

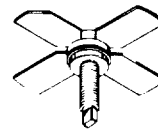
Advance Information
The RF Line
UHF Linear Power Transistor

... designed for 4 watt stages in Band V TV transposer amplifiers. Gold metallized dice and diffused emitter ballast resistors are used to enhance reliability, ruggedness and linearity.

- Band IV and V (470–860 MHz)
- 4 W — P_{ref} ($\alpha = 54$ dB IMD)
- 25 V — V_{CC}
- High Gain — 9 dB Typ, Class A ($\alpha = 860$ MHz)
- Gold Metallization for Reliability

TPV698

4 W — 470 to 860 MHz
UHF LINEAR
POWER TRANSISTOR



.280 SOE
CASE 244C-01, STYLE 1

MAXIMUM RATINGS

Rating	Symbol	Value	Unit
Collector-Emitter Voltage	V_{CEO}	27	Vdc
Collector-Base Voltage	V_{CBO}	48	Vdc
Emitter-Base Voltage	V_{EBO}	4	Vdc
Operating Junction Temperature	T_J	200	°C
Storage Temperature Range	T_{stg}	- 65 to +200	°C

THERMAL CHARACTERISTICS

Characteristic	Symbol	Max	Unit
Thermal Resistance, Junction to Case ($T_C = 70^\circ\text{C}$)	$R_{\theta JC}$	5	°C/W
Thermal Resistance, Case to Heatsink	$R_{\theta CH}$	0.4 Typ	°C/W

ELECTRICAL CHARACTERISTICS

Characteristic	Symbol	Min	Typ	Max	Unit
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OFF CHARACTERISTICS

Collector-Emitter Breakdown Voltage ($I_C = 20$ mA, $I_B = 0$)	$V_{(BR)CEO}$	27	—	—	Vdc
Collector-Base Breakdown Voltage ($I_C = 50$ mA, $I_E = 0$)	$V_{(BR)CBO}$	48	—	—	Vdc
Emitter-Base Breakdown Voltage ($I_E = 5$ mA, $I_C = 0$)	$V_{(BR)EBO}$	4	—	—	Vdc

ON CHARACTERISTICS

DC Current Gain ($I_C = 1$ A, $V_{CE} = 10$ V)	h_{FE}	10	—	—	—
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DYNAMIC CHARACTERISTICS

Output Capacitance ($V_{CB} = 24$ V, $I_E = 0$, $f = 1$ MHz)	C_{ob}	—	20	22	pF
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FUNCTIONAL TESTS

Common-Emitter Amplifier Power Gain ($V_{CE} = 25$ V, $P_{out} = 4$ W, $f = 860$ MHz, $I_C = 850$ mA)	G_{pE}	8.5	9	—	dB
Intermodulation Distortion, 3 Tone ($f = 860$ MHz, $V_{CE} = 25$ V, $I_E = 850$ mA, $P_{ref} = 4$ W, Vision Carrier — 8 dB, Sound Carrier — 7 dB, Sideband Signal — 16 dB, Specification TV05001)	IMD ₁	—	—	54	dB
Cutoff Frequency ($V_{CE} = 25$ V, $I_C = 850$ mA)	f_T	—	2	—	GHz

This document contains information on a new product. Specifications and information herein are subject to change without notice.