

# Rack Mountable System Amplifier

Product Name : RCA0105U57

Doc. Name : Preliminary Short Spec.

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| <p><b>Preliminary Short Specification</b><br/>for<br/><b>RCA0105U57</b></p> |
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|-----------------------------------|-----------|-----------------|----------|-----------------------|
| 2010/5/19                         | 2010/10/1 |                 | A        | <i>RFcore co.,Ltd</i> |
| File : RCA0105U57 Short Spec.docx |           |                 |          |                       |

*The Specifications is subject to change before finalization*

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## ELECTRICAL SPECIFICATIONS

| Parameter                                | Specification   | Remark   |
|--|---|--|
| Frequency Range                          | 100 ~ 500 MHz   |  |
| Saturated Output Power                   | Typical : 500Watts, Minimum : 400Watts  | Tcase = 35 °C  |
| Power Output @ 1dB Comp.                 | TBD Watts min   |  |
| Input Power for Rated Output             | 0 dBm max   |  |
| Maximum Input Power for Survival         | Pin_max = H dBm, H = ( Gain adjustment attenuation value) dBm, H cannot exceed 10 Ex)<br>0 dBm @ 0 dB attenuation<br>5 dBm @ 5 dB attenuation<br>10 dBm @ 10 dB attenuation<br>10 dBm @ 15 dB attenuation | In case exceeding this limit amplifier back off gain automatically by about 15dB |
| Small Signal Gain                        | 57 dB max   | @ 0 dB attenuation   |
| Small Signal Gain Flatness               | ± 2.5 dB max  |  |
| Input VSWR                               | 2 : 1 max   |  |
| Maximum Load VSWR for 0.5 dB degradation | 2 : 1   |  |
| Maximum Load VSWR for amplifier working  | 4.5 : 1   |  |
| Maximum Load VSWR for amplifier survival | Infinite  | In case over 4.5:1, amplifier back off gain by about 15 dB.                      |
| Harmonics                                | -13 dBc min @ TBD Watts   |  |
| Spurious Signal                          | -60 dBc max @ TBD Watts   |  |
| Primary Supply Voltage                   | 176 ~ 264VAC / 47 ~ 63 Hz   |  |
| Power Consumption                        | 2500 Watts max [TBD]  |  |
| RF Input Signal Format                   | CW / FM   |  |
| Input / Output Impedance                 | 50 Ohms nominal   |  |

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## ENVIRONMENTAL SPECIFICATIONS

| Parameter                        | Specification                | Remark |
|----------------------------------|------------------------------|--------|
| Operating Ambient Temperature    | -20 ~ 55 °C                  |        |
| Storage Temperature              | -30 ~ 75 °C                  |        |
| Relative Humidity w/o Condensing | MIL – STD – 810F 507.4       |        |
| Altitude                         | Up to 3000 m above sea level |        |
| Vibration                        | MIL – STD – 810F 514.5       |        |
| Shock                            | MIL – STD – 810F 516.5       |        |
| EMI / EMC                        | MIL – STD – 461E             |        |

## MECHANICAL SPECIFICATIONS

| Parameter                   | Specification                     | Remark |
|-----------------------------|-----------------------------------|--------|
| Dimension                   | 19 x 8.75 x 22 Inch max           |        |
| Weight                      | Less than 50 kg [TBD]             |        |
| RF Input / Output Connector | N – Female                        |        |
| RS – 232 / JTAG Connector   | D – Sub 9 Pin Male                |        |
| Ethernet Connector          | RJ – 45                           |        |
| Power Connector             | Amphenol MIL – C – 5015 Connector |        |
| Cooling                     | Built – In Forced – Air System    |        |

## SELF PROTECTIONS

| Parameter       | Specification   | Remark  |
|-----------------|---|---|
| Input Overdrive | Pin_max = H dBm, H = ( Gain adjustment attenuation value) dBm, H cannot exceed 10<br>Ex) 0 dBm @ 0 dB attenuation<br>5 dBm @ 5 dB attenuation<br>10 dBm @ 10 dB attenuation<br>10 dBm @ 15 dB attenuation | In case exceeding this limit amplifier back off gain automatically by about 15dB, Factory Reset |
| Over Temp Alarm | 85 °C ± 5 °C shutdown   | Factory Reset   |
| VSWR Alarm      | Load VSWR over 4.5 : 1  | Factory Reset   |

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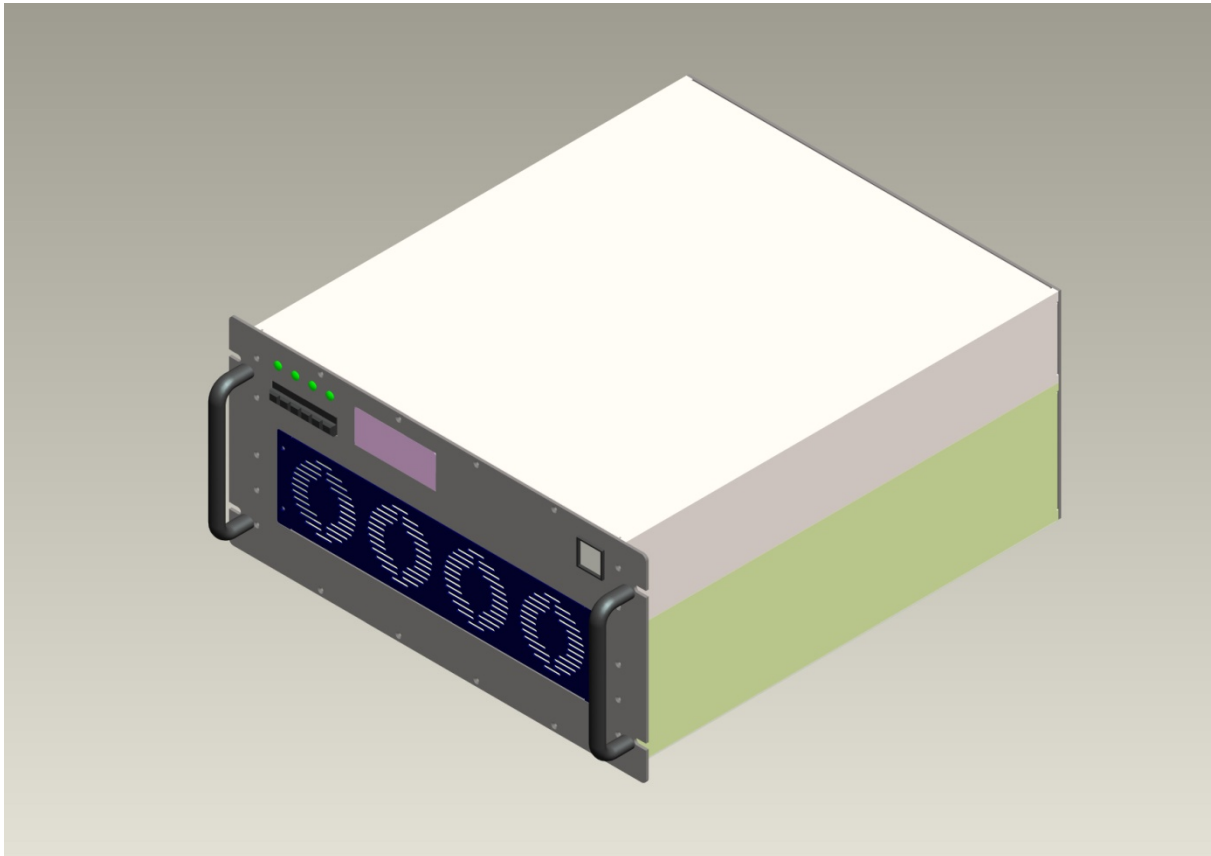
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## Design Concept of Outline Drawing



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