

## DISC SEAL TRIODE

Indirectly heated disc seal triode primarily intended for use as a class "C" amplifier or oscillator at frequencies up to 1500Mc/s, or up to 3370Mc/s as a pulsed oscillator.

# TD3.5-12

### PRELIMINARY DATA

This data should be read in conjunction with GENERAL OPERATIONAL RECOMMENDATIONS – TRANSMITTING VALVES included in this volume of the handbook.

#### HEATER

$V_h$	6.3	V
$I_h$	900	mA

#### MOUNTING POSITION

Any

#### CAPACITANCES

$C_{a-g}$	$1.7 \pm 0.2$	pF
$C_{g-k}$	$2.8 \pm 0.45$	pF
$C_{a-k}$	$< 0.05$	pF
* $C_{k-k(r.f.)}$	$> 30$	pF

\*Capacitance between d.c. and r.f. cathode connections

#### CHARACTERISTICS (measured at $V_a = 250V$ , $I_a = 22.5mA$ )

$g_m$	8.0	mA/V
$\mu$	50	

#### OPERATION AS PUSH-PULL OSCILLATOR OR FREQUENCY MULTIPLIER (CLASS "C" TELEGRAPHY)

Limiting values (absolute ratings) per valve

$V_a$ max.	500	V
$p_a$ max.	12	W
$I_a$ max.	40	mA
$I_k$ max.	55	mA
$f$ max.	1500	Mc/s
$T_{seals}$ max.	200	°C

Typical operating conditions for two valves as push-pull oscillator

$f$	1500	1500	Mc/s
$V_a$	360	470	V
$I_a$	$2 \times 14$	$2 \times 19$	mA
$R_{g-k}$	1.0	1.0	k $\Omega$
$P_{out}$	4.7	9.0	W
$p_a$	$2 \times 2.65$	$2 \times 4.45$	W
$\eta$	47	50	%



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### OPERATION AS ANODE PULSE MODULATED CLASS "C" POWER OSCILLATOR

#### Limiting values (absolute ratings)

$V_{a(\text{pulse})}$ max.	3.5	kV
$p_a$ max.	12	W
$I_{k(\text{pulse})}$ max.	4.0	A
Max. duty cycle	0.006	
$t_p$ max.	2.0	$\mu\text{s}$
$f$ max.	3370	Mc/s

#### Typical operating conditions

$f$	3370	Mc/s
$V_{a(\text{pulse})}$	3.0	kV
$I_a$	3.5	mA
$I_{a(\text{pulse})}$	2.8	A
$P_{\text{out}}$	> 0.75	W
$P_{\text{out}(\text{pulse})}$	> 750	W
$R_{g-k}$	100	$\Omega$
Duty cycle	0.001	
$t_p$	1.0	$\mu\text{s}$
P.R.F.	1000	p/s



