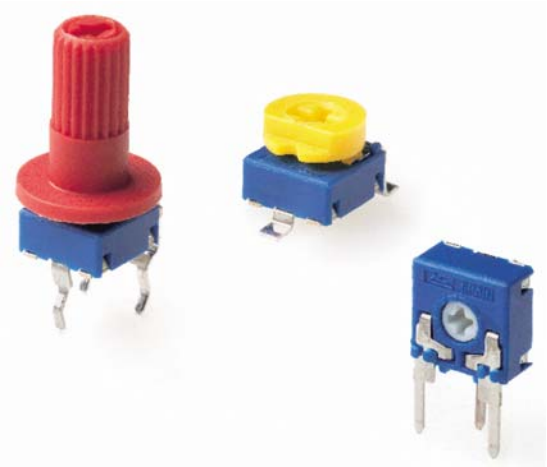
VIMEX INTERNATIONAL CORPORATION
http://www.vimex.com

CARBON Trimmer Potentiometers
CA6 Series

800-227-0075



Available in both through hole and surface mount configurations.

Trimming potentiometers with polyester substrate and carbon resistive pastes. They have a plastic housing with IP 5 protection (dust-proof).

Terminals are manufactured in tinned brass to guarantee better soldering, as well as higher resistance to corrosion. They can be provided straight or crimped (snap-in), which is recommended for securing components to the board prior to the soldering operation.

These potentiometers can be adjusted from either side, both in the horizontal and the vertical types. There is an adjusting guide on the housing, which simplifies the manual adjusting operation.

Carbon potentiometers can be manufactured in a wide range of types, according to:

- Resistive value
- Tolerance
- Tapers / variation laws of the resistive element (linear, log, antilog). Others on request.
- Pitch
- Positioning of the wiper (the standard is at 50%).
- Housing and rotor color to help with its identification.
- Mechanical life

Self-extinguishable properties according to UL 94 V-0.

GENERAL NOTES

Characteristics

- 6mm (1/4") / Carbon / IP 5 protection (dust-proof)
- compact form offers high power to size ratio
- Low noise level
- High stability part can be used in high frequency circuits
- Low temperature co-efficient

Applications

- Small electronic appliances.
- Measurement and test devices.
- Telecommunication equipment (antenna amplifiers and receivers, videocomm., intercomm.)
- Alarm systems.

HOW TO ORDER

CA6		X		V5	-	25K	-	M

SERIES / MODEL		ROTOR		TERMINAL CONFIGURATION	-	RESISTANCE	-	TOLERANCE
CA6		X M N		H2.5 V2.5 V5 VS5 HSMD VSMD	-	**Example:** **253 = 25,000Ω** ***or*** **25K = 25,000Ω**	-	**K = ± 10%** **M = ± 20%** **N = ± 30%**

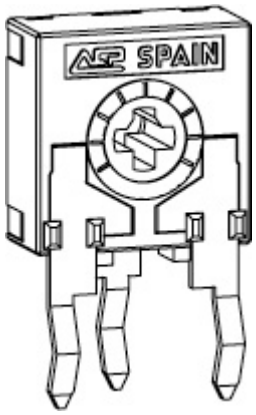
Call factory @800-227-0075 for special codes.

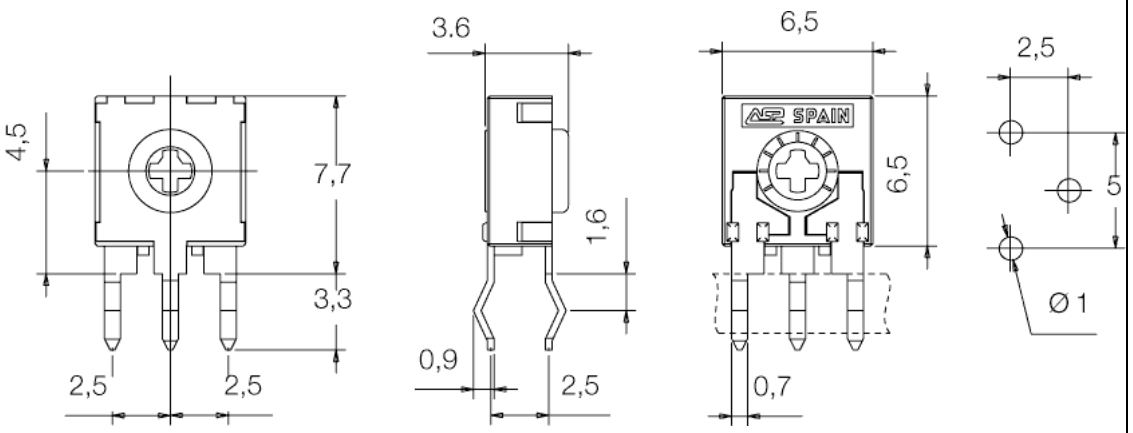
PACKAGE QUANTITY

Model	Accessory inserted	Pieces per package
H2.5, V2.5, V5, VS5, HSMD, VSMD	-no accessory	1,000/box
	6001 or 6030 or 6032	1,000/box
	6022 or 6023 or 6024 or 6031	500/box
	6025 or 6028	300/box
HSMD & VSMD	-no accessory	1,000/reel

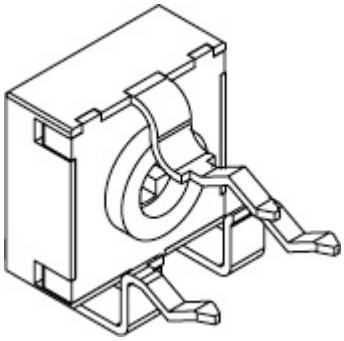
MODELS

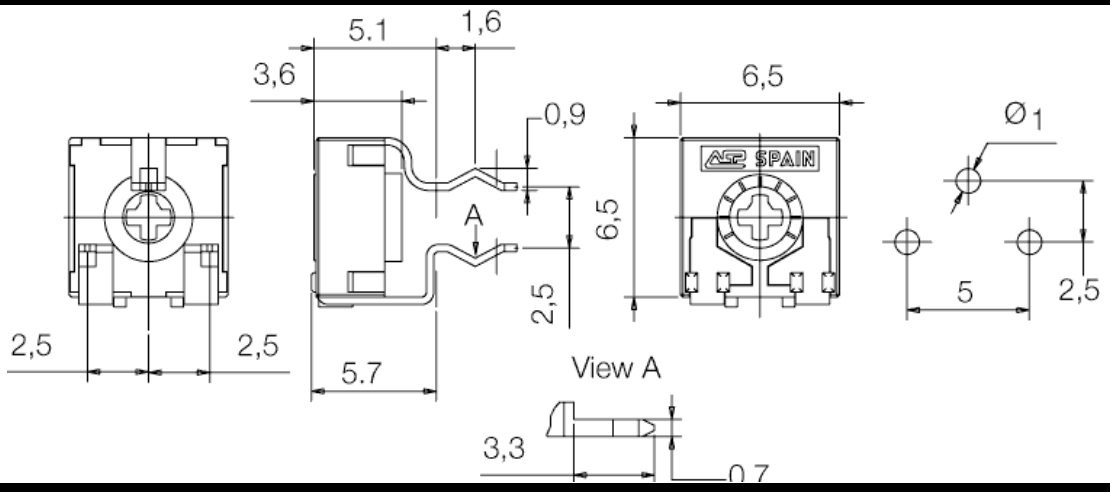
CA6 H2.5



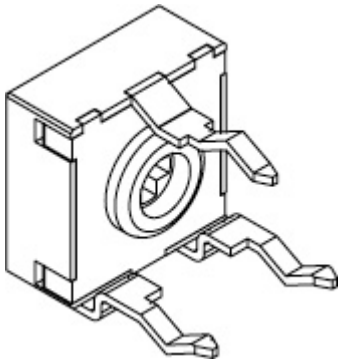


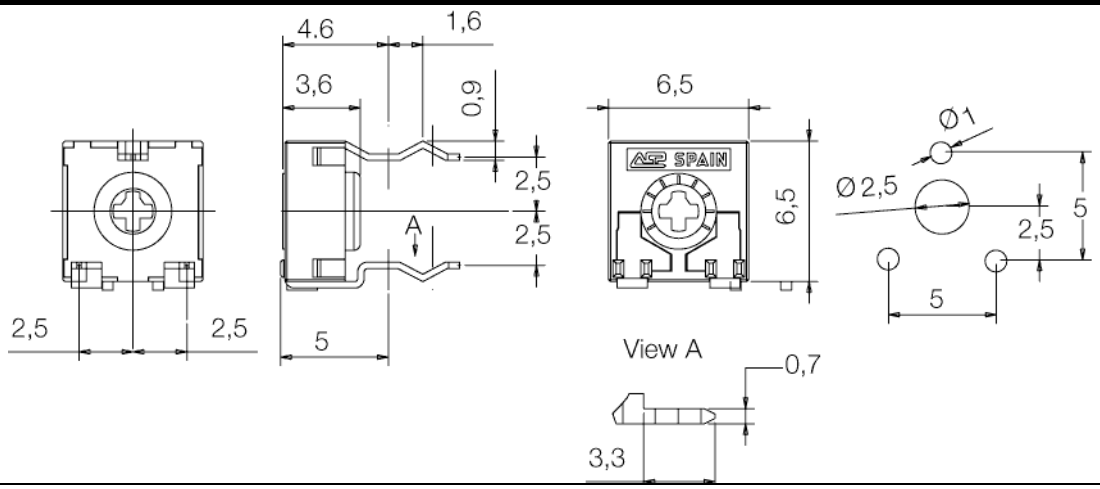
CA6 V2.5





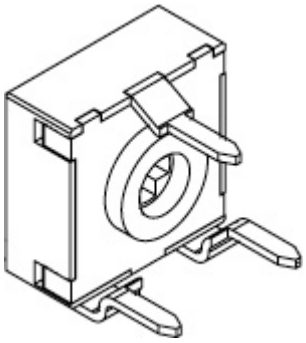
CA6 V5

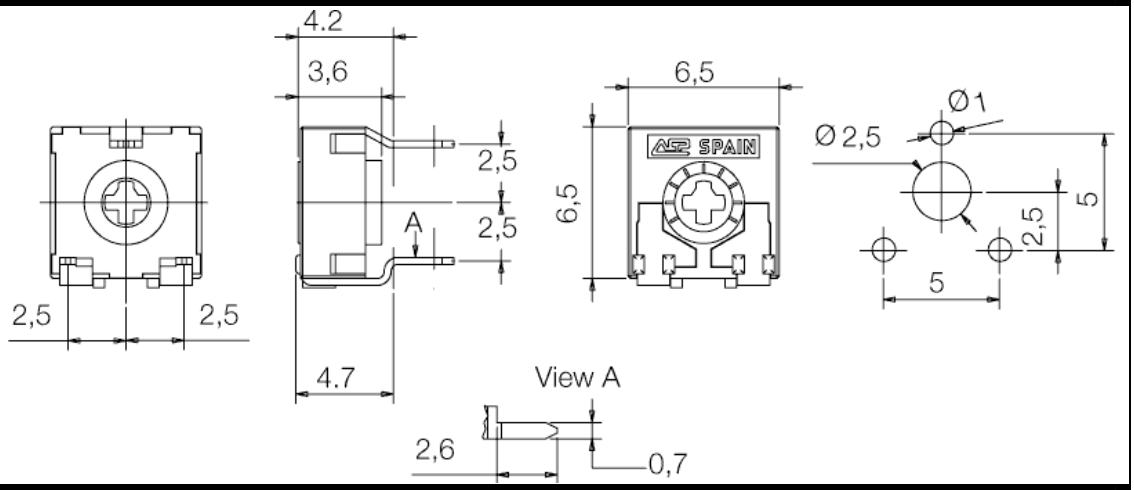




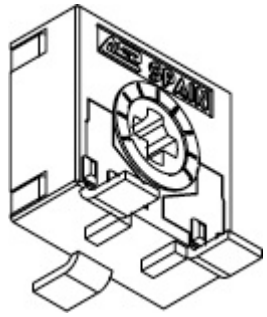
MODELS

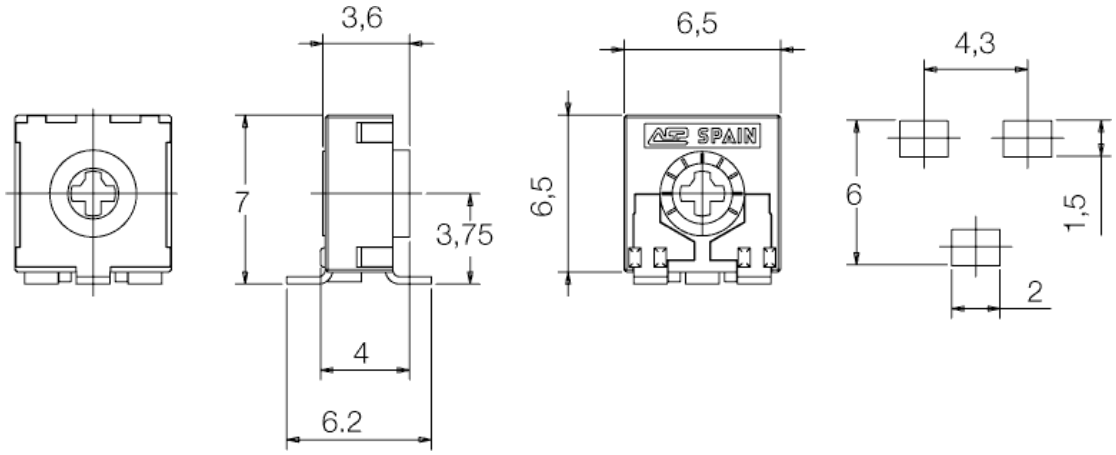
CA6 VS5



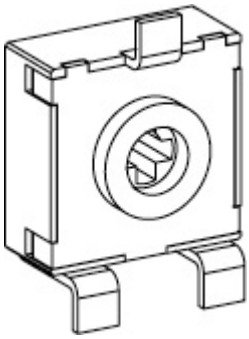


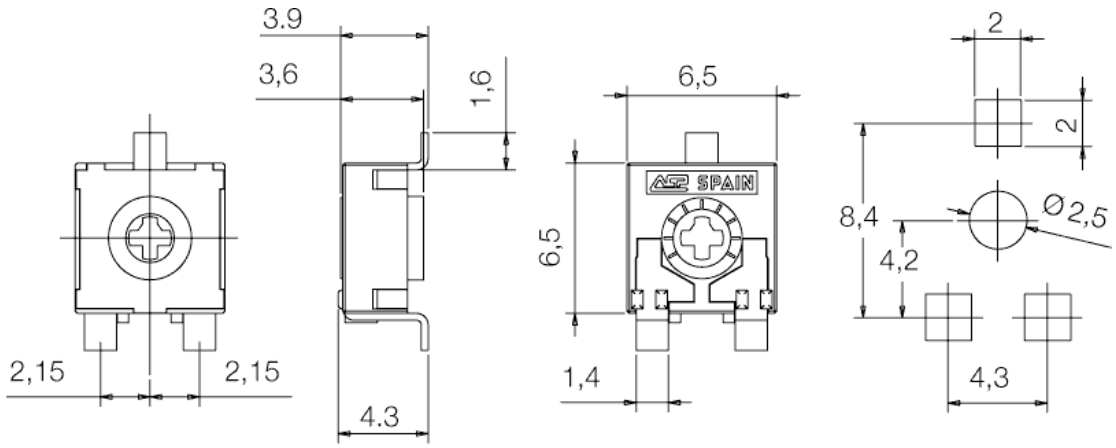
CA6 HSMD





CA6 VSMD





Electrical

Standard Resistance Range	:	Taper	Through Hole	SMD
		Linear (A)	100Ω ~ 5MΩ	100Ω ~ 1MΩ
		Log (B) Antilog (C)	1KΩ ~ 2.2MΩ	1KΩ ~ 1MΩ

Resistance Tolerance *(others available on request)*	:	Through Hole	SMD
		100Ω ~ 1MΩ ±20%	>1MΩ ±25%
		>1MΩ ~ 5MΩ ±30%	
		Rn>5MΩ +50% -30%	

Variation laws	:	Linear (A), Log (B), Antilog (C) *(Other tapers available on request)*	
Residual resistance	:	$\leq 5*10^{-3}*R_n$ (2Ω minimum value)	
Contact resistance variation (dynamic)	:	$\leq 3\%R_n$	
Contact resistance variation (static)	:	$\leq 5\%R_n$	
Max. Power dissipation @40°C	:	Linear (A) Taper	0.10W
		Log (B) & Antilog (C) Tapers	0.06W
Max. Voltage @40°C	:	Linear (A) Taper	100VDC
		Log (B) & Antilog (C) Tapers	60VDC
Operating Temperature	:	-25°C ~ +70°C	

Temperature coefficient	:	Through Hole	SMD
		100Ω ~ 10KΩ → +200/-300 ppm	100Ω ~ 100KΩ → +200/-500 ppm
		>10KΩ ~ 5MΩ → +200/-500 ppm	>100KΩ ~ 1MΩ → +200/-1000 ppm

Mechanical

Resistive element	:	Carbon technology
Angle of rotation (mechanical)	:	235°±10°
Wiper position	:	Middle position: 50%±15°
Angle of rotation (electrical)	:	215°±20°
Stop torque	:	4 Ncm
Push/Pull on Rotor	:	9.8 N
Wiper torque	:	<2 Ncm
Mechanical Life	:	1,000 cycles *(more available on request)*
Degree of protection	:	IP5 (dust-proof)

Environmental

Test	Condition	Typical variation of nominal resistance
Damp heat	500 hours @40°C and 95% RH	+5% / -2%
Thermal cycles	16hours @85°C | 2hours @-25°C	±2.5%
Temperature coefficient	-25°C ~ +70°C	100Ω ~ 10KΩ → +200/-300 ppm >10KΩ ~ 5MΩ → +200/-500 ppm
Load life	1,000 hours @40°C	+0% / -5%
Mechanical life	1,000 cycles @10 c.p.m.	±3%
Soldering effect	2 seconds @350°C	±1%
Storage (3 years)	@23°C±2°C	±3%

Unless noted, all specifications are stated based on conditions of 23°C±2°C and 50%±25% RH

All features and specifications are standard. Other specifications can always be studied upon request.

Standard Resistance Values

Resistance (Ohms)	Resistance Code	Resistance (Ohms)	Resistance Code
100	100	25,000	25K
200	200	47,000	47K
220	220	50,000	50K
250	250	100,000	100K
470	470	200,000	200K
500	500	220,000	220K
1,000	1K	250,000	250K
2,000	2K	470,000	470K
2,200	2K2	500,000	500K
2,500	2K5	1,000,000	1M
4,700	4K7	2,000,000	2M
5,000	5K	2,500,000	2M5
10,000	10K	4,700,000	4M7
20,000	20K	5,000,000	5M
22,000	22K		

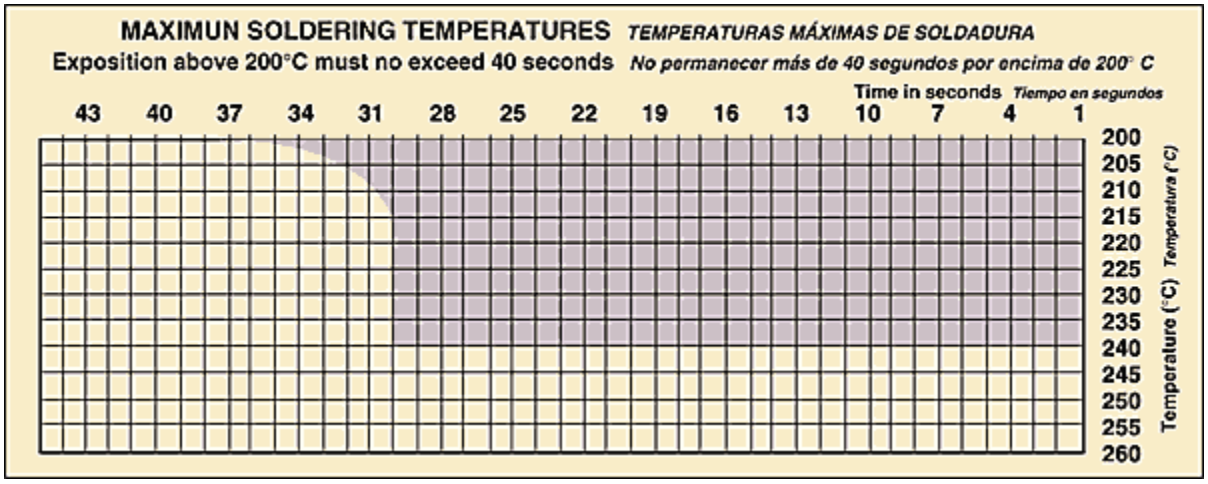
SMD Soldering Process Notes

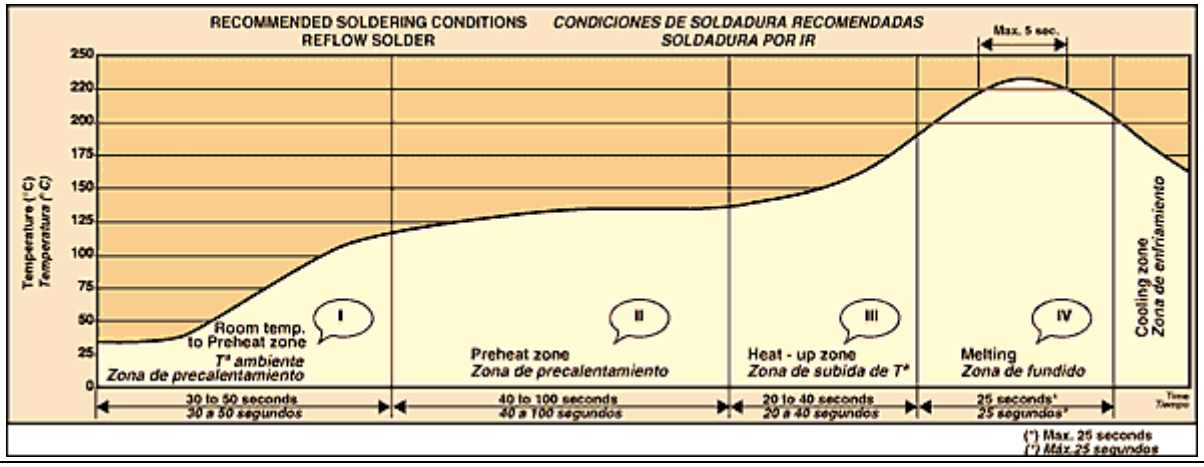
Manual Soldering

When manual soldering is employed, the following conditions are recommended:

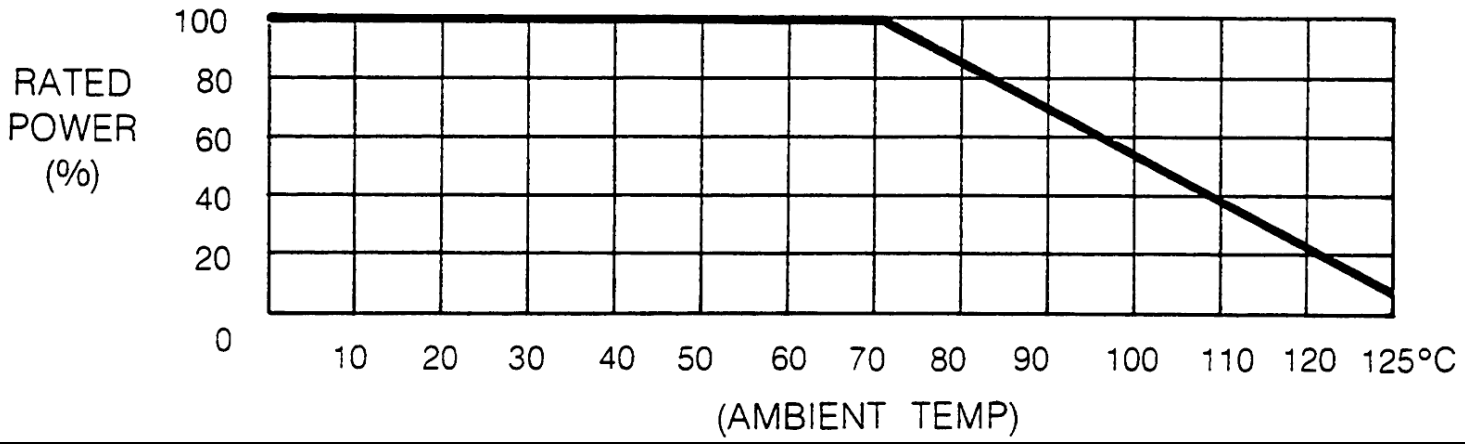
- Power of soldering iron: 20W max.
- Temperature of soldering iron: 280°C max.
- Time: 3 seconds max.

Reflow Soldering





DERATING CURVE



RESISTANCE TAPER