FIELD MAINTENANCE SUPPORT

NUVISTOR CHECKER/BALANCER OPERATION PROCEDURE
(For use with Type 575 Transistor Curve Tracer)

The Nuvistor Checker/Balancer, used in conjunction with the Type 575 Curve Tracer, provides a means of observing a family of characteristic curves. In addition, two nuvistors can be operationally compared for similar characteristics.

This device incorporates 1 k, 1% current sampling resistors between the base and emitter terminals so that the MA/step selector of the Type 575 can be read as V/step directly. The following equations are used to determine the μ and gm of the nuvistor under test:

$$\mu = \frac{\Delta Ep}{\Delta Eg} \text{ with Ip constant} \qquad gm = \frac{\Delta Ip}{\Delta Eg} \text{ with Ep constant}$$

Test Procedure:

Preset the Type 575 as follows:

Vert. Sens:	1 MA/Div
Horiz. Sens:	10 V/Div (6CW4)
	10 V/Div (7895)
	5 V/Div (7586)

Collector Sweep:

Peak Volts Range	0-200
Peak Volts Approx.	60%
Polarity	+
Diss. Lim. Res.	5 k to 50 k

Base Step Generator:

Polarity	-
Step/Family	12
Step Sel:	.05 to .2 MA/Step (Read as V/Step)

Plug the Checker/Balancer into the test panel of the Type 575. Remove the indicator light jewel and bulb from the Type 575 and insert the power plug of the Checker/Balancer.

Nuvistor Characteristics: Source: RCA Publications 7586, Feb., 1960; 6CW4, June, 1960; 7895, Mar., 1961.

6CW4	7586	7895
Max. Ratings:	Max. Ratings:	Max. Ratings:
Ep = 110V	Ep = 110V	Ep = 110V
Pp = 1 watt	Pp = 1 watt	Pp = 1 watt
Ip = 15 ma	Ip = 20 ma	Ip = 20 ma
Typical Operation:	Typical Operation:	Typical Operation:
Ep = 70V	Ep = 40V	Ep = 110V
Ip = 8 ma	Ip = 6.8 ma	Ip = 7 ma
Ep (for Ip = 10 μa = -4V)	Eg (for 10 μa Ip) = -6.5V	Eg (for 10 μa Ip) = -4V
μ = 68	μ = 35	μ = 64
gm = 12,500 μmhos	gm = 11,000 μmhos	gm = 9,400 μmhos

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FMS/BG