

# KSC Series Sealed Tact Switch for SMT

## Features/Benefits

- Positive tactile feeling
- Range of 6 actuation forces
- J or G terminations
- Tape & reel
- IP 67

## Typical Applications

- Automotive
- Cellular phones
- Industrial electronics
- Network infrastructure and IT



## Specification

FUNCTION: momentary action  
CONTACT ARRANGEMENT: 1 make contact = SPST, N.O.  
TERMINALS: J bend & Gullwing type for SMT

## Mechanical

Type	Operating force FA (Newtons) Min/Max	Operating life (operations)	Travel (mm)
KSC121J	1.2 / 2.5	200 000	0.3 ± 0.15
KSC141J	2.25 / 3.75	200 000	0.3 ± 0.15
KSC151J	4.3 / 7.3	100 000	0.3 ± 0.15
KSC201J	0.9 / 2N	300 000	0.3 +0.2 /-0.15
KSC221J	1.5 / 2.5	500 000	0.35 +0.3 /-0.1
KSC222J	1.5 / 2.5	1 000 000	0.35 +0.3 /-0.1
KSC241J	2.6 / 4.4	300 000	0.5 ± 0.2
KSC251J	4.1 / 7.0	300 000	0.5 ± 0.2
KSC321J	1.6 / 2.4	300 000	0.2 +0.3 /0
KSC341J	2.25 / 3.75	300 000	0.2 +0.3 /0
KSC351J	4.1 / 6.9	100 000	0.25 +0.3 /0
KSC401J 50SH	0.9 / 2.0	300 000	0.5 ± 0.25
KSC411J 70SH	1.05 / 1.75	300 000	0.35 ± 0.15
KSC421J 70SH	1.25 / 2.12	300 000	0.5 ± 0.25
KSC422J 70SH	1.25 / 2.12	1 000 000	0.5 ± 0.25
KSC441J 70SH	3.0 / 5.0	300 000	0.75 ± 0.25
KSC442J 70SH	3.0 / 5.0	1 000 000	0.75 ± 0.25
KSC621J	1.0 / 1.65	300 000	0.5 ± 0.2
KSC641J	2.25 / 3.75	300 000	0.5 ± 0.2
KSC421V	1.3 / 2.1	300 000	0.375 ± 0.225
KSC621V	1.1 / 1.9	100 000	0.5 ± 0.2

A detect switch version is available KSC4D1J and KSC4D1G.  
Please see Detect chapter, page F-7.  
KSC vertical series have an IP40 sealing level.

## Electrical

	Silver	Gold
MAXIMUM POWER:	1 VA	0.2 VA
MAXIMUM VOLTAGE:	32 VDC	32 VDC
MINIMUM VOLTAGE:	20 mV	20 mV
MAXIMUM CURRENT:	50 mA	10 mA
MINIMUM CURRENT:	1 mA	1 mA

DIELECTRIC STRENGTH (50 Hz, 1 min.): 250 V  
CONTACT RESISTANCE: < 100 mΩ  
INSULATION RESISTANCE (100 V): > 10<sup>9</sup> Ω  
BOUNCE TIME: < 1 ms

## Environmental

	Silver	Gold
OPERATING TEMPERATURE:	-40°C to 85°C	-40°C to 125°C
STORAGE TEMPERATURE:	-55°C to 85°C	-55°C to 125°C

## Process

SOLDERING: Depending on the application, this component is suited to the following methods:  
– Terminals being silver or gold plated over a nickel barrier, the use of slightly activated flux is suitable.  
– Soldering on double wave machine for vertical versions: soldering time < 5 sec.  
– Cleaning according to typical washing processes.  
– Infrared Reflow Soldering in accordance with IEC 61760-1.

## Packaging

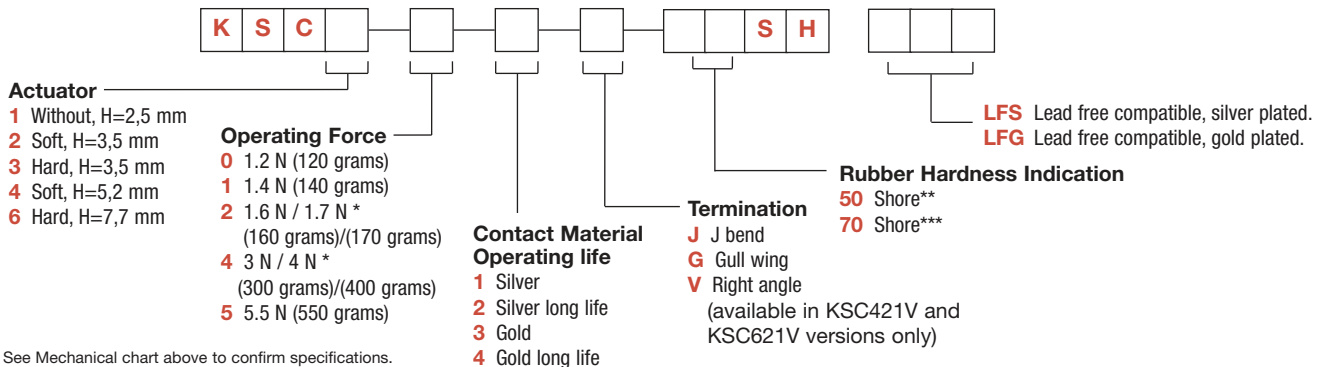
KSC1, KSC2 and KSC3 are delivered on continuous tape and reels of 2,000 pieces, KSC4 in reels of 1,000 pieces. KSC 6 in reels of 750 pieces. KSCV in boxes of 500 pieces. Dimensions of reels according to EIA RS481 or IEC 2863. External diameter 330 mm ± 2 mm.

**NOTE:** Specifications listed above are for switches with standard options.  
For information on specific and custom switches, consult Customer Service Center.

## How To Order

Our easy build-a-switch concept allows you to mix and match options to create the switch you need. To order, select desired option from each category and place it in the appropriate box.

**For any part number different from those listed above, please consult your local representative.**



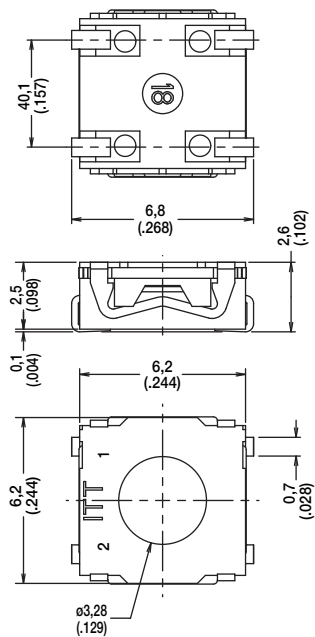
\* See Mechanical chart above to confirm specifications.  
\*\* Applies to KSC401J50SH only.  
\*\*\* Applies to KSC 411J70SH, KSC421J70SH, KSC441J70SH



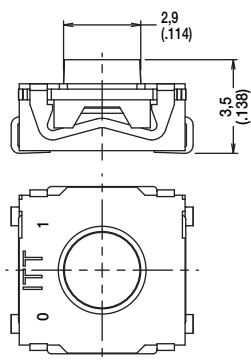
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## ACTUATOR

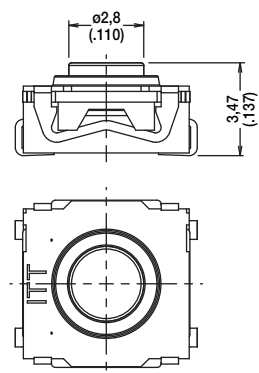
**KSC1** WITHOUT, 2,5 mm HIGH



**KSC2** SOFT, 3,5 mm HIGH

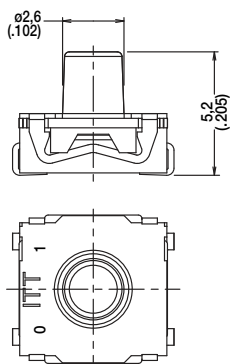


**KSC3** HARD, 3,5 mm HIGH



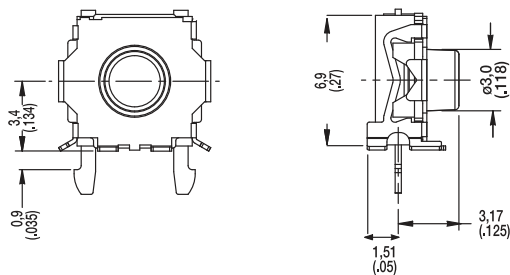
**KSC4** SOFT, 5,2 mm HIGH

**NOTE:** KSC4 standard silicone material is 70 shore, the only exception is KSC401J which is 50 shore.

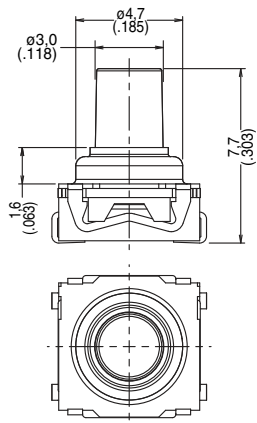


**KSC4** KSC421V ONLY

**NOTE:** KSC421V requires metalized holds for simultaneous reflow soldering of switch terminals and bracket terminals.

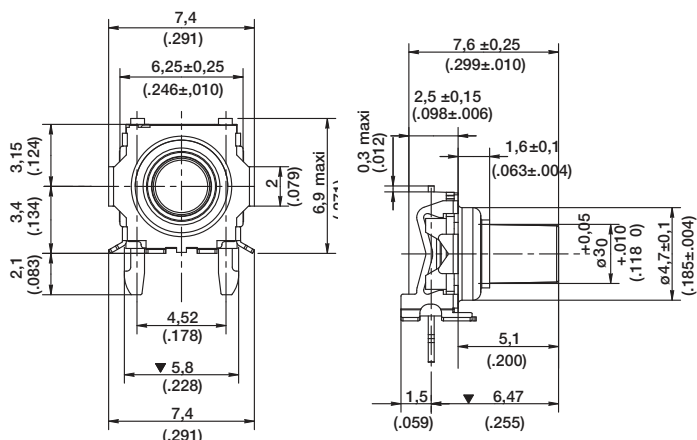


**KSC6** HARD, 7,7 mm HIGH



**KSC6** KSC621V ONLY

**NOTE:** KSC621V requires metalized holds for simultaneous reflow soldering of switch terminals and bracket terminals.



Dimensions shown in: mm (inch)  
Specifications and dimensions subject to change

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## OPERATING FORCE

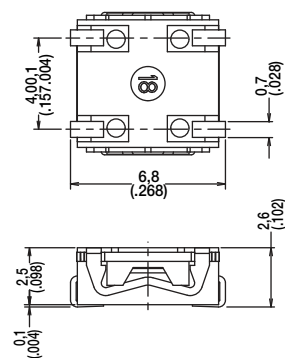
OPTION CODE	OPERATING FORCE
0	1.2 N (120 grams)
1	1.4 N (140 grams)
2	1.6 N / 1.7 N (160/170 grams)
4	3 N / 3.5 N (300/350 grams)
5	5.5 N (550 grams)

## CONTACT MATERIAL

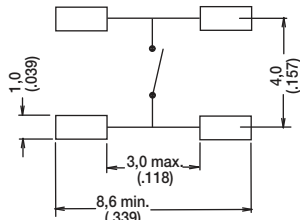
OPTION CODE	MATERIAL
1	SILVER
3	GOLD

## TERMINATION

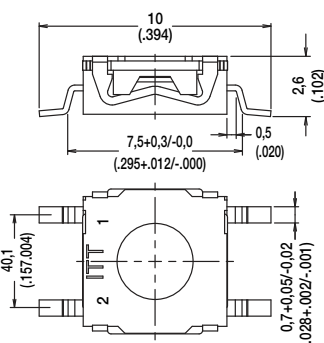
### J J BEND



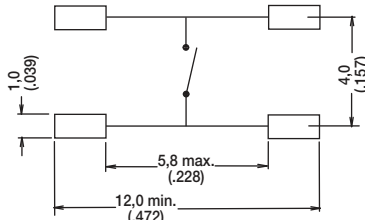
#### PAD LAYOUT



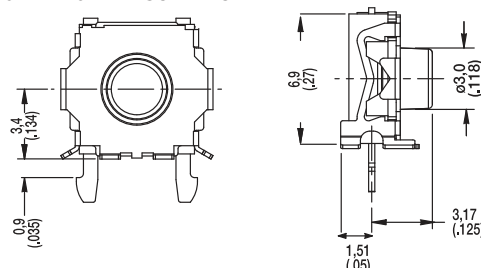
### G GULLWING



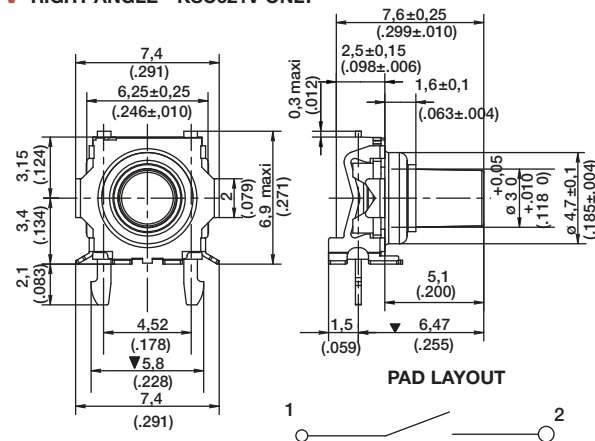
#### PAD LAYOUT



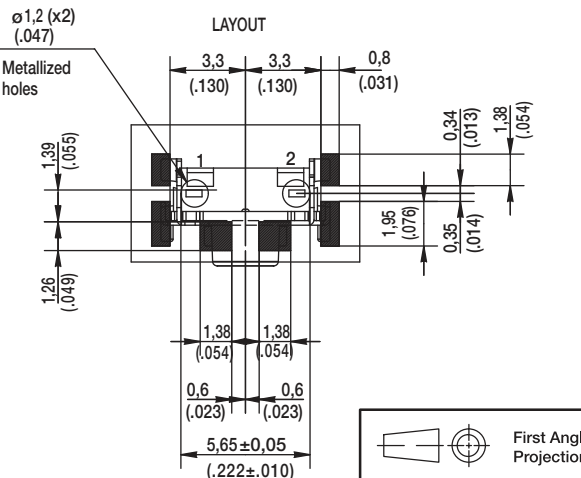
### V RIGHT ANGLE - KSC421V ONLY



### V RIGHT ANGLE - KSC621V ONLY



#### PAD LAYOUT



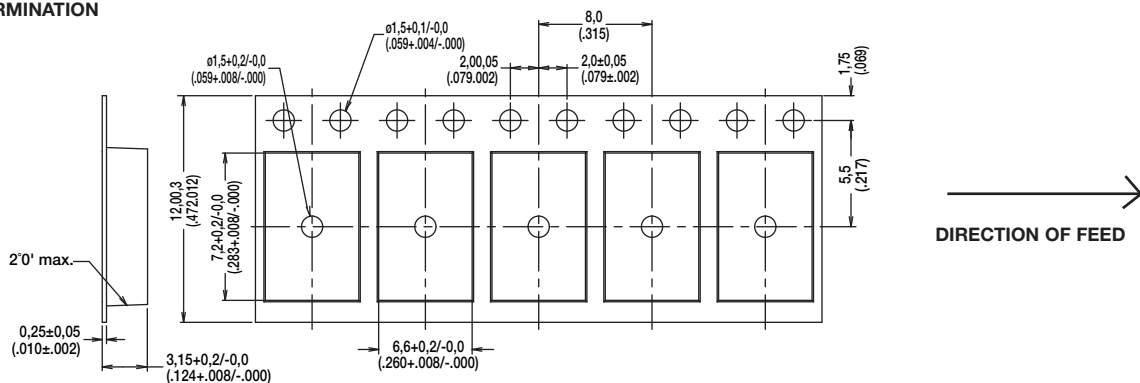
Dimensions shown in: mm (inch)  
Specifications and dimensions subject to change



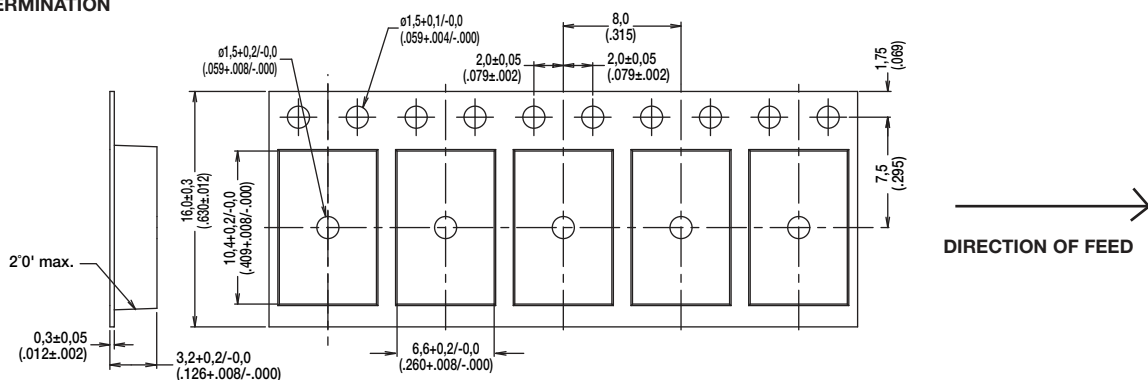
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## TAPE & REEL

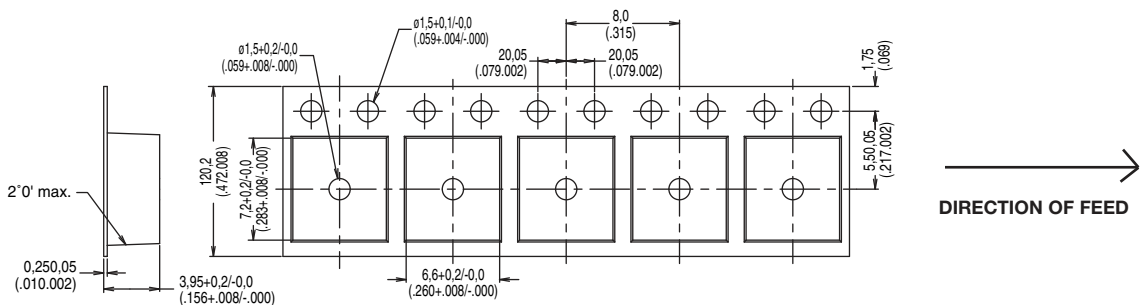
### FOR KSC1 J TERMINATION



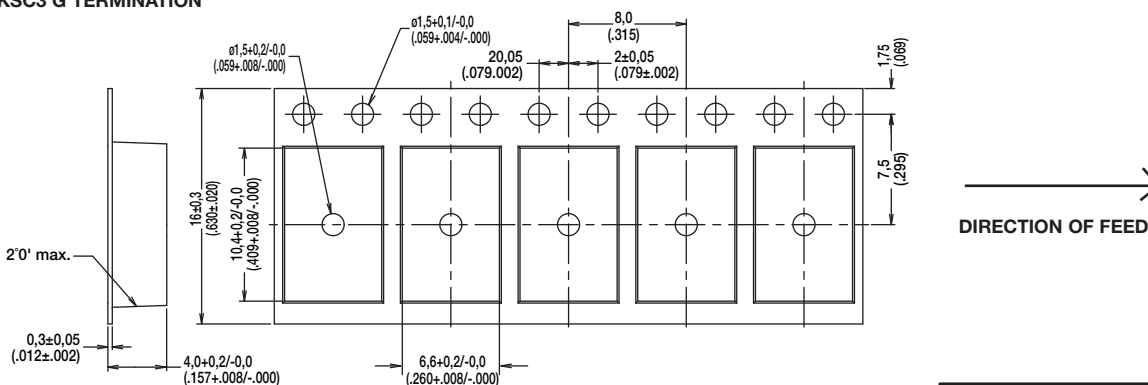
### FOR KSC1 G TERMINATION



### FOR KSC2 & KSC3 J TERMINATION



### FOR KSC2 & KSC3 G TERMINATION



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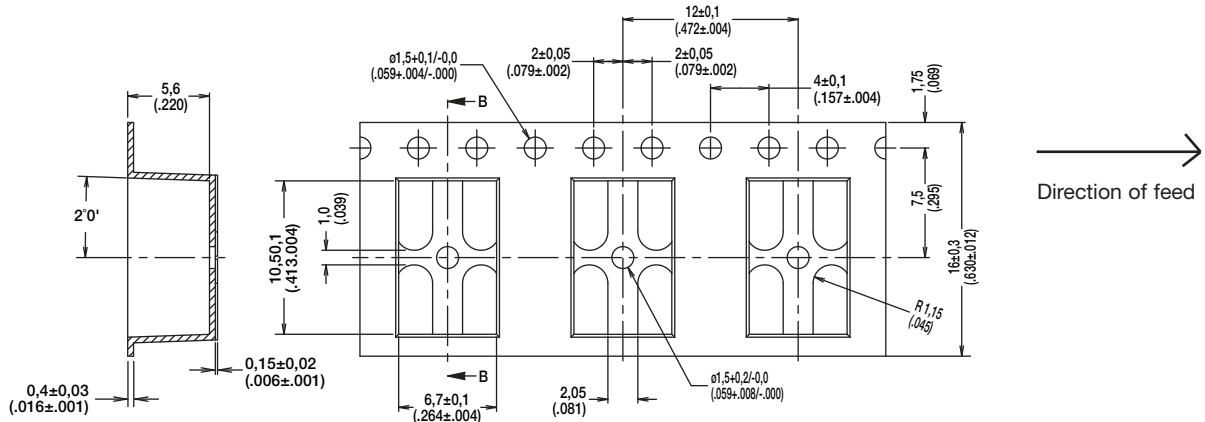
Tactile Switches



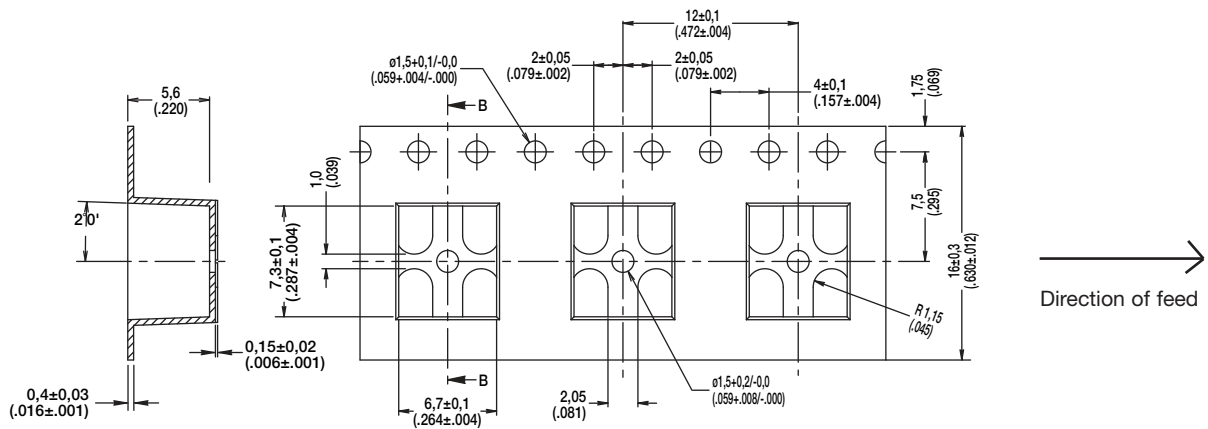
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## TAPE & REEL

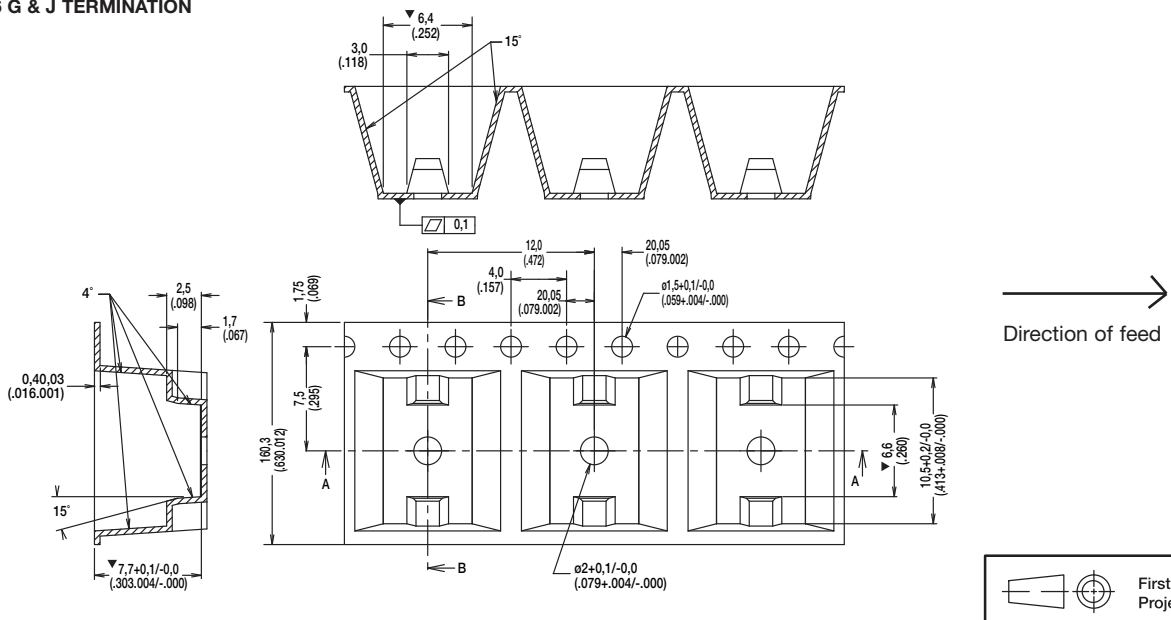
### FOR KSC4 FOR G TERMINATION



### FOR KSC4 FOR J TERMINATION



### FOR KSC6 G & J TERMINATION



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