



ITT

Electronic Components
Discontinued Product Notification
Detect switch KSM 1131Z

February 17, 2006

J. Smolinski

Senior Product Manager



Engineered for life

The detect switches KSM 1131Z will be

- Discontinued effective August 31st 2006
- Last Time buy effective August 31st 2006

Suggested replacement:

See list below. Replacement part number is NOT a drop in replacement and will require printed circuit board to be changed as well as other adjustment in the final application. Drawing and specifications are enclosed.

Discontinued P/N:

KSM 1131Z – Y32A1131ZFP

Replacement P/N:

KSM 6161 LFG – Y32A61615FP

Please notify your present customers of this change and the recommended replacement product



Why the change?

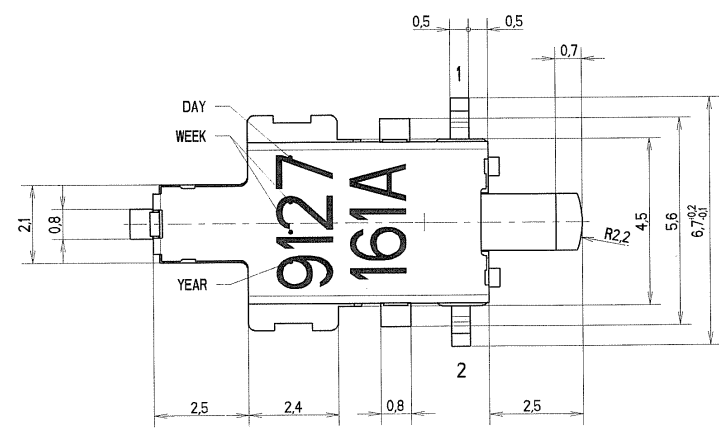
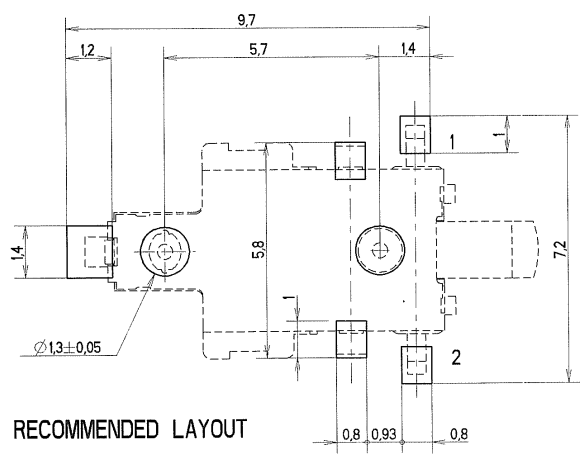
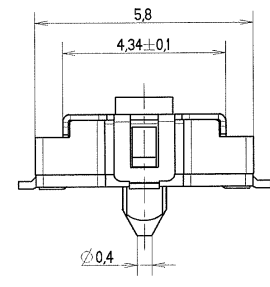
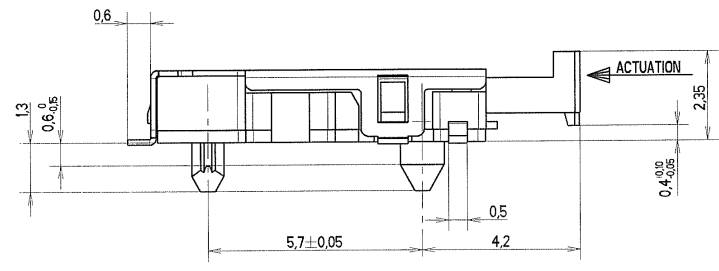
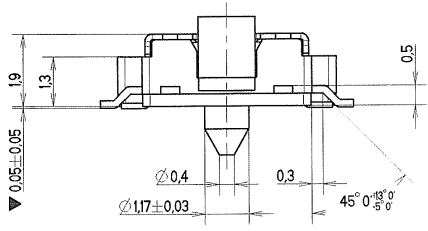
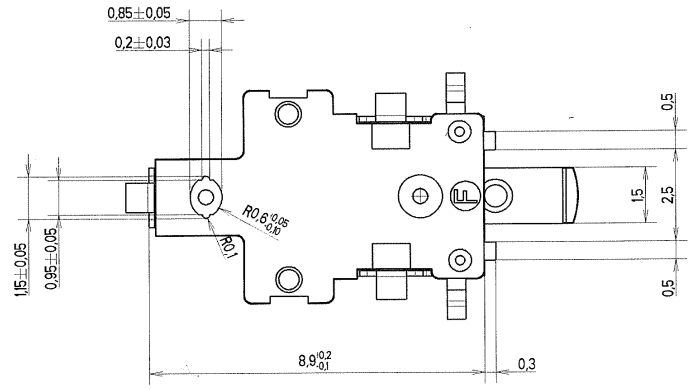
KSM 1131Z

- Not Available in lead free version (tin lead on terminals)
- Shear test > 20N (no pegs, only one ground terminal)
- Operating life can reach 50K cycles

KSM 6161 LFG

- Lead Free (gold on contact tails and Silver on ground terminal)
- Shear test > 40N (2 pegs and 3 ground terminals)
- Operating life over 200 K cycles
- Contact pressure ensure good behavior against dust and oil

REV.	N° DCR	NATURE DE LA MODIFICATION	DATE	VISA
A	D2000336	Modification de la designation KSM 61615 LFG → KSM 6161 LFG	27/09/2005	L.B
B	D2000415	Reduire marquage sur 2 lignes 6161/A → 161A	08/11/2005	SM
C	D2000450	Supression cotes critiques: 19 et 25	24/11/2005	VP



20 DEC. 2005

SYSTEM CONFIDENTIAL

MATIERE	TRAITEMENT				PROTECTION	
SAUF INDIQUE :	TOL. LINEAIRE	± 0,1	TOL. ANGULAIRE	± 1	DIMENSIONS CRITIQUES 1	
COTES DONNEES AVANT PROTECTION	ETAT DE SURFACE				DIMENSIONS SPC 0	
SALVAGES ET ARETES VIVES SUPPRIMEES	R _a				LANGAGE F	
DESSINE	BOUVIER L.	DATE	06/09/2005	ANALYSE	TAB. FAM.	PRO/E
VERIFIE	ESTEBAN B.	DATE				
APPROUVE	KUBAT L.	DATE	15/12/05			
Cannon	PROJECTION 1ER DEDRE		DESIGNATION			
ITT Industries	ECHELLE 10,000		KSM 6161 LFG			
			normally closed contact 1 & 2			
BP 359 - 39105 Dole - FRANCE -	TAILLE	FEUILLE	NUMERO	REV		
	A2	1 / 1	CU 32 A61 615 FP LFG	C		

CE PLAN EST LA PROPRIETE DE ITT. C.B.I. ET NE PEUT ETRE REPRODUIT OU COMMUNIQUE SANS AUTORISATION.

PRODUCT SPECIFICATION


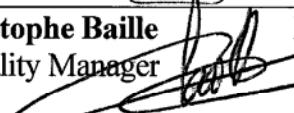

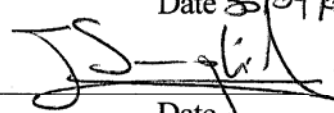
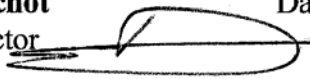
KSM 6161 – LFG version

Ref. / PS-KSM-123

Page 1 / 6

ISSUE 1: September 2005

Approvals :

Laurent Kubat Engineering Manager		Date 29/09/05
Jean-Christophe Baile Project Quality Manager		Date 02/10/05
Charles Zapata Laboratory Manager		Date 29/09/05
Jérôme Smolinski WW Product Manager		Date 30/09/05
Jérôme Brochot Quality Director		Date 31/10/05
Customer approval		Date
Name :		
Function :		

Note

This specification , attached documents and attached drawings cannot be communicated to anybody without written agreement of ITT CANNON.



SUMMARY

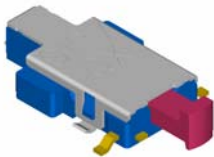
- 1. Description / Main Features**
- 2. Construction**
- 3. Electrical data**
- 4. Mechanical data**
- 5. Physical data**
- 6. Operating environment**
- 7. Additional data : storage and handling environment**
- 8. Additional data : process environment**
- 9. Applicable norms**
- 10. Qualification Plan**

KSM 6161 – LFG version

Issue 1

Ref. / PS-KSM-123

Page 4 / 6

1 - Description

The KSM 6161 LFG (Lead Free Gold) is a side actuated ultraminiature switch without tactile feedback and with single normally closed contact, designed to be compatible with the Surface Mount Technology process (SMT process).

Main Features

- With hard plastic actuator
- Gold plated flat terminals
- Compatible with lead free reflow soldering processes of SMT devices
- ROHS Compliance
- Compatible with pick & place machines
- Delivered on plastic packaging reel of 2000 pieces
- Marking
 - On the product : according to drawing
 - On the packaging reel : bar code.

2 - Construction

Function	Detection switch
Contact type	SPST - Normally Closed
Terminals	SMT terminals (G type)

3 - Electrical data

	Contact plating : Au
Maximum power	1.0 VA
Min/max voltage	20 mVdc - 32 Vdc
Min/max current	1.0 mA – 50 mA
Dielectric strength	≥ 250 Vrms
Contact resistance	≤ 300 mΩ
Insulation resistance :	Initial measurement : ≥ 1000 MΩ
between terminals	After damp heat : ≥ 10 MΩ
Bounce time	see appendix 1 – page 6

4 - Mechanical data

Force at maximum travel (Fm)	0.90 N ≤ Fm ≤ 1.25 N
Force at electrical contact (Fce) :	0.50 N ≤ Fce Forward ≤ 0.90 N 0.45 N ≤ Fce Return ≤ 0.90 N
Electrical travel (Te):	0.30 mm ≤ Te Forward ≤ 0.70 mm 0.30 mm ≤ Te Return ≤ 0.70 mm
Maximum travel (Tm)	1.85 mm ≤ Tm ≤ 2.15 mm

5 - Physical data

Dimensions & layout	According to drawing : CU 32 A61 615 FP LFG
Mass	0.075 g ± 0.05

6 - Operating environment

Operating temperatures	- 40 °C / + 85 °C
Relative humidity	90 to 96 % According to NF EN 60068-2-30
Operating life	≥ 200 000 cycles Weibull : • B10 : 1M cycles min
Vibrations	10-500 Hz / 10 g / 3 axis No discontinuity > 1μs According to NF EN 60068-2-6
Mechanical shocks	½ sinusoidal / 50 g / 11 ms 3 shocks in each direction of the 3 axis No discontinuity > 1μs According to NF EN 60068-2-27
Overload	10 N

KSM 6161 – LFG version

Issue 1

Ref. / PS-KSM-123

Page 5 / 6

7 - Additional data : storage and handling environment

Packaging conditions	According to drawing : 91 004 690 OM
Transport conditions	According to specification NF H00-060
Storage temperatures	- 55 °C (10 days) / + 85 °C (21 days)

8 - Additional data : process environment

Reflow soldering process	According to lead free process (ITT Procedure : PS-LF-001)
Sealing	Not sealed
Washing process	No washing
Chemical agent	Switch not sealed. Care must be taken with a chemical product surrounding the product.
Shear test (switch/PCB)	40 N

9 – Applicable norms

Testing procedure (ITT spec)	Proc-essai 16
Fire Norm (UL)	UL 94-HB
Legal norm (EHS)	ITT procedure

10. Qualification Plan

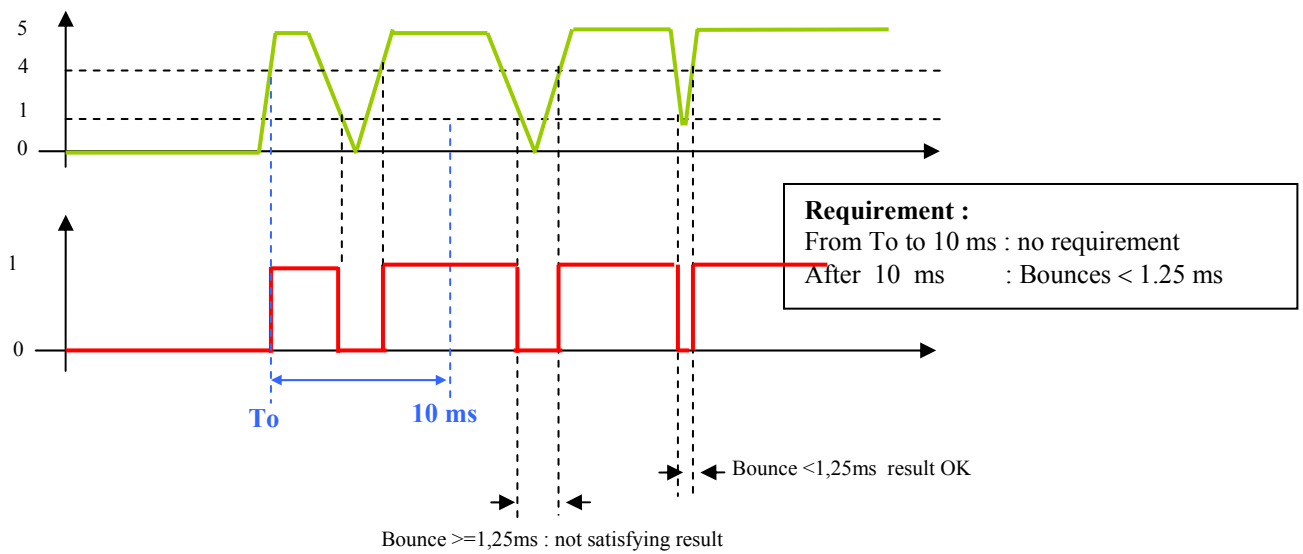
- According to Qualification plan N° QP-KSM-123.

Appendix 1

Electrical characteristics : Bounces

KSM 6161 - ELECTRICAL BOUNCE DEFINITION

Actuating speed: 6,5m/s - Electrical test parameters: 5V / 80µA - Signal condition: 1 → 0 ≤ 1V



Actuating speed: 6,5m/s - Electrical test parameters: 5V / 80µA - Signal condition: 0 → 1 ≥ 4V

