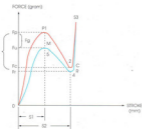


FORCE-STROKE CURVE OF RUBBER KEYPAD:

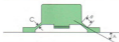


FORCE	F_p	Peak Force (Peak)
	F_c	Contact Force
	F_m	Min. Return Force (Peak)
	F_r	Max. Return Force
	F_d	Drop Force ($F_r - F_m - F_c$)
	F_s	Set Force ($F_p - F_m - F_c$)
STROKE	S_1	Peak Stroke
	S_2	Contact Stroke
LOCATION	O	Original Point
	P	Peak Point
	C	Contact Point
	R	Return Point
	M	Min. Return Point
TRAVEL	O-P	Preload Travel
	P-C	Travel To Contact
	C-R	Post Travel
	R-O	Return Travel

TYPICAL KEY SECTIONS AND CHARACTERISTICS:

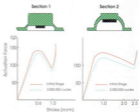
		<table border="1"> <tr><td>Force Range</td><td>50 - 80 grams</td></tr> <tr><td>Stroke Range</td><td>15 - 20mm</td></tr> <tr><td>Code (Key ID)</td><td>90 - 100</td></tr> <tr><td>Typical Use</td><td>Telephone Remote Control, Automobile, Radio, Fax, Calculator, etc.</td></tr> </table>	Force Range	50 - 80 grams	Stroke Range	15 - 20mm	Code (Key ID)	90 - 100	Typical Use	Telephone Remote Control, Automobile, Radio, Fax, Calculator, etc.			<table border="1"> <tr><td>Force Range</td><td>50 - 60 grams</td></tr> <tr><td>Stroke Range</td><td>15 - 40mm</td></tr> <tr><td>Code (Key ID)</td><td>130 - 200</td></tr> <tr><td>Typical Use</td><td>Computer, Telephone, etc.</td></tr> </table>	Force Range	50 - 60 grams	Stroke Range	15 - 40mm	Code (Key ID)	130 - 200	Typical Use	Computer, Telephone, etc.
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		<table border="1"> <tr><td>Force Range</td><td>30 - 200 grams</td></tr> <tr><td>Stroke Range</td><td>17 - 20mm</td></tr> <tr><td>Code (Key ID)</td><td>80 - 100</td></tr> <tr><td>Typical Use</td><td>Telephone Remote Control, Fax, Games, Calculator, etc.</td></tr> </table>	Force Range	30 - 200 grams	Stroke Range	17 - 20mm	Code (Key ID)	80 - 100	Typical Use	Telephone Remote Control, Fax, Games, Calculator, etc.			<table border="1"> <tr><td>Force Range</td><td>30 - 200 grams</td></tr> <tr><td>Stroke Range</td><td>15 - 25mm</td></tr> <tr><td>Code (Key ID)</td><td>90 - 100</td></tr> <tr><td>Typical Use</td><td>Telephone, Telephone Set Instruments, etc.</td></tr> </table>	Force Range	30 - 200 grams	Stroke Range	15 - 25mm	Code (Key ID)	90 - 100	Typical Use	Telephone, Telephone Set Instruments, etc.
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LIFE TEST


















Life Depends Mostly On:

- **Soft Material** ... 50 Shore A is preferred.
- **Low Stroke** ... Less than 1 mm.
- **Angle** (As part A illustrated above) ... 40-Degree is recommended.
- **Length of side-wall** (As part B illustrated above) ... As longer as better.
- **Thickness of side-wall** (As part C illustrated above) ... Determined by key structure. The thicker the longer life, the thicker the higher force.



PHYSICAL SPECIFICATION

Actuation Force version structure for design and testing.

ITEM \ NAME	CONE TYPE	DOUBLE CONE TYPE	BELL TYPE	DOUBLE BELL TYPE	FLAT TYPE
Type					
Actuation Force Travel Curve					
Relation between A/F (load) and Travel (Stroke)	A/F (g) 30-50 55-80 85-150	Travel (mm) 0.5-0.9 0.7-1.4 0.8-1.5	A/F (g) 30-80 80-160 160-250	Travel (mm) 1.0-1.8 1.6-2.8 2.6-3.5	A/F (g) 30-200 Travel (mm) 0.3-7
Outside Dimension based on Key Top Dimension	 $A \geq B \pm 2.0\text{m/m}$	 $A \geq B \pm 2.0\text{m/m}$	 $A \geq B \pm 2.0\text{m/m}$	 $A \geq B \pm 2.0\text{m/m}$	 $A \geq B \pm 2.0\text{m/m}$
Life Cycles	1×10^6		1×10^6		5×10^6