14D13

RADIATION COOLED TRIODE

GENERAL

The 14D13 is a directly heated Radiation Cooled Triode which is mechanically and electrically identical to the V1505. It has a graphite anode and a thoriated tungsten filament. It is intended for use in Relay and Vibrator Amplifiers, also other low R.F. and A.F. service.

RATING—Absolute Values

Filament Voltage	V_f	14 ± 5%	V
Filament Current	I_f	7·0	A
Maximum Anode Voltage (D.C.)	$V_{a(max)}$	3·0	kV
Maximum Peak Cathode Current	$i_{k(pk)max}$	4·0	A
Maximum Anode Dissipation (continuous)	$P_{a(max)}$	300	W
Maximum Operating Frequency at full ratings	$f_{(max)}$	1·5	Mc/s

INTER-ELECTRODE CAPACITANCES (pF)

Anode/Grid	C_{a-g}	18
Grid/Filament	C_{g-f}	14
Anode/Filament	C_{a-f}	9·0

DIMENSIONS

Maximum Overall Length	345	mm
Maximum Diameter	90	mm
Maximum Seated Height	322	mm

MOUNTING POSITION—Vertical, base down

CHARACTERISTICS

Anode Voltage	V_a	2·0	kV
Anode Current	I_a	150	mA
Mutual Conductance	g_m	8·0	mA/V
Amplification Factor	μ	16	
Valve Anode Resistance	r_a	2·0	kΩ

Associated Electrical Industries Limited
Electronic Components Division
Tel.: GERRARD 9797

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TYPICAL OPERATION—Class AB2, two valves

Values for one valve unless otherwise stated.

Anode Voltage (d.c.) (no signal)	V_a	2·68*	kV
Anode Voltage (d.c.) (maximum signal)	V_a	2·5	kV
Grid Voltage (d.c.) (approx)	V_g	—160	V
Grid Voltage (r.m.s.) (A.F. Sine Wave)	$V_{g(r.m.s.)}$	180	V
Anode Current (d.c.) (no signal)	I_a	100	mA
Anode Current (d.c.) (maximum signal)	I_a	350	mA
Grid Current (d.c.) (maximum signal) (approx)	I_g	25	mA
Grid Current (peak) (approx)	$i_{g(pk)}$	400	mA
Driving Power (maximum signal) (approx)		6·0	W
Maximum Anode Dissipation	$P_{a(max)}$	300	W
Anode/Anode Load (two valves)		10	kΩ
Power Output (maximum signal) (two valves)	P_{out}	>1·2	kW
Distortion (total at maximum signal) (two valves)	D	<5	%

* Based on 10% h.t. supply regulation.

BASE—Special 4 pin

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