

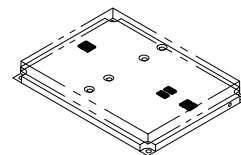
The RF Line Broadband RF Array for TV Transmitter

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	$^{\circ}C$
Operating Temperature (1)	T_{op}	-20 to +70	$^{\circ}C$

NOMINAL OPERATION CONDITION

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

ELECTRICAL CHARACTERISTICS ($T_C = 25^{\circ}C$, $V_{CC} = 26.5 V$, $I_{sup} = 3.8 A$, 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 ($P_{out} = 25 W$)	VSWR	$\infty:1$	—	—
Intermodulation (-8 dB/-16 dB/-10 dB, $P_{ref} = 20 W$)	IMD	—	-52.5	dB _{ref}
Intermodulation (-8 dB/-16 dB/-7 dB, $P_{ref} = 20 W$)	IMD	—	-50	dB _{ref}
Input Return Loss	IRL	15	—	dB

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

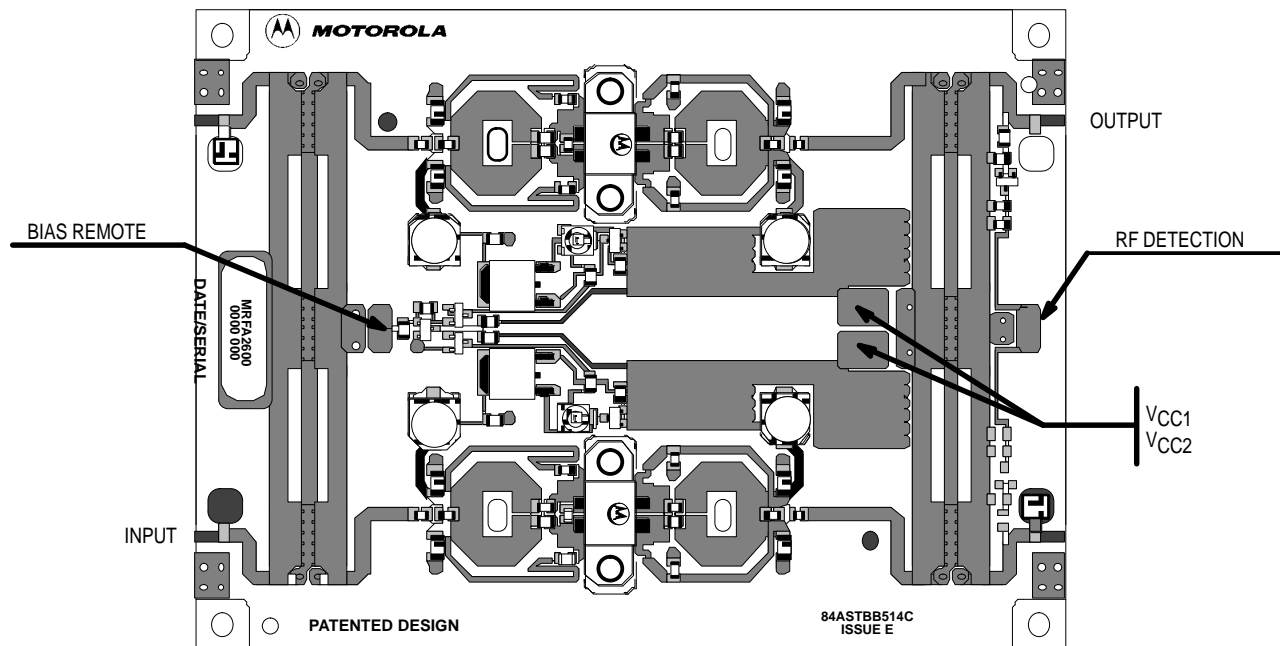
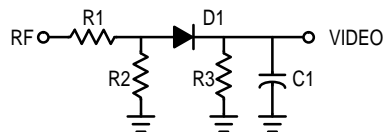


Figure 1. MRFA2600 Connections

RF DETECTION

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

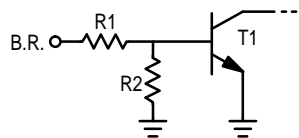
- C1 22 pF
- D1 MMBD701
- R1 22 k Ω
- R2 680 Ω
- R3 2.2 k Ω



BIAS REMOTE

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

- R1 4.7 k Ω
- R2 4.7 k Ω
- 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 mm³ for 0.1 mm thickness)
(Equivalent weight: 1.5g for 2.2 density paste).

SCREWS

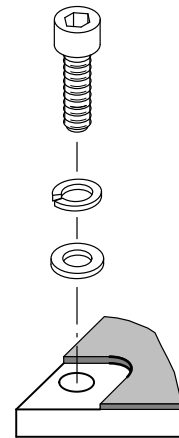
- Socket head cap screws: — CHC M3 x 10 for Copper/Aluminum Heatsink.
- Material: Nickel plated steel.

WASHERS

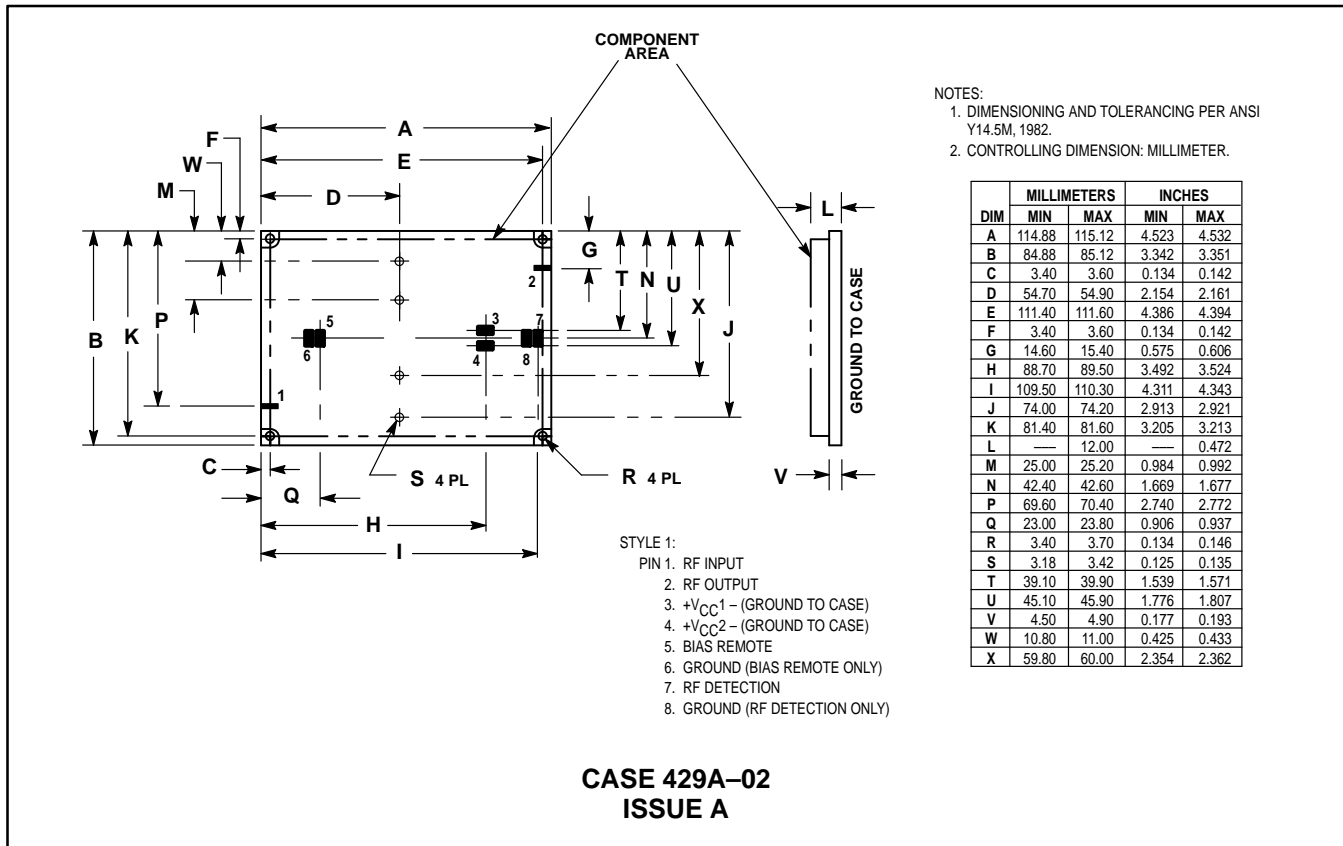
- Split lock washers WZ Ø3 + Flat washers ZU Ø3.

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.



PACKAGE DIMENSIONS



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MRFA2600/D

