VALVE ELECTRONIC **CV291**

ADMIRALTY SIGNAL AND RADAR ESTABLISHMENT

Specification AD/CV291 Issue No.4 dated 10/11/55 To be read in conjunction with K1001	SECURITY Specification: Unclassified	 Valve: Unclassified

⟶ Indicates a change

TYPE OF VALVE:- Mixer Crystal Valve. (Silicon)

ENVELOPE:- Cartridge, Unshielded

MARKING: CV291

RATINGS			Note
Max. Frequency of Operation	(Mc/s)	6000	
Min. Back to Forward resistance ratio.		8:1	
Max. Forward Resistance	(Ohms)	265	A
⟶ Max. amount by which performance is below "Standard best".	(dB)	3.0	
Max. Noise temperature ratio.		2.6	
Nominal I.F. Impedance	(Ohms)	350	

DIMENSIONS: K1001/A.1/D8

NOTE

A. In an ohmmeter type of measurement using 1.5V source with series resistance of 500 ohms and a 3 mA, F.S.D. meter.

TESTS

To be performed in addition to those applicable in K1001

	Test Conditions	Test	Limits		No. Tested	Note
			Min.	Max.		
(a)	The crystal shall be subjected to 3000 pulse discharges in the conducting direction, (spaced at least 200 μsecs. apart) from a 20 pF condenser at an energy level of 0.6 ergs.	Resistance to Burn-out The crystal shall subsequently pass tests (b) and (c)	-	-	100%	
(b)	The overall performance shall be measured in the standard test equipment Pattern 65682X "Performance Meter for Crystal Valves".	Performance Measurement dB's below "Standard best"	-	3.0	100%	1
(c)	The rectified current to be measured in Pattern 65682X "Performance Meter" switched to "Manual" operation.	Rectified Current (μA)	500	-	100%	2

NOTES

1. A.S.R.E. will calibrate standard crystals relative to the "Standard best" crystal. Sub-standard crystals should be chosen by the manufacturer for routine checks.

2. A standard crystal is used in this test which is a different standard to that used in test (a). The local oscillator power level of the Performance Meter, Pattern 65682X shall be set to give 500 μA crystal current with this standard crystal inserted. This power level shall be kept constant. All crystals which pass less than 500 μA when the Performance Meter is tuned to give maximum performance reading shall be rejected.