

# Mullard

## OCTODE FREQUENCY CHANGER

# EK32

### HEATER

This valve is suitable for DC/AC operation

$V_h$	6.3	V
$I_h$	0.2	A

### CAPACITANCES

$c_{in}$	9.0	uuF
$c_{out}$	10.5	uuF
$c_{g1-g4}$	< 1.0	uuF
$c_{g2-g4}$	<< 0.25	uuF
$c_{a-g4}$	< 0.1	uuF
$c_{g1-all}$	6.0	uuF
$c_{g2-all}$	5.0	uuF

### OPERATING CONDITIONS FOR MEDIUM AND LONG WAVELENGTHS

$V_a$	250	V
$V_{g2}$	200	V
$V_{g3+5}$	50	V
$R_{g1}$	50,000	ohms
$V_{g1}$ (rms)	15	V
$I_{g1}$	300	uA
$I_a$ ( $V_{g4} = -2V$ )	1	mA
$I_a$ ( $V_{g4} = -25V$ )	< 0.015	mA
$I_{g2}$ ( $I_a = 1mA$ )	2.5	mA
$I_{g3+5}$ ( $I_a = 1mA$ )	0.8	mA
$g_c$ ( $I_a = 1mA$ )	0.55	mA/V
$g_c$ ( $V_{g4} = -25V$ )	< 0.002	mA/V
$r_a$ ( $I_a = 1mA$ )	> 2	megohms
$r_a$ ( $V_{g4} = -25V$ )	> 10	megohms

### OPERATING CONDITIONS FOR SHORT WAVELENGTHS.

$V_a$	250	250	V
$V_{g2}$	200	200	V
$V_{g3+5}$	80	80	V
$R_{g1}$	16,000	50,000	ohms
$V_{g1}$ (rms)	5	9	V
$I_{g1}$	275	200	uA
$V_{g4}$	-4	-4	V
$I_a$	2.3	1.7	mA
$I_{g2}$	5.3	4.0	mA
$I_{g3+5}$	1.9	1.3	mA
$g_c$	0.65	0.5	mA/V
$r_a$	0.9	1.4	megohms

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### LIMITING VALUES

$V_{a(b)}$ max	550	V
$V_a$ max	250	V
$w_a$ max	1.0	W
$V_{g3+5(b)}$ max	550	V
$V_{g3+5}$ max	125	V
$I_{g2}$ min	2.0	mA*
$I_{g2}$ max	3.0	mA*
$I_{g3+5}$ min	0.6	mA*
$I_{g3+5}$ max	1.0	mA*
$I_{g2}$ min	4.2	mA**
$I_{g2}$ max	6.4	mA**
$I_{g3+5}$ min	1.5	mA**
$I_{g3+5}$ max	2.3	mA**
$I_{g2}$ min	3.2	mA***
$I_{g2}$ max	4.8	mA***
$I_{g3+5}$ min	1.0	mA***
$I_{g3+5}$ max	1.6	mA***
$w_{g3+5}$ max	0.3	W
$R_{g4}$ max	2.5	megohms
$V_{g4}$ max ( $I_{g4}=0.3\mu A$ )	-1.3	V
$V_{g2(b)}$	550	V
$w_{g2}$ max	1.3	W
$R_{g1}$ max	100,000	ohms
$I_k$ max	12	mA
$R_{h-k}$ max	5000	ohms
$V_{h-k}$ max	50	V
$V_{g2}$ max	225	V

\* Medium and long wave operation ( $V_{g1} = 15V.rms$ )  
 \*\* Short wave operation ( $V_{g1} = 5V.rms$ )  
 \*\*\* Short wave operation ( $V_{g1} = 9V.rms$ )

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