Matsushita Electronics Corporation

Telephone No.
TAKATSUKI (6) 0 5 2 1

Takatsuki, Osaka, Japan
Telex : OS 3461 MECTRON

Cable Address
"MECTRON" TAKATSUKI

8 3 5 8

T W I N B E A M P O W E R T U B E

The MATSUSHITA 8358 is a miniature twin beam power with a directly heated cathode and consequently a short warm up time, for communications equipment operating at frequencies up to 500MC as a push-pull RF power amplifier or as a frequency multiplier tube.

The type 8358 has the same construction as 6939 except for the heater construction being directly heated cathode type. Characteristics of type 8358 are nearly same as type 6939's.

General Data

Electrical

Cathode :

Heating :

Voltage 1)	1.9 volts
Current	3.15 amp.
Heating time 2)	0.85 sec.

Transconductance (each unit)
for dc plate volts = 150, dc grid No.2 volts = 150, and dc plate ma = 25 ..... 10000 μmhos

Mu-Factor (each unit)
Grid No.2 to Grid No.1 (Each unit) for dc plate volts = 150, dc grid No.2 volts = 150, and dc plate ma = 25 30

Direct interelectrode capacitances 3)
(Approx, Each unit) *

Grid No.1 to plate	0.15 $\mu\mu$F
Grid No.1 to cathode & grid No.3, Grid No.2, and filament	8.0 $\mu\mu$F
plate to cathode & grid No.3, Grid No.2, and filament	2.0 $\mu\mu$F

Mechanical

Mounting position
If the tube is mounted with its main axis deviating from the vertical it is recommended that the pins 2 and 7 are placed in a vertical plane.

Cooling
Radiation and convection. The use of a closed screening can is not permissible.

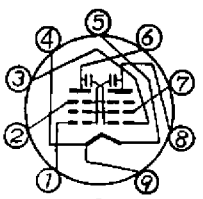
Maximum overall length	2-5/8"
Maximum seated length	2-3/8"

from JEDEC release #4451, Oct. 7, 1963

Length, Base seat to bulb top (Excluding tip) ..... 2″ ± 3/32″
Diameter ..... 0.750″ to 0.875″
Bulb T6-½

Base ..... Small-buttom Noval 9-pin (JEDEC No. E9-1)
Basing Designation for BOTTOM VIEW.

Pin 1-Grid No.1 of unit No.2
Pin 2-Grid No.3
Pin 3-grid No.1 of unit No.1
Pin 4-filament (+)



9QR

Pin 5-filament (−)
Pin 6-Plate of unit No.2
Pin 7-grid No.2
Pin 8-Plate of unit No.1
Pin 9-filament (+)

PUSH-PULL RF POWER AMPLIFIER & OSCILLATOR-CLASS C Telegraphy
and
PUSH-PULL RF POWER AMPLIFIER-Class C FM Telephony
Values are on a per-tube basis unless otherwise specified.

Maximum Ratings, Absolute - Maximum Values:

	ICAS ** (up to 500 MC)
DC plate voltage	250 max volts
DC Grid No.2 voltage	200 max volts
DC Grid No.1 voltage	-100 max volts
DC plate current	100 max ma
DC Grid No.1 current	8 max ma
DC cathode current	120 max ma
Plate input	14 max watts
Grid No.2 input	3.5 max watts
Grid No.1 input	0.24max watts
Plate dissipation	7.5 max watts

Bulb temperature
(At the hottest point on bulb surface) ..... 225 max °C

Typical operation

	(At 500 MC)
DC plate voltage	180 volts
DC grid-No.2 voltage	180 volts
DC grid-No.1 voltage	-20 volts
From grid resistor for each grid No.1 of	27000 ohms

Peak -to-peak RF

Grid-No.1 voltage	50 volts
DC Plate current	50 ma
DC grid-No.2 current	11.5 ma
DC grid-No.1 current	1.5 ma
Driver power output (APProx.)	1.2 watts
Useful power output *** (Approx.)	4.5 watts

Remarks

1. Filament supply from a dc / ac inverter is recommended. The permissible deviation from the filament voltage is ±10%. If the dc / ac inverter is fed from a 12.6 volts battery that is charged during operation (driving vehicle) the design center value for the supply voltage should be considered to be 14 volts.

2. It is defined as the time between switching-the heater voltage and the moment when useful power output has reached 70% of the final useful power output.

3. The tube is internally neutralized.

* Without external shield.

** Intermittent commercial and amateur service.

*** This value of useful power is measured at the load of output circuit.