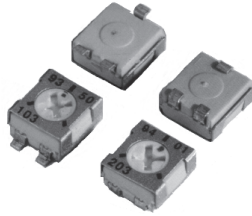


5mm Surface Mount Cermet Trimmers



FEATURES

- Both the J-Lead (4J) and Gull Wing (4G) are Fully Sealed for Wave Soldering
- Vapour Phase Soldering
- Reflow Soldering and Immersion Cleaning
- Designed for Manual or Automatic Operation

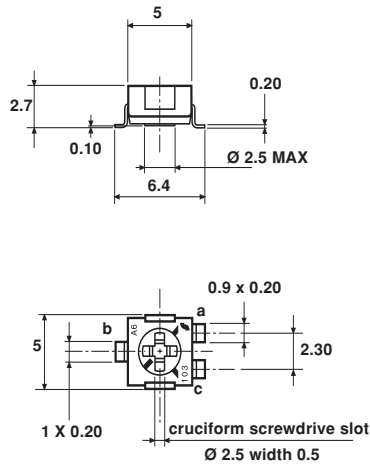
The Models 4G and 4J trimming potentiometers have been designed for high performance and stability with optimum packaging density. Both the J-lead (4J) and gull wing (4G) are fully sealed for wave, vapour phase, reflow soldering and immersion cleaning processes. Designed for both manual or automatic operation, and fitted with mechanical stops, both models are available in bulk or tape and reel packaging.

ELECTRICAL SPECIFICATIONS	
PARAMETER	4G AND 4J
Effective Travel	220° ± 15°
Resistance Range	10Ω to 1MΩ
Standard Series	1 - 2 - 5
Resistance Tolerance	± 20%
Power Rating Linear	0.2W at 85°C or 0.25W at 70°C
Logarithmic	Not Available
Typical Temperature Coefficient	(For RN ≥ 100Ω) 50ppm/°C
Limiting Element	Voltage (linear law) 200V
Contact Resistance Variation	2% or 3Ω
End Resistance Variation (typical)	1Ω
Dielectric Strength (RMS)	1000V
Insulation Resistance	10 ⁶ MΩ

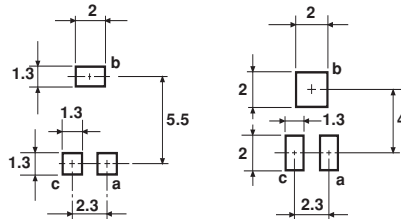
ORDERING INFORMATION		
4G	XXX	TR
MODEL	RESISTANCE VALUE	PACKAGING
4G, 4J	EIA Code	TR - Tape and reel by 500 pieces B - Bulk (Plastic box of 100 - 250 pieces)
Example: 4G - XXX - TR		

DIMENSIONS in millimeters

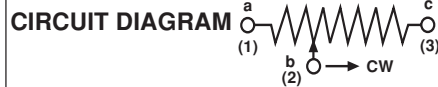
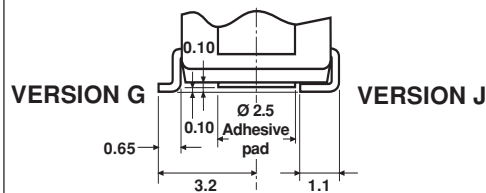
DIMENSIONS 4G



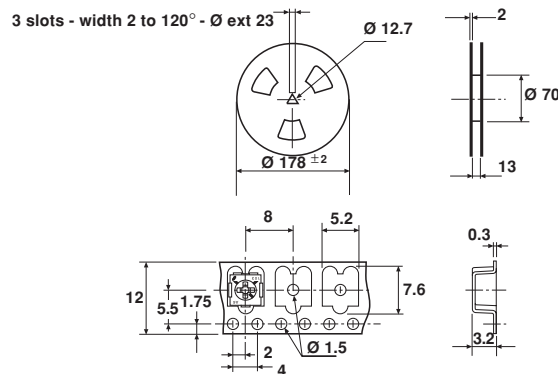
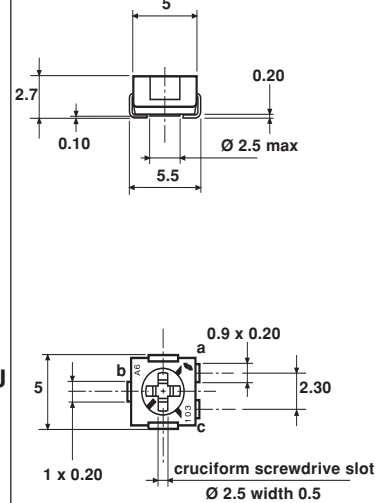
RECOMMENDED SOLDERING AREAS



ADHESIVE PAD (detail)



DIMENSIONS 4J



Cover tape panel strength specifications
EIA 481 A and 286 CE1 3.

MECHANICAL SPECIFICATIONS

PARAMETER	
Mechanical Travel	270° ± 10°
Operating Torque	1.5 (maximum. Ncm)
End Stop Torque	3.5 Ncm
Unit Weight	0.15 (maximum. g)
Resistance Element	Cermet



ENVIRONMENTAL SPECIFICATIONS			
TESTS	CONDITIONS	$\frac{\Delta RT}{RT} \%$	$\frac{\Delta R1 - 2}{R1 - 2}$
Load Life	1000 Hours at rated power 90°/30° - Ambient Temperature + 85°C	2% Contact Resistance Variation	3% $\Delta < 1\% R_n$
Moisture Resistance	MIL STD 202 Method 106 10 Cycles of 24 hours constituted with Damp heat - cold - vibrations	2% Dielectric strength 1000 V _{RMS} Insulation resistance: $> 10^4 M\Omega$	3%
Long Term Damp Heat	Temperature 40°C - RH 90 - 95% 10% rated power 56 Days	2% Dielectric Strength 1000V _{RMS} Insulation Resistance $> 10^4 M\Omega$	3%
Thermal Shocks	55°C to + 125°C Cycles	1% $\Delta \frac{V1 - 2}{V1 - 3}$	2%
Rotational Life (electrical and mechanical)	100 Cycles - rated power	3%	—
Shocks	MIL STD 202 Method 213/1 100g - 6 ms 3 successive shocks in 3 directions	1% $\Delta \frac{V1 - 2}{V1 - 3}$	1%
Vibrations	MIL STD 202 Method 204/D 20g - 12 hours	1% $\Delta \frac{V1 - 2}{V1 - 3}$	1%
Temperature Range	-55°C to + 155°C	—	—
Climatic Category	55/125/56	—	—
Sealing	Sealed Container Solder Immersion	—	—

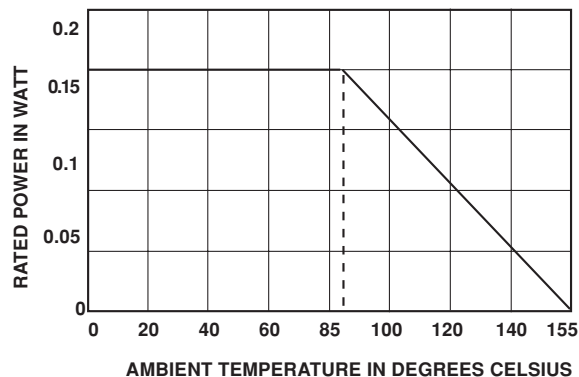
Surface Mounting (according to VCRI)

Soldering cycle: 2mm at 215°C or 10 seconds at 260°C or with an Iron 40W 3 seconds at 350°C. Soldering is possible by waves, reflow and vapour phase.

RESISTANCE VALUES	
Ohms	10R, 20R, 50R, 100R, 200R, 500R, 1K, 2K, 5K, 10K, 20K, 50K, 100K, 200K, 500K, 1M

MARKING	
Unit Identification	IEC resistance value coding, date coding.

POWER RATING CHART



Standard Resistance Element Data

LINEAR LAW				
STANDARD RESISTANCE VALUES	MAX. POWER AT 85°C	MAX. WORKING VOLTAGE	MAX. CUR. THROUGH ELEMENT	T.C - 55°C + 125°C
Ω	W	V	mA	ppm/°C
10	0.20	1.41	141	0 + 200
20		2.00	100	
50		3.16	63	
100	0.20	4.47	45	± 100
200		6.32	32	
500		10	20	
1K		14	14	
2K		20	10	
5K		31.6	6.3	
10K		44.7	4.5	
20K		63.2	3.2	
50K		100	2.0	
100K		141	1.4	
200K	0.20	200	1.0	
500k	0.08	200	0.4	
1M	0.04	200	0.2	