21B13

INERT GAS FILLED THYRATRON

TENTATIVE

GENERAL

The 21B13 is a xenon filled thyratron suitable for welding, motor control and other power applications. It has an indirectly heated oxide-coated cathode.

RATING

Heater voltage	V_h	5·0	V
Heater current	I_h	21	A
Maximum peak forward anode voltage		1·2	kV
Maximum peak inverse anode voltage	P.I.V.(max)	1·2	kV
Maximum mean cathode current (max averaging time 15 sec)	$I_{k(av)max}$	10*	A
Maximum peak cathode current	$i_{k(pk)max}$	100	A
Maximum surge cathode current (max duration 0·1 sec)		2000	A
Maximum anode voltage drop		18	V
Maximum anode voltage for conduction		70	V
Maximum negative grid voltage before conduction		−200	V
Maximum negative grid voltage after conduction		−10	V
Maximum grid resistance	$R_{g(max)}$	50	kΩ
Recommended minimum grid resistance	$R_{g(min)}$	10	kΩ
Minimum pre-heat time		120	s
Ambient temperature range		−55 to +75°C	

* The anode structure must be left free, to ensure adequate cooling by free convection.

INTER-ELECTRODE CAPACITANCES

Anode/grid	C_{a-g}	8·8	pF
Anode/cathode	C_{a-k}	0·15	pF
Grid/cathode	C_{g-k}	13·4	pF

CHARACTERISTICS

Approximate ionization time	10	μs
Approximate recovery time (V_g=−200V)	50	μs
Approximate recovery time (V_g=−10V)	500	μs
Critical grid current (at V_a=1kV)	<20	μA
Control ratio	200 : 1	

Associated Electrical Industries Limited
Electronic Components Division
Tel: GERrard 9797

21B13

INERT GAS FILLED THYRATRON

TENTATIVE

MOUNTING POSITION—Vertical, base down

DIMENSIONS

Maximum overall length	230 mm
Maximum diameter over bulb	70 mm
Maximum diameter over connectors	115 mm

CAP—$\frac{9}{16}$" diameter

BASE—Special

CONNECTIONS

Anode—Cap
Grid—Flexible lead from body of valve
Heater—Copper strip on base with 2BA slot
Heater and Cathode—Copper strip on base with 0BA clearing hole

Associated Electrical Industries Limited
Electronic Components Division
Tel: GERrard 9797