

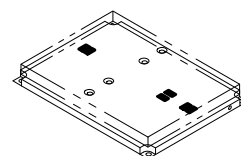
## The RF Line Broadband RF Array for TV Transmitter

The MRFA2600 is a solid state class A amplifier and is specifically designed for TV transposers and transmitters. This amplifier incorporates microstrip technology and reliable Motorola push-pull transistors.

- Specified 26.5 Volts: 470–860 MHz Characteristics  
Output Power: 25 Watts Min @ 1 dB Comp. (CW)  
Gain: 10.5 dB Min (Small Signal)
- Suitable for 28 Volts Application
- 50 Ω Input and Output Impedance

**MRFA2600**

**25 W, 470–860 MHz  
CLASS A  
RF POWER AMPLIFIER**



**CASE 429A-02  
STYLE 1**

### MAXIMUM RATINGS

Rating	Symbol	Value	Unit
Supply Voltage	$V_{CC}$	29	Vdc
Current	$I_{max}$	4	Adc
Storage Temperature Range	$T_{stg}$	-40 to +100	°C
Operating Temperature (1)	$T_{op}$	-20 to +70	°C

### NOMINAL OPERATION CONDITION

Supply	Transposer Application	$V_{CC} = 26.5 \text{ V}$	$I_{sup} = 3.8 \text{ A}$
	Transmitter Application	$V_{CC} = 28 \text{ V}$	$I_{sup} = 3.6 \text{ A}$

### ELECTRICAL CHARACTERISTICS ( $T_C = 25^\circ\text{C}$ , $V_{CC} = 26.5 \text{ V}$ , $I_{sup} = 3.8 \text{ A}$ , unless otherwise noted)

Characteristic	Symbol	Min	Max	Unit
Instantaneous Bandwidth	BW	470	860	MHz
Power Gain (small signal)	$G_p$	10.5	—	dB
Gain Ripple (small signal)	$G_{rple}$	—	±1	dB
Output Power @ 1 dB Compression	$P_{out}$	25	—	W
Mismatch Tolerance ( $P_{out} = 25 \text{ W}$ )	VSWR	∞:1	—	—
Intermodulation (-8 dB/-16 dB/-10 dB, $P_{ref} = 20 \text{ W}$ )	IMD	—	-52.5	dB <sub>ref</sub>
Intermodulation (-8 dB/-16 dB/-7 dB, $P_{ref} = 20 \text{ W}$ )	IMD	—	-50	dB <sub>ref</sub>
Input Return Loss	IRL	15	—	dB

(1) Temperature is measured at temperature test point (on the flange of the transistor).

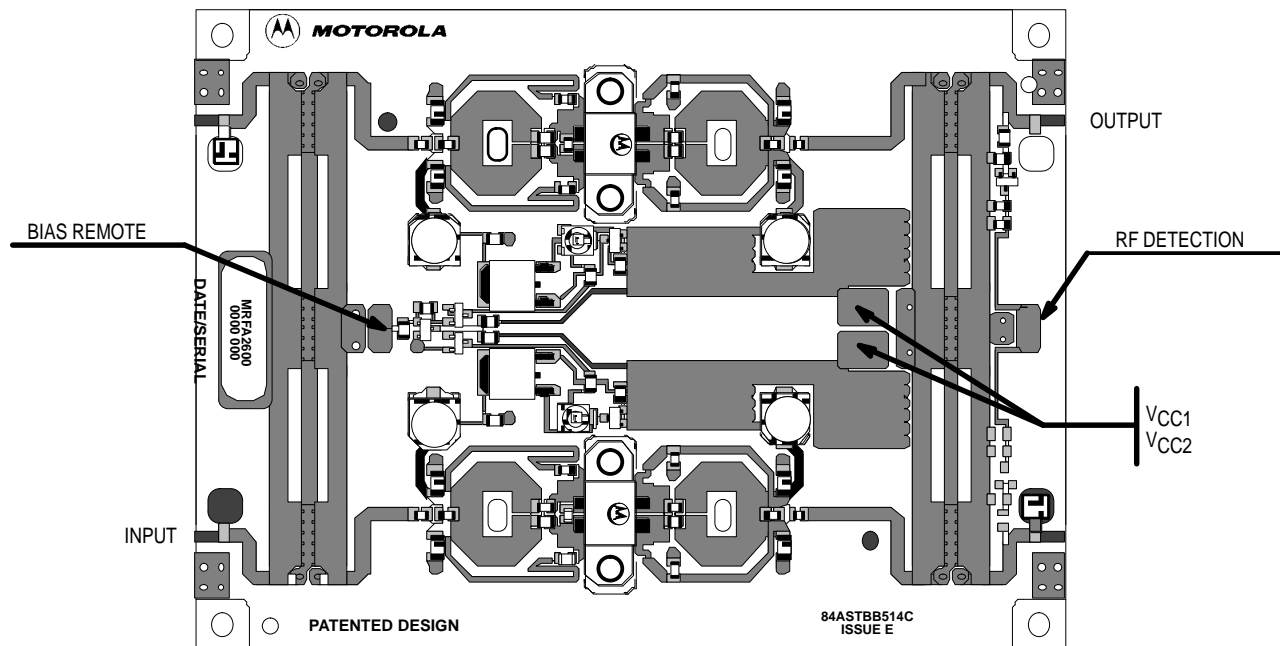
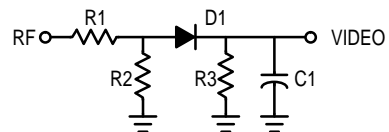


Figure 1. MRFA2600 Connections

#### RF DETECTION

$V_D = 1 \text{ V @ } 25 \text{ W}$   
on infinite load

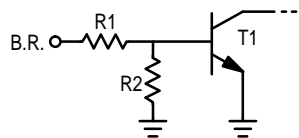
- C1 22 pF
- D1 MMBD701
- R1 22 k $\Omega$
- R2 680  $\Omega$
- R3 2.2 k $\Omega$



#### BIAS REMOTE

If B.R. = "1" (TTL signal)  
bias circuit is off

- R1 4.7 k $\Omega$
- R2 4.7 k $\Omega$
- T1 . BCX20



## MOUNTING RECOMMENDATIONS



- 8 Fixing holes M3  
Minimum useful depth: — Copper/Aluminum: 6 mm

### HEATSINK TOOLING

- Flatness better than 0.03 mm.
- Roughness: Typical value 0.8.

### THERMAL COMPOUND

- Paste with silicones: SICERONT KF Ref. 1201 Recommended.
- Thickness: Optimum between 0.06 mm and 0.15 mm, on the whole back surface of the amplifier.  
(Typical volume: 700 mm<sup>3</sup> for 0.1 mm thickness)  
(Equivalent weight: 1.5g for 2.2 density paste).

### SCREWS

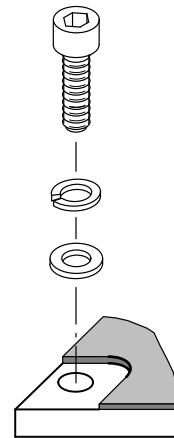
- Socket head cap screws: — CHC M3 x 10 for Copper/Aluminum Heatsink.
- Material: Nickel plated steel.

### WASHERS

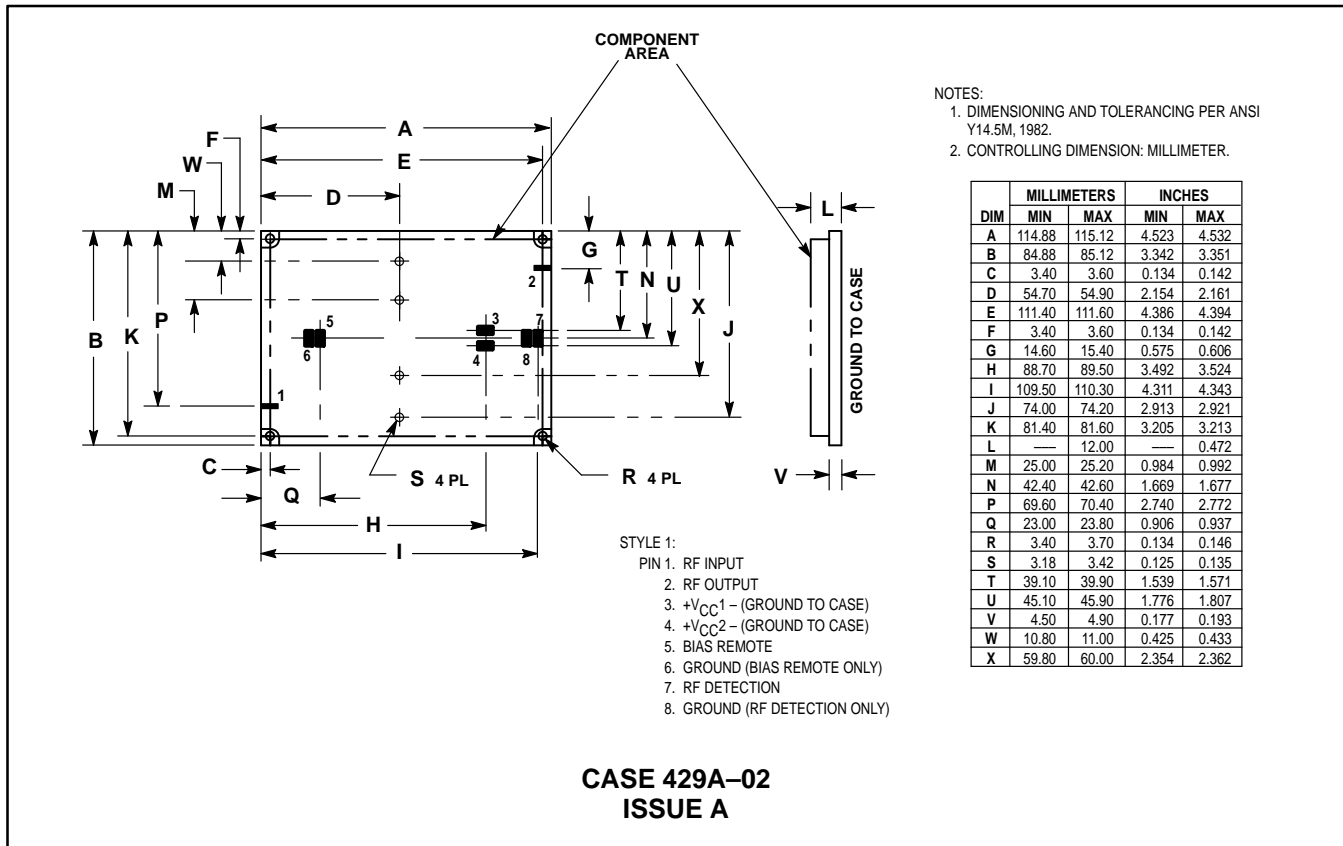
- Split lock washers WZ Ø3 + Flat washers ZU Ø3.

### CLEANING

- Some components of this amplifier are not qualified for every kind of cleaning solvent.
- Do not clean the amplifier in a solvent bath.
- Local cleaning is recommended.



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