



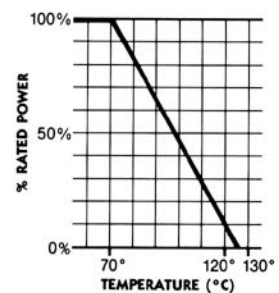
SERVO MOUNT/BALL BEARING
MODEL 4504

HYBRID 3, 5 AND 10-TURN PRECISION POTENTIOMETERS

SERVO MODEL	4504
ELECTRICAL	
Theoretical Electrical Travel	1080°
Normal Resistance Range	1K to 30K
Extended Resistance Range ⁽¹⁾	500 Ω to 60K
Resistance Tolerance: Standard %	± 5
Best Practical %	± 3
Power Rating At 70°C, Derating To 0 at 125°C (Watts)	3.0
Linearity, Independent, Tolerance, Standard %	± 0.25
Best Practical %	± 0.075
Output Smoothness Max. (% Of Applied Voltage)	0.25
End Voltage Max. (% Of Total Applied Voltage)	0.25
Insulation Resistance At 500 VDC, Min. (Megohms)	1000
Dielectric Withstanding Voltage (Volts RMS)	1000
Max. Applied Voltage (Volts DC) ⁽²⁾	1000
Temperature Coefficient Of Potentiometer, Max. %/°C	$\pm .007$
Tap Spacing Minimum	16°
MECHANICAL	
Total Mechanical Travel	1080° + 10° - 0°
Mechanical Life, Shaft Revolutions	5 million
Ganged Cups, Max. (Number)	3
Taps, Max., Excluding End Terminations	35
Moment Of Inertia, Per Cup (gm-cm ²)	6.5
Weight: Single Cup (oz.)	3.0
Each Additional Cup (oz.)	1.9
Torque, Max. Per Cup (oz.-in)	1.0
Pilot Diameter Runout, Max.	.001
Lateral Runout, Max.	.0015
Shaft Runout, Max.	.001
Shaft Radial Play, Max.	.001
Shaft End Play, Max.	.005
Dimension For Each Additional Cup	.963 $\pm$.002
Stop Strength Static (oz.-in)	750
ENVIRONMENTAL	
Temperature Range (°C) Standard	-55 to +125

(1) All specifications listed apply to units with a total resistance within the normal resistance range. Higher or lower resistances may require some degradation of listed specifications because of resistance material composition.

(2) Not to exceed specified power rating.



ALL MODELS are manufactured to meet or exceed applicable characteristics of MIL-R-39023. For MILITARY-APPROVED (QPL) Listings, see page 52.

TOLERANCES UNLESS OTHERWISE SPECIFIED:

FRACTIONAL: $\pm 1/64"$ DECIMAL: $\pm .005"$ ANGULAR: $\pm 1^\circ$

LENGTHS

MODEL	NUMBER OF TURNS	LENGTH DIMENSION L
4204	3	1.070 $\pm$.006
4504		1.388 $\pm$.007
4704		1.231 $\pm$.007
4207	5	1.213 $\pm$.006
4507		1.610 $\pm$.007
4201	10	1.570 $\pm$.006
4501		2.165 $\pm$.007
4701		2.008 $\pm$.007

4504

