (p-p) | |
| 220VAC (47-63 Hz) | |
| 1150W | |
| 450×350×170mm | |
| 28 Kg | J. |
| Input: 2.92mm-F | 101 |
| Output: WR28/BJ320 | |
| LAN/RS485/RS422/RS232(op | tional) |
| Forced Air Cooling | |

Note: Function and environmental characteristics, please see P2.

Cooling

ZDTECH

Ka band, 250 W, Wideband SSPA

Specification Value Parameter **Frequency Range** 25GHz~32GHz **Rated Power** +54dBm/250W Gain Adjustment 0~30 dB (Step 0.1dB) Gain Flatness 0.5dBp-p Gain ≥65dB Gain Stability ±0.5dB/24h Electrical -25dBc IM3 **Specifications** ≤-60dBc Spurious **Noise Power Density** ≤-135dBW/4kHz AM/PM ≤3°/dB Group Delay ≤0.5nS (p-p)

220VAC (47-63 Hz)

2000W

460×355×130 mm

Input: 2.92mm-F

25Kg

Weight

Dimensions

Power Supply

Power Consumption

RF Connectors

Mechanical Specifications

Communication Interface

Cooling

LAN/RS485/RS422/RS232(optional)

Forced Air Cooling

Output: WR28/BJ320

Ka Band, 350 W, SSPA



| | N. Contraction of the second s | ×. |
|-----------------|--|---------------------------------|
| Specification | Parameter | Value |
| 12 | Frequency Range | 26GHz~31GHz |
| | Rated Power | +55.5dBm/350W |
| | Gain Adjustment | 0~30 dB (Step 0.1dB) |
| | Gain Flatness | 0.5dBp-p |
| | Gain | ≥70dB |
| | Gain Stability | ±0.5dB/24h |
| Electrical | IM3 | -25dBc |
| Specifications | Spurious | ≤-60dBc |
| | Noise Power Density | ≤-135dBW/4kHz |
| | AM/PM | ≤3°/dB |
| 101 <u>echi</u> | Group Delay | ≤0.5nS (p-p) |
| | Power Supply | 220VAC (47-63 Hz) |
| | Power Consumption | 2400W |
| | Dimensions | 500×355×160 mm |
| | Weight | З7Кд |
| | ALL . | Input: 2.92mm-F |
| Specifications | RF Connectors | Output: WR28/BJ320 |
| J ^K | Communication Interface | LAN/RS485/RS422/RS232(optional) |
| | Cooling | Forced Air Cooling |
| 17 | | 0 |

Ka Band, 800 W, SSPA

Specification

Electrical Specifications

Mechanical

Specifications

| Parameter | Value |
|---|----------------------|
| Frequency Range | 26GHz~31GHz |
| Rated Power | +59dBm/800W |
| Gain Adjustment | 0~30 dB (Step 0.1dB) |
| Gain Flatness | 0.5dBp-p |
| Gain | ≥70dB |
| Gain Stability | ±0.5dB/24h |
| IM3 | -24dBc |
| Spurious | ≤-60dBc |
| Noise Power Density | ≤-135dBW/4kHz |
| AM/PM | ≤3°/dB |
| Group Delay | ≤0.5nS (p-p) |
| Power Supply | 220VAC (47-63 Hz) |
| Power Consumption | 7000W |
| | Input: 2.92mm-F |
| RF Connectors | Output: WR28/BJ320 |
| Communication Interface LAN/RS485/RS422/RS232(optional) | |
| | |

Note: Function and environmental characteristics, please see P2.

Cooling

Liquid Cooling

Qband, 10W, SSPA

| Spe | cifica | ation |
|-----|--------|-------|
|-----|--------|-------|

Electrical Specifications

Mechanical

Specifications

Parameter Output Frequency Input Frequency RatedPower Gain Adjustment Gain Flatness Gain Gain Stability IM3 Spurious Harmonics Noise Power Density

Power Supply Power Consumption Dimensions Weight

RF Connectors

Cooling

Value 43GHz~46GHz 950 MHz~1550MHz (optional) +40dBm/10W 0~20dB (Step 0.1dB) 0.4dBp-p 50dB ±0.5dB/24h -23dBc ≤-60dBc ≤-60dBc ≤-135dBW/4kHz ≤-60dBc/Hz@100Hz ≤-70dBc/Hz@1kHz ≤-80dBc/Hz@10kHz 220VAC 80W 250×145×110mm 4.5Kg Input: N Output: WR22/BJ400 LAN, RS485, RS422, RS232 optional Forced Air Cooling

Qband, 20W, SSPA

| Specification | |
|---------------|--|
|---------------|--|

Electrical Specifications

| Parameter |
|---------------------|
| Output Frequency |
| Input Frequency |
| RatedPower |
| Gain Adjustment |
| Gain Flatness |
| Gain |
| Gain Stability |
| IM3 |
| Spurious |
| Harmonics |
| Noise Power Density |
| 17 |
| |

Phase Noise

Power Supply Power Consumption Dimensions Weight

Mechanical Specifications

RF Connectors

Communication Interface

Cooling

950 MHz~1550MHz +43dBm/20W 0~20dB (Step 0.1dB) 0.5dBp-p 50dB ±0.5dB/24h

43GHz~46GHz

Value

-23dBc ≤-60dBc ≤-60dBc

≤-135dBW/4kHz

≤-60dBc/Hz@100Hz

≤-70dBc/Hz@1kHz

≤-80dBc/Hz@10kHz

220VAC

160W

250×180×110mm

6.0Kg

Input: N

Output: WR22/BJ400

LAN, RS485, RS422, RS232 optional

Forced Air Cooling

Qband, 80W, SSPA



Specification

Electrical Specifications

Mechanical

Specifications

Parameter Frequency Range RatedPower Gain Adjustment Linear Gain **Gain Flatness** Gain Stability IM3 Spurious AM/PM **Group Delay Noise Power Density Power Supply Power Consumption** Dimensions Weight **RF** Connectors **Communication Interface** Cooling

| Value |
|--------------------------|
| 43GHz~46GHz |
| +49dBm/20W |
| 0~25dB (Step 0.1dB) |
| ≥65dB |
| 0.5dBp-p |
| ±0.5dB/24h |
| -23dBc |
| ≤-60dBc |
| ≤3°/dB |
| ≤0.5nS p-p |
| ≤-135dBW/4kHz |
| 180-264VAC@47-63Hz |
| 650W |
| 422×212×175mm |
| 17.5kg |
| Input: 2.4mm-F |
| Output: WR22/BJ400 |
| LAN, RS485, RS422, RS232 |

Forced Air Cooling

Qband, 160W, SSPA



| Specification | Parameter | Value |
|------------------------------|-------------------------|--------------------------|
| 12 | Frequency Range | 43GHz~46GHz |
| | RatedPower | +52dBm/20W |
| | Gain Adjustment | 0~25dB (Step 0.1dB) |
| | Linear Gain | ≥65dB |
| | Gain Flatness | 0.5dBp-p |
| | Gain Stability | ±0.5dB/24h |
| Electrical Specifications | IM3 | -23dBc |
| specifications | Spurious | ≤-60dBc |
| | AM/PM | ≤3°/dB |
| | Group Delay | ≤0.5nS p-p |
| | Noise Power Density | ≤-135dBW/4kHz |
| | Power Supply | 180-264VAC@47-63Hz |
| | Power Consumption | 1400W |
| | Dimensions | 422×312×175mm |
| | Weight | 25.5kg |
| D.A. a bourieral | ALL . | Input: 2.4mm-F |
| Specifications | RF Connectors | Output: WR22/BJ400 |
| , C ^K | Communication Interface | LAN, RS485, RS422, RS232 |
| | Cooling | Forced Air Cooling |

ZDTECH

Qband, 250W, SSPA



Electrical Specifications

Mechanical Specifications

Parameter Working Frequency RatedPower Gain Adjustment Linear Gain **Gain Flatness** Gain Stability IM3 **Spurious** AM/PM Group Delay Noise Power Density Power Supply **Power Consumption** Dimensions Weight **RF** Connectors

Communication Interface

Cooling Forced Air Cooling

Value 43GHz~46GHz +54dBm/20W 0~20dB (Step 0.1dB) ≥65dB 0.5dBp-p ±0.5dB/24h -23dBc ≤-60dBc ≤3°/dB ≤0.5nS p-p ≤-135dBW/4kHz 180-264VAC@47-63Hz 2100W 550×360×183mm 36Kg Input: 2.4mm-F Output: WR22/BJ400 LAN, RS485, RS422, RS232

V Band, 20W, SSPA



Specification

Electrical Specifications

Mechanical Specifications

Parameter **Frequency Range Rated Power** Gain Adjustment **Gain Flatness** Gain Gain Stability IM3 Spurious **Noise Power Density** AM/PM **Group Delay Power Supply Power Consumption** Dimensions Weight **RF** Connectors **Communication Interface**

| Value | |
|---------------------|--|
| 47-51GHz | |
| +43dBm/20W | 1 |
| 0~23dB (Step 0.1dB) | Å. |
| 0.5dBp-p | |
| ≥50dB | 10 |
| ±0.5dB/24h | \$ |
| -23dBc | |
| ≤-60dBc | 1 |
| ≤-135dBW/4kHz | |
| ≤3°/dB | |
| ≤0.5nS(p-p) | |
| 220VAC (47-63Hz) | .6 |
| 160W | J. The second se |
| 260×190×110mm | |
| 6.0Kg | |
| Input: 1.85mm-F | |
| Output: WR19/BJ500 | OTE |
| LAN/RS485/RS422/RS | 232(optional) |

Forced Air Cooling

Note: Function and environmental characteristics, please see P2

Cooling

V Band, 200W, SSPA



Specification

Electrical Specifications

Mechanical Specifications

Parameter Frequency Range **Rated Power** Gain Adjustment **Gain Flatness** Gain Gain Stability IM3 Spurious **Noise Power Density** AM/PM Group Delay **Power Supply Power Consumption** Dimensions Weight **RF** Connectors

Communication Interface

Cooling F

| Value | |
|---------------------|----|
| 47-51GHz | |
| +53dBm/200W | |
| 0~25dB (Step 0.1dB) | |
| 0.5dBp-p | |
| ≥65dB | 10 |
| ±0.5dB/24h | |
| -23dBc | |
| ≤-60dBc | |
| ≤-135dBW/4kHz | |
| ≤3°/dB | |
| ≤0.5nS(p-p) | 19 |
| 220VAC (47-63Hz) | |
| 1800W | |
| 500×350×160mm | |
| 38Kg | |
| Input: WR19/BJ500 | |
| Output: WR19/BJ500 | |

LAN/RS485/RS422/RS232(optional)

Forced Air Cooling

Q/V Band, 25W, SSPA

| Specification | Parameter | Value |
|------------------------------|-------------------------|--------------------------------------|
| 101 | Frequency Range | 47-51.5GHz (suitable for 47~52.4GHz) |
| | · · · · · · | ≥44dBm/50W@47~51.5GHz |
| | Psat CW | ≥43dBm/40W@51.5~52.4GHz |
| | Gain | ≥45dB |
| Electrical | Gain Stability | ≤1dB |
| Specifications | Input/Output VSWR | ≤2:1 |
| | Spurious | ≤-60dBc |
| | IM3 | ≤-20dBc |
| | Power Supply | 24VDC |
| | Power Consumption | ≤300W |
| | Dimensions | ≤250×160×100mm |
| | Weight | ≤7Kg |
| | | Input: WR19UG383/U |
| Mechanical Specifications | RF Connectors | Output: WR19UG383/U |
| | | Power Supply: Circle 4-pin |
| | Communication Interface | RS485 optional |
| | Cooling | Built-in Forced Air Cooling |

Q/V Band, 50W, SSPA

| Specification | Parameter | Value | |
|------------------------------|-------------------------------------|-------------------------------------|------|
| | Frequency Range | 47-51.5GHz (suitable for 47~52.4GHz | :) |
| | OTE | ≥47dBm/50W@47~51.5GHz | |
| | Psat CW | ≥46dBm/40W@51.5~52.4GHz | |
| | Gain | ≥45dB | |
| Electrical | Gain Stability | ≤1dB | j, L |
| Specifications | Input/Output VSWR | ≤2:1 | |
| | Spurious | ≤-60dBc | |
| | IM3 | ≤-20dBc | |
| | Power Supply | 220VAC | |
| × | Power Consumption | ≤500W | |
| | Dimensions | ≤300×240×110mm | |
| | Weight | ≤12Kg | 5 |
| Mechanical Specifications | | Input: WR19UG383/U | · |
| | RF Connectors | Output: WR19UG383/U | |
| | | Power Supply: Circle 4-pin | |
| | Communication Interface | RS485 optional | |
| | Cooling | Built-in Forced Air Cooling | |
| Note: Function and | environmental characteristics, plea | ise see P2 | |

Q/V Band, 80W, SSPA

| Specification | Parameter | Value |
|------------------------------|-------------------------|--------------------------------------|
| | Frequency Range | 47-51.5GHz (suitable for 47~52.4GHz) |
| | Psat CW | ≥47dBm/50W@47~51.5GHz |
| | | ≥46dBm/40W@51.5~52.4GHz |
| | Gain | ≥48dB |
| Electrical | Gain Stability | ≤1dB |
| Specifications | Input/Output VSWR | ≤2:1 |
| - | Spurious | ≤-60dBc |
| | IM3 | ≤-20dBc |
| - | Power Supply | 220VAC |
| | Power Consumption | ≤800W |
| 10 | Dimensions | ≤438×274×174mm |
| Mechanical Specifications | Weight | ≤17.5Kg |
| | LIN . | Input: WR19UG383/U |
| | RF Connectors | Output: WR19UG383/U |
| | | Power Supply: Circle 4-pin |
| | Communication Interface | RS485 optional |
| | Cooling | Built-in Forced Air Cooling |
| 17 | <u>NY</u> | Q |

W Band, 10W, SSPA

| Specification |
|---------------|
| |

Electrical Specifications

Mechanical Specifications

Environmental Specifications

| | Par | ameter | |
|-----|-----------|---------|--|
| F | requency | y Range | |
| | Rateo | l Power | |
| | | Gain | |
| | Power | Supply | |
| Pow | er Consu | Imption | |
| | Din | nension | |
| | | Weight | |
| RF | I/O Con | nectors | |
| C | Operating | g Temp. | |
| | Storage | e Temp. | |

| Value | |
|------------------|---|
| W band(92-96GHz) | |
| +40dBm/10W | ž, |
| ≥15dB | A. C. |
| 24VDC | 12 |
| 50W | ż. |
| 70×60×30mm | ALC . |
| 1Kg | |
| WR10/BJ900 | × ⁶ |
| -40°C~+60°C | |
| -50°C∼ +70°C | 101 |

W Band, 20W/40W, SSPA



| Parameter | Specification | |
|-------------------|----------------|--|
| Frequency Range | 12 | |
| Rated Power | ×. | |
| Gain | Electrical | |
| Power Supply | Specifications | |
| Power Consumption | | |
| Dimension | | |
| Weight | Mechanical | |
| RF I/O Connectors | Specifications | |
| Operating Temp. | Environmental | |
| Storage Temp. | Specifications | |
| | | |

| Value | |
|------------|--------|
| 92-96GHz | 101 |
| +43dBm/20W | |
| ≥15dB | |
| 24VDC | |
| 100W | |
| 75×75×25mm | 1× |
| 1.4Kg | offer. |
| WR10/BJ900 | 1× |
| -40℃~ +55℃ | 1. A. |
| -50℃~ +70℃ | |

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Electrical Specifications

Frequency Range Power Mode Gain Stability Input VSWR MTTR MTBF Operating Temp.

| Value | |
|--------------------|-----|
| Ku/K/Ka/Q/V/W | 10 |
| 10/20/50/120/350 W | 4 |
| CW/Pulse | |
| ±0.5dB/24h | 10 |
| 1.5:1 | |
| ≤0.5h | |
| ≥10000h | DIE |
| -50℃~ +70℃ | V |

MMW, Wideband SSPA Series



| Parameter | Specification | |
|-------------------|------------------------------|--|
| Frequency Range | Electrical Specifications | |
| Power | | |
| Gain Adjustment | | |
| Gain Flatness | | |
| Input VSWR | | |
| Spurious | | |
| Operating Voltage | | |
| Dimension | Mechanical Specifications | |
| Weight | | |
| RF I/O Connectors | | |
| | | |

| Value | DIF |
|------------------------|------------------|
| 2~18/18~26/26~40/18~40 | |
| 10~ 400W | , C ^K |
| 0~30dB (step 0.1) | |
| 0.5dBp-p | |
| 1.8:1 | 1 |
| -60dBc | ALL A |
| 220VAC | 12 |
| 460×355×130mm | , Š |
| 24Kg | L.C. |
| WR10/BJ900 | |

20TECH