

ELECTRONIC VALVE SPECIFICATION

CV7062 - 65

ISSUE 1 DATED 15.1.60

AMENDMENT NO. 1

Page 3

5D.4.1 under Test Conditions, amend CV numbers to read as follows:-

CV7062/63

CV7064/65

Collector-emitter under Test Conditions amend CV
breakdown voltage numbers to read as follows:-

CV7062/64

CV7063/65

P.T.O.

Pages 4,5 & 6 5D.4.1

in each case, under Test Conditions, CV numbers to read as follows :-

CV7062/63

CV7064/65

September, 1960.
N.33934

R.R.E., Malvern.

ELECTRONIC VALVE SPECIFICATION
CV7062-65. ISSUE 1. DATED 15.1.60.

AMENDMENT NO.2.

Page 2. Delete existing curves and attach curve given below.

Page 3. GROUP C. Add the following clause:-

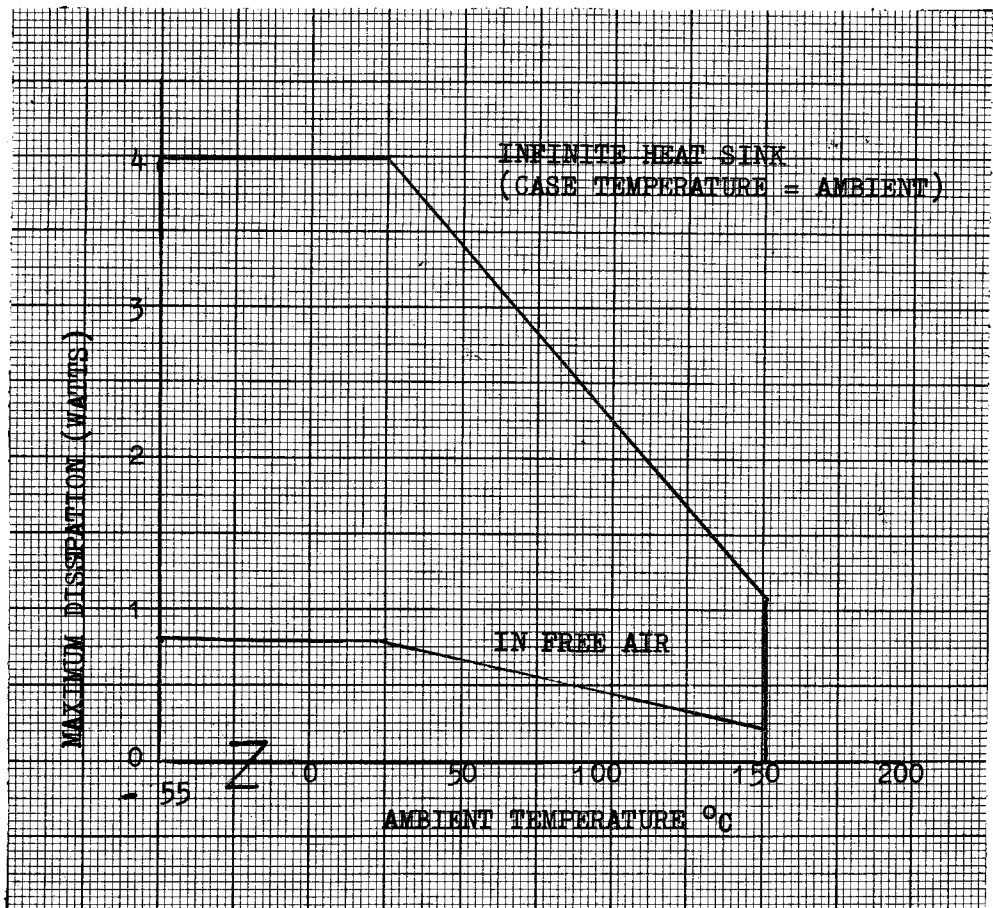
5. D.2.2. Emitter Base leakage current

$V_{EB} = 8v.$ $I_C = 0.$ AQL = 2.5%. Insp. Level I.

Symbol $I_{EBO}.$ Max. Limit 250. Units $\mu A.$

R.R.E.

January 1962.



ELECTRONIC VALVE SPECIFICATIONS
SPECIFICATION CV7062-65
ISSUE NO.1 DATED 15.1.1960
AMENDMENT NO.3

Page 3 Group D

5.D.5 Cut off frequency of h_{fb}
Insert maximum limit "15 Mcs".

May, 1962.

Ministry of Aviation/RRE

40182

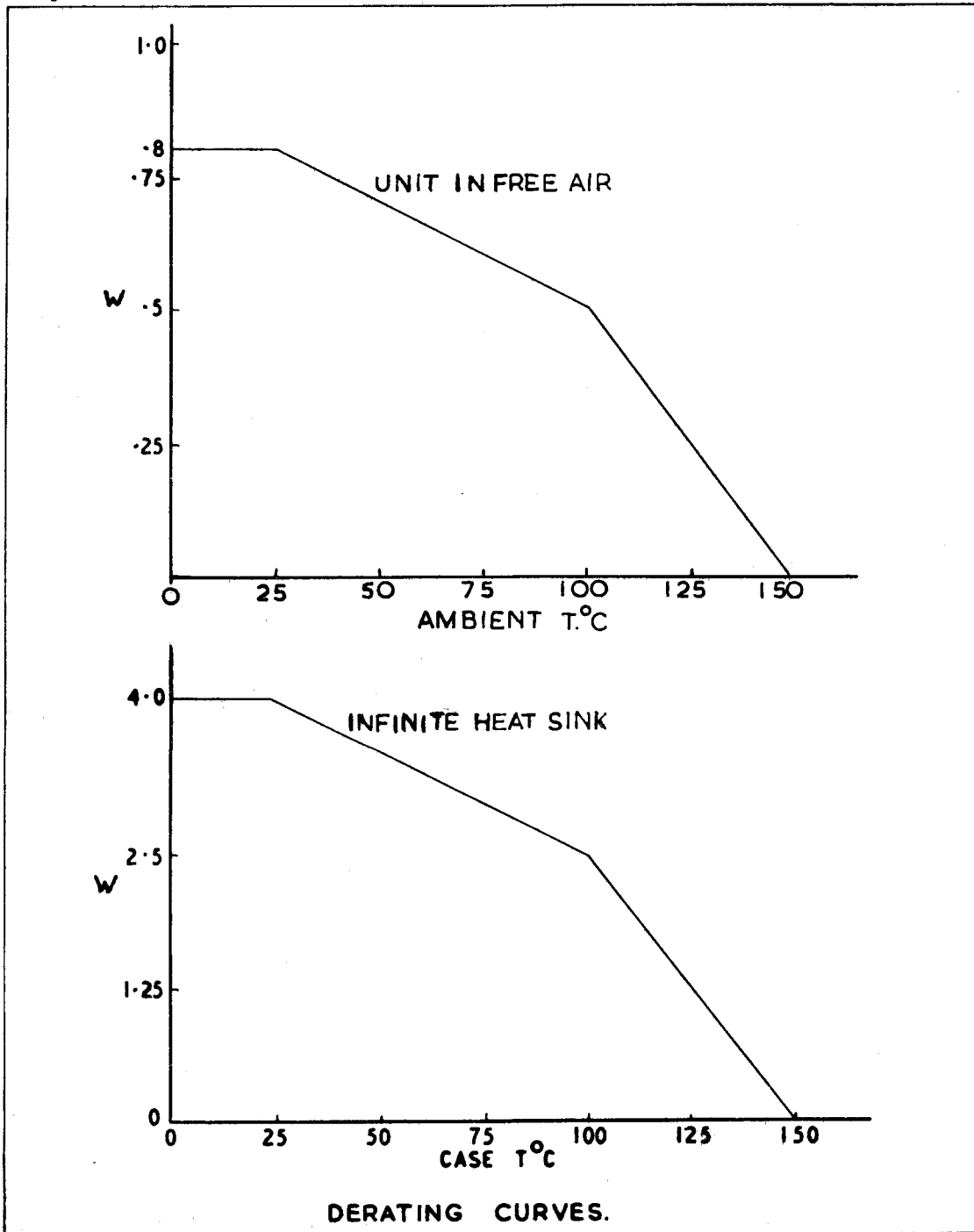
Specification MOA/CV.7062/63/64/65 Issue 1 dated 15.1.60 To be used in conjunction with K1007	<u>SECURITY</u>	
	<u>Specification</u> Unclassified	<u>Valve</u> Unclassified

indicates a change

TYPE OF DEVICE - Silicon n-p-n junction transistor CONSTRUCTION - Metal body PROTOTYPE - 2S017/18/19/20			<u>MARKING</u> See K1007/4 CV number and if practicable Factory code and Date code
<u>RATING</u> All limiting values are absolute		Note	<u>DIMENSIONS</u> See K1007/A1/D3A (outline) K1007/A1/D3B (base)
Max collector dissipation at 100°C (W)	0.5	A	<u>MOUNTING POSITION</u> Any
Max collector - emitter voltage and max collector - base voltage			
CV 7062/64 (V) CV 7063/65 (V)	60 100		<u>PACKAGING</u> See K1007/14
Max mean collector current (mA)	200		
Max base emitter voltage (V)	8		
Ambient temperature range (°C)	-55 +150		<u>CONNECTIONS</u> 1. Emitter 2. Base 3. Collector, internally connected to case.
<u>TYPICAL CHARACTERISTICS</u>			
Alpha cut off frequency (Mc/s)	5		
DC current gain, grounded emitter			
CV 7062/63 CV 7064/65	25 50		
<u>NOTES</u>			
A. See rating curves on Page 2			
B. JOINT SERVICE CATALOGUE NUMBERS.			
	CV 7062 =	5960 - 99 - 037 - 2115	
	CV 7063 =	5960 - 99 - 037 - 2116	
	CV 7064 =	5960 - 99 - 037 - 2121	
	CV 7065 =	5960 - 99 - 037 - 2122	

CV7062-65/1/1

Z.20538.



DERATING CURVES.

To be performed in addition to those applicable in K1007

CV7062-
CV7065

K1007 Ref.	Test	Test Conditions	AQL %	Insp. Level	Sym- bol.	Limits		Units
						Min.	Max.	
5D.2	<u>GROUP A</u> Collector-base leakage current	$V_{db} = 30v.$ $I_e = 0$		100%	I_{cbo}		10	μA
5D.4.1	Large signal current gain (1)	$V_{ce} = 10v$ $I_c = 200 \text{ mA}$ CV 7062/64 CV 7063/65		100%	h_{FE}	12 30	36 90	
	Collector-emitter breakdown voltage	Note 1 $I_{oe} = 250 \mu A$ $I_B = 0$ CV 7062/63 CV 7064/65		100%	BV_{CEO}	60 100		V V
	<u>GROUP B</u>	Omitted						
5D.3.2	<u>GROUP C</u> Collector-emitter saturation voltage	$I_o = 200 \text{ mA}$ $I_b = 40 \text{ mA}$ Note 1	2.5	I	V_{ce} (Sat)		5	V
5D.8.2	Common emitter input resistance	$V_{ce} = 10v$ $I_b = 8 \text{ mA.}$ Note 1	2.5	I	h_{IE}		500	ohms
5D.4.1	Large signal $V = 10V$	$= 1.5 I_c h_{FE}$						
5D.5	<u>GROUP D</u> Cut-off frequency of h_{fb}	$V_{ce} = 30v$ $I_c = 30 \text{ mA}$ Note 2	6.5	IC	h_{fb}	3		Mz/s
11.5 10.1	<u>GROUP E</u> Soldering Lead Fragility Note 3.		6.5 6.5	IC IC				

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CV7065

K1007	Test	Test Conditions	AQL	Insp. Level	Sym- bol	Limits		Units
						Min.	Max.	
	<u>GROUP E (cont'd)</u>							
10.2	Temperature Cycling	Three cycles -55°C + 5°C -10°C to 150°C			IC			
10.3	Climatic Test <u>Post Climatic and Temperature cycling Tests</u>							
8	Inoperatives		6.5					
5D.2	Collector base leakage current	$V_{cb} = 30v.$ $I_e = 0$	6.5		I_{cbe}		12	μA
5D.4.1	Large signal current gain	$V_{ce} = 10v.$ $I_c = 200 \text{ mA}$ Note 1 CV 7062/64 CV 7063/65	6.5			10 24	42 108	
11.3	Fatigue				IC			
11.4	Shock <u>Post Fatigue and Shock Tests</u>	Hammer Angles 60°			TA			
8	Inoperatives		6.5					
5D.2	Collector base leakage current	$V_{cb} = 30v$ $I_e = 0$	6.5		I_{cbo}		12	μA
5D 4.1	Large signal current gain	$V_{ce} = 10v$ $I_c = 200 \text{ mA}$ Note 1 CV 7062/64 CV 7063/65	6.5		h_{FE}	10 24	42 108	

K1007	Test	Test Conditions	AQL	Insp. Level	Sym- bol	Limits		Units
						Min	Max	
	<u>GROUP F</u>							
13	Life	$P_c = 0.8W$ $T_{amb} = +15^{\circ}C$ to $+30^{\circ}C$ $V_{ce} = 24v$ Note 5		IA				
13.3	<u>Life Test end point 1000 hours</u>	Combined AQL	10					
8	Inoperatives		6.5					
5D.2	Collector base leakage current	$V_{cb} = 30v$ $I_e = 0$	6.5		I_{cbo}		12	μA
5D.4.1	Large signal current gain	$V_{ce} = 10v$ $I_c = 200mA$ Note 1 CV 7062/64 CV 7063/65	6.5		h_{FE}		10 24	42 108
13.3.3	<u>Life Test end point 240 hours</u>							
8	Inoperatives		6.5					
5D.2	Collector-base leakage current	$V_{cb} = 30v$ $I_e = 0$	6.5		I_{cbo}		12	μA
5D.4.1	Large signal current gain	$V_{ce} = 10v$ $I_c = 200mA$ Note 1 CV 7062/64 CV 7063/65	6.5		h_{FE}		10 24	42 108
13.4	Storage Life (1)	$t = 150$ hours $T = 55^{\circ}C + 0^{\circ}C$ $-10^{\circ}C$		IA				
13.5	Storage Life (2)	$t = 150$ hours $T = +150^{\circ}C \pm 5^{\circ}C$		IA				
	<u>Post Storage Life Tests</u>	Combined AQL for Storage Life (1) Storage Life (2)	2.5 4.0					

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K1007 Ref	Test	Test Conditions	AQL	Insp. Level	Sym- bol	Limits		Units
						Min	Max	
5D.2	<u>Group F (Cont'd)</u> Collector base leakage current	$V_{cb} = 30v$ $I_e = 0$			I_{cbo}		12	μA
5D.4.1	Large signal current gain	$V_{ce} = 10v$ $I_c = 200ma$ Note 1 CV7062/64 CV7063/65			h_{FE}	10 24	42 108	
8	<u>GROUP G</u> Retest after 28 days holding period Inoperatives			100%				
5D.2	Collector-base leakage-current	$V_{cb} = 30v$ $I_c = 0$	0.5 2.0		I_{cbo}		10	μA
5D.4.1	DC common emitter current gain	$V_{ce} = 10v$ $I_c = 200ma$ Note 1 CV7062/64 CV7063/65	2.0		h_{FE}	12 30	36 90	

NOTES

1. A pulse width of not more than 500 μ Sec is used with approximately 2% duty cycle.
2. The transistor is mounted on a 2" x 2" 16 gauge aluminium heat sink.
3. Transistors used for this test must have undergone at least 28 cycles of the climatic test in accordance with K1007 section 10.3.1 or section 10.3.2 or 6 cycles in accordance with section 10.3.3.
4. The average to be taken only on units that are within the specified life test end points of I_{cbo} and h_{FE} .
5. This test may be carried out at a dissipation not less than the appropriate point on the derating curve on page 2, corresponding to the t_{amb} chosen by the manufacturer.