


12.71 (501) ~ 63.00 (1600)	+0.03 -0.25
5.10 (201) ~ 12.70 (500)	+0.03 -0.20
1.78 (070) ~ 5.09 (200)	+0.03 -0.10
0 ~ 1.77 (069)	+0.03 -0.05
<b>DIMENSION A &amp; B (MILS)</b>	<b>TOLERANCE (MM)</b>

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<b>TOLERANCE UNLESS SPECIFIED</b> X.X ±0.10 GENERAL TOL. ±0.2 X.XX ±0.05 ANGLE ±0.5° SURFACE FINISH $\frac{1.6}{\sqrt{R}}$ REMOVE BURRS AND SHARP EDGES ALL DIMENSIONS IN MM. 13-99-027 R03	MATERIAL: NBR	PROCESS: -	TITLE: RUBBER TIP (MODIFICATION FRAME TIP)	REV.:	
	 <b>MICRO-MECHANICS PTE LTD</b> mmsingapore@micro-mechanics.com TEL: 67468800 FAX: 67467700	DATE: 22-4-09	DRAWING NO: 13-111A-XX		140
		DRAFTSMAN: SH XIE	SCALE: 5:1	SHEET 1	
		CHECKER: HS TOK		8	

PART NO.	A	B	C $\pm 0.1$ (2x)	D $\pm 0.1$	K $\pm 0.1$	E°	$\phi F$	G	H	MAX. J	HOLDER
13-111A-28	7.30	7.20	0.4	0.4	0.4	50°	1.3	9.6x9.6	0.3	0.4	12C
13-111A-27	8.70	8.70	0.4	0.4	0.4	50°	1.3	9.6x9.6	0.3	0.4	12C
13-111A-26	4.60	3.90	0.3	0.3	0.3	50°	1.0	5.0x5.0	0.3	0.4	12U1/3
13-111A-25	5.50	4.20	0.3	0.3	0.3	50°	1.0	7.0x7.0	0.3	0.4	12C
13-111A-24	5.25	4.63	0.3	0.29	0.29	50°	1.0	7.0x7.0	0.3	0.4	12C
13-111A-23	4.78	3.81	0.17 $\pm$ <sub>-0.05</sub> <sup>0</sup>	0.17 $\pm$ <sub>-0.05</sub> <sup>0</sup>	0.17 $\pm$ <sub>-0.05</sub> <sup>0</sup>	50°	1.0	5.0x5.0	0.3	0.4	12U1/3
13-111A-22	5.35	4.52	0.3	0.3	0.3	50°	1.0	7.0x7.0	0.3	0.4	12C
13-111A-21	3.91	1.94	0.3	0.25	0.25	50°	1.0	2.8x5.1	0.3	0.2	12U1/3
13-111A-20	7.40	5.80	0.4	0.4	0.4	50°	1.3	9.6x6.1	0.3	0.4	12C
13-111A-19	5.08	1.20	0.2	0.4	0.4	50°	0.8	5.0x6.0	0.3	0.2	12U1/3
13-111A-18	5.60	3.60	0.3	0.3	0.3	50°	1.0	7.0x7.0	0.3	0.4	12C
13-111A-17	4.55	4.20	0.3	0.3	0.3	50°	1.0	5.0x5.0	0.3	0.4	12U1/3
13-111A-16	8.75	7.60	0.3	0.3	0.3	50°	1.3	9.6x9.6	0.3	0.4	12C
13-111A-15	5.40	4.90	0.3	0.3	0.3	50°	1.0	7.0x7.0	0.3	0.4	12C
13-111A-14	4.10	3.90	0.3	0.3	0.3	50°	1.0	5.0x5.0	0.3	0.4	12U1/3
13-111A-13	4.06	3.85	0.3	0.3	0.3	50°	1.0	5.0x5.0	0.3	0.4	12U1/3
13-111A-12	5.30	4.30	0.3	0.3	0.3	50°	1.0	7.0x7.0	0.3	0.4	12C
13-111A-11	2.05	1.95	0.3	0.3	0.3	50°	1.0	4.0x4.0	0.4	0.2	12U1/3
13-111A-10	3.70	3.70	0.3	0.3	0.3	50°	1.0	5.0x5.0	0.3	0.4	12U1/3
13-111A-09	4.39	4.06	0.3	0.3	0.3	50°	1.0	5.0x5.0	0.3	0.4	12U1/3
13-111A-08	6.37	6.06	0.3	0.3	0.3	50°	1.0	7.0x7.0	0.3	0.4	12C
13-111A-07	5.80	5.50	0.3	0.3	0.3	50°	1.0	7.0x7.0	0.3	0.4	12C
13-111A-06	4.00	3.50	0.3	0.3	0.3	50°	1.0	5.0x5.0	0.3	0.4	12U1/3
13-111A-05	4.50	2.50	0.5	0.5	0.5	50°	1.0	2.8x5.1	0.3	0.2	12U1/3
13-111A-04	3.00	2.50	0.5	0.5	0.5	50°	1.0	4.0x4.0	0.3	0.2	12U1/3
13-111A-03	9.30	8.60	0.4	0.4	0.4	50°	1.3	9.6x9.6	0.3	0.4	12C
13-111A-02	12.7	7.19	0.4	0.4	0.4	50°	$\square 2.5$	7.4x12.7	1.0	0.4	12C
13-111A-01	8.89	7.11	0.5	0.5	0.5	50°	1.3	9.6x9.6	0.3	0.4	12C

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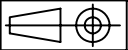
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1 2 3 4 5 6

A

B

C

D

13-111A-56	4.72	1.78	0.5	0.5	0.5	50°	0.8	6.0x5.0	0.3	0.2	12U1/3
13-111A-55	4.06	1.78	0.5	0.5	0.5	50°	0.8	6.0x5.0	0.3	0.2	12U1/3
13-111A-54	3.89	3.39	0.3	0.3	0.3	50°	1.0	4.0x4.0	0.3	0.3	12U1/3
13-111A-53	4.42	4.28	0.3	0.3	0.3	50°	1.0	5.0x5.0	0.4	0.3	12U1/3
13-111A-52	5.20	4.40	0.3	0.3	0.3	50°	1.0	7.0x7.0	0.3	0.4	12C
13-111A-51	4.40	3.40	0.2	0.2	0.2	50°	1.0	5.0x5.0	0.4	0.3	12U1/3
13-111A-50	7.10	7.10	0.3	0.3	0.3	50°	1.3	9.6x9.6	0.4	0.3	12C
13-111A-49	5.70	5.70	0.3	0.3	0.3	50°	1.0	7.0x7.0	0.4	0.3	12C
13-111A-48	4.45	1.96	0.25	0.25	0.25	50°	1.0	2.8x5.1	0.4	0.2	12U1/3
13-111A-47	OBSOLETE, REFER TO 13-149C-01										
13-111A-46	5.20	3.20	0.3	0.3	0.3	50°	1.0	7.0x7.0	0.3	0.3	12C
13-111A-45	5.50	5.00	0.3	0.3	0.3	50°	1.0	7.0x7.0	0.4	0.4	12C
13-111A-44	5.00	5.00	0.3	0.3	0.3	50°	1.0	7.0x7.0	0.4	0.4	12C
13-111A-43	4.50	2.40	0.2	0.2	0.2	50°	1.0	5.0x5.0	0.3	0.2	12U1/3
13-111A-42	8.07	7.43	0.3	0.3	0.3	50°	1.3	9.6x9.6	0.4	0.4	12C
13-111A-41	10.16	5.71	0.5	0.5	0.5	50°	1.0	7.0x12.0	0.3	0.4	12C
13-111A-40	4.90	4.50	0.3	0.3	0.3	50°	1.0	7.0x7.0	0.3	0.4	12C
13-111A-39	7.50	7.00	0.25	0.25	0.25	50°	1.3	9.6x9.6	0.3	0.4	12C
13-111A-38	4.50	4.00	0.25	0.25	0.25	50°	1.0	5.0x5.0	0.3	0.4	12U1/3
13-111A-37	3.80	3.00	0.3	0.35	0.35	50°	1.0	4.0x4.0	0.3	0.3	12U1/3
13-111A-36	3.60	2.50	0.3	0.3	0.3	50°	1.0	4.0x4.0	0.3	0.2	12U1/3
13-111A-35	2.05	1.95	0.3	0.3	0.3	50°	1.0	4.0x4.0	0.4	0.2	12U1/3
13-111A-34	7.00	7.00	0.3	0.3	0.3	50°	1.3	9.6x9.6	0.5	0.4	12C
13-111A-33	4.00	4.00	0.3	0.3	0.3	50°	1.0	5.0x5.0	0.4	0.4	12U1/3
13-111A-32	8.20	7.30	0.3	0.3	0.3	50°	1.3	9.6x9.6	0.4	0.4	12C
13-111A-31	8.89	7.11	0.75	1.14	1.14	50°	1.3	9.6x9.6	0.15	0.4	12C
13-111A-30	3.70	2.60	0.3	0.3	0.3	50°	1.0	4.0x4.0	0.3	0.2	12U1/3
13-111A-29	10.20	9.90	0.4	0.4	0.4	50°	1.0	12.0x12.0	0.3	0.4	12C
PART NO.	A	B	C ±0.1(2x)	D ±0.1	K ±0.1	E°	ØF	G	H	MAX. J	HOLDER


12.71 (501) ~ 63.00 (1600)	+0.03 -0.25
5.10 (201) ~ 12.70 (500)	+0.03 -0.20
1.78 (070) ~ 5.09 (200)	+0.03 -0.10
0 ~ 1.77 (069)	+0.03 -0.05
DIMENSION A & B (MILS)	TOLERANCE (MM)

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TOLERANCE UNLESS SPECIFIED	
X.X ±0.10	GENERAL TOL. ±0.2
X.XX ±0.05	ANGLE ±0.5°
SURFACE FINISH 1.6/	
REMOVE BURRS AND SHARP EDGES	
ALL DIMENSIONS IN MM.	
13-99-027 R03	

MATERIAL: NBR

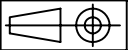


**MICRO-MECHANICS PTE LTD**  
 mmsingapore@micro-mechanics.com  
 TEL: 67468800 FAX: 67467700

PROCESS:	-
DATE:	22-4-09
DRAFTSMAN:	SH XIE
CHECKER:	HS TOK

TITLE:	RUBBER TIP (MODIFICATION FRAME TIP)	REV.	
SCALE:	5:1	DRAWING NO:	13-111A-XX
		SHEET	2
			8

1 2 3 4 5 6



1 2 3 4 5 6

A

B

C

D

A


B

C

D

13-111A-84	12.60	8.00	0.4	0.4	0.4	50°	2.0	15.0x12.0	0.5	0.4	12D3
13-111A-83	7.00	7.00	0.3	0.3	0.3	50°	1.3	9.6x9.6	0.6	0.4	12C
13-111A-82	6.22	4.65	0.3	0.3	0.3	50°	1.0	7.0x7.0	0.3	0.4	12C
13-111A-81	7.52	6.95	0.35	0.2	0.2	50°	1.3	9.6x9.6	0.2	0.4	12C
13-111A-80	8.40	7.10	0.3	0.3	0.3	50°	1.3	9.6x9.6	0.2	0.4	12C
13-111A-79	5.10	4.79	0.15 <sup>+0.05</sup> <sub>-0.05</sub>	0.25	0.25	50°	1.0	7.0x7.0	0.3	0.4	12C
13-111A-78	6.80	6.00	0.3	0.3	0.3	50°	1.0	7.0x7.0	0.3	0.4	12C
13-111A-77	7.00	5.50	0.3	0.3	0.3	50°	1.0	7.0x7.0	0.3	0.4	12C
13-111A-76	5.20	4.00	0.3	0.3	0.3	50°	1.0	7.0x7.0	0.3	0.4	12C
13-111A-75	5.50	5.50	0.2	0.2	0.2	50°	1.0	7.0x7.0	0.2	0.4	12C
13-111A-74	5.85	4.80	0.3	0.3	0.3	50°	1.0	7.0x7.0	0.3	0.4	12C
13-111A-73	4.65	3.55	0.3	0.3	0.3	50°	1.0	5.0x5.0	0.3	0.3	12U1/3
13-111A-72	4.60	4.10	0.3	0.3	0.3	50°	1.0	5.0x5.0	0.3	0.4	12U1/3
13-111A-71	5.50	4.50	0.3	0.3	0.3	50°	1.0	7.0x7.0	0.3	0.4	12C
13-111A-70	6.50	4.80	0.3	0.3	0.3	50°	1.0	7.0x7.0	0.3	0.4	12C
13-111A-69	5.20	2.90	0.3	0.3	0.3	50°	0.8	6.0x5.0	0.3	0.3	12U1/3
13-111A-68	5.30	3.30	0.3	0.3	0.3	50°	1.0	7.0x7.0	0.3	0.3	12C
13-111A-67	4.10	4.10	0.2	0.2	0.2	50°	1.0	5.0x5.0	0.4	0.3	12U1/3
13-111A-66	5.70	4.90	0.3	0.3	0.3	50°	1.0	7.0x7.0	0.3	0.3	12C
13-111A-65	10.50	3.50	0.4	0.4	0.4	50°	1.0	7.0x12.0	0.3	0.4	12C
13-111A-64	5.00	3.20	0.3	0.18	1.0	50°	1.0	7.0x7.0	0.5	0.4	12C
13-111A-63	7.73	6.60	0.4	0.4	0.4	50°	1.3	9.6x9.6	0.3	0.4	12C
13-111A-62	6.90	4.30	0.2	0.2	0.2	50°	1.0	7.0x7.0	0.3	0.4	12C
13-111A-61	6.00	3.00	1.1	1.0	1.0	50°	0.8	6.0x5.0	0.2	0.3	12U1/3
13-111A-60	5.00	5.00	0.25	0.25	0.25	50°	1.0	7.0x7.0	0.4	0.4	12C
13-111A-59	10.60	6.80	0.4	0.4	0.4	50°	1.0	12.0x12.0	0.3	0.4	12C
13-111A-58	5.50	4.50	0.5	0.5	0.5	50°	1.0	7.0x7.0	0.3	0.4	12C
13-111A-57	REFER TO 13-111C-18										

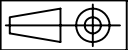
12.71 (501) ~ 63.00 (1600)	+0.03 -0.25
5.10 (201) ~ 12.70 (500)	+0.03 -0.20
1.78 (070) ~ 5.09 (200)	+0.03 -0.10
0 ~ 1.77 (069)	+0.03 -0.05
<b>DIMENSION A &amp; B (MILS)</b>	<b>TOLERANCE (MM)</b>

PART NO.	A	B	C <sup>+0.1</sup> <sub>0</sub> (2x)	D <sup>+0.1</sup> <sub>0</sub>	K <sup>+0.1</sup> <sub>0</sub>	E°	ØF	G	H	MAX. J	HOLDER		
TOLERANCE UNLESS SPECIFIED			MATERIAL: NBR			PROCESS: -			TITLE: RUBBER TIP (MODIFICATION FRAME TIP)			REV.	
X.X ±0.10 GENERAL TOL. ±0.2 X.XX ±0.05 ANGLE ±0.5° SURFACE FINISH 1.6/√ REMOVE BURRS AND SHARP EDGES ALL DIMENSIONS IN MM.			 <b>MICRO-MECHANICS PTE LTD</b> mmsingapore@micro-mechanics.com TEL: 67468800 FAX: 67467700			DATE: 22-4-09			SCALE: 5:1			DRAWING NO: 13-111A-XX	140
13-99-027 R03						DRAFTSMAN: SH XIE							SHEET 3
			CHECKER: HS TOK									8	

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PART NO.	A	B	C $\pm 0.1(2X)$	D $\pm 0.1$	K $\pm 0.1$	E'	$\emptyset F$	G	H	MAX. J	HOLDER
13-111A-112	6.30	6.30	0.2	0.2	0.2	50°	1.0	7.0x7.0	0.4	0.4	12C
13-111A-111	4.30	4.30	0.2	0.2	0.2	50°	1.0	5.0x5.0	0.3	0.4	12U1/3
13-111A-110	6.07	5.07	0.5	0.5	0.5	50°	1.0	7.0x7.0	0.3	0.4	12C
13-111A-109	6.29	5.24	0.5	0.5	0.5	50°	1.0	7.0x7.0	0.3	0.4	12C
13-111A-108	4.06	3.85	0.3	0.3	0.3	50°	□ 1.5	5.0x5.0	1.0	0.4	12U1/3
13-111A-107	REFER TO 13-111F-05										
13-111A-106	3.00	2.60	0.2	0.2	0.2	50°	1.0	4.0x4.0	0.3	0.3	12U1/3
13-111A-105	3.00	2.60	0.3	0.3	0.3	50°	1.0	4.0x4.0	0.3	0.3	12U1/3
13-111A-104	7.0	3.20	0.3	0.3	0.3	50°	1.0	7.0x7.0	0.5	0.3	12C
13-111A-103	4.00	3.00	0.3	0.3	0.3	50°	1.0	5.0x5.0	0.3	0.3	12U1/3
13-111A-102	7.0	6.00	0.3	0.3	0.3	50°	1.0	7.0x7.0	0.3	0.4	12C
13-111A-101	4.85	4.60	0.3	0.3	0.3	50°	1.0	7.0x7.0	0.3	0.4	12C
13-111A-100	5.60	5.55	0.3	0.3	0.3	50°	1.0	7.0x7.0	0.3	0.4	12C
13-111A-99	4.60	5.10	0.3	0.3	0.3	50°	1.0	7.0x7.0	0.4	0.4	12C
13-111A-98	5.10	5.10	0.3	0.3	0.3	50°	1.0	7.0x7.0	0.4	0.4	12C
13-111A-97	7.00	6.00	0.3	0.3	0.3	50°	1.0	10.0x10.0	0.3	0.4	12C
13-111A-96	8.30	5.20	0.5	0.3	0.3	50°	1.0	9.0x9.0	0.4	0.4	12C
13-111A-95	8.30	7.70	0.5	0.3	0.3	50°	1.3	9.6x9.6	0.4	0.4	12C
13-111A-94	6.10	5.40	0.5	0.5	0.5	50°	1.0	7.0x7.0	0.3	0.4	12C
13-111A-93	5.50	4.40	0.5	0.5	0.5	50°	1.0	7.0x7.0	0.3	0.4	12C
13-111A-92	8.40	8.40	0.3	0.3	0.3	50°	□ 2.5	9.6x9.6	1.0	0.4	12C
13-111A-91	7.80	7.80	0.3	0.3	0.3	50°	□ 2.5	9.6x9.6	1.0	0.4	12C
13-111A-90	9.20	6.60	0.4	0.4	0.4	50°	□ 2.5	12.0x12.0	1.0	0.4	12C
13-111A-89	3.80	2.70	0.2	0.2	0.2	50°	1.0	4.0x4.0	0.3	0.2	12U1/3
13-111A-88	5.90	5.50	0.3	0.3	0.3	50°	1.0	7.0x7.0	0.4	0.4	12C
13-111A-87	6.40	6.00	0.3	0.3	0.3	50°	1.0	7.0x7.0	0.4	0.4	12C
13-111A-86	3.50	3.50	0.3	0.3	0.3	50°	1.0	5.0x5.0	0.4	0.3	12U1/3
13-111A-85	3.30	3.30	0.3	0.3	0.3	50°	1.0	5.0x5.0	0.4	0.3	12U1/3


12.71 (501) ~ 63.00 (1600)	+0.03 -0.25
5.10 (201) ~ 12.70 (500)	+0.03 -0.20
1.78 (070) ~ 5.09 (200)	+0.03 -0.10
0 ~ 1.77 (069)	+0.03 -0.05
<b>DIMENSION A &amp; B (MILS)</b>	<b>TOLERANCE (MM)</b>

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TOLERANCE UNLESS SPECIFIED
X.X $\pm 0.10$ GENERAL TOL. $\pm 0.2$ X.XX $\pm 0.05$ ANGLE $\pm 0.5^\circ$ SURFACE FINISH $\frac{1.6}{\sqrt{R}}$ REMOVE BURRS AND SHARP EDGES ALL DIMENSIONS IN MM.

MATERIAL: NBR



**MICRO-MECHANICS PTE LTD**  
mmsingapore@micro-mechanics.com  
TEL: 67468800 FAX: 67467700

PROCESS:	-
DATE:	22-4-09
DRAFTSMAN:	SH XIE
CHECKER:	HS TOK

TITLE:	RUBBER TIP (MODIFICATION FRAME TIP)
SCALE:	5:1
DRAWING NO:	13-111A-XX

REV.	140
SHEET	4
	8

1 2 3 4 5 6

A

A

B

B

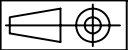
C

C

D

D

1 2 3 4 5 6



1 2 3 4 5 6

A

B

C


D

13-111A-140	14.30	10.40	0.5	0.5	0.5	50°	2.0	15.0x12.0	0.4	0.4	12D3
13-111A-139	14.00	10.60	0.5	0.5	0.5	50°	2.0	15.0x12.0	0.4	0.4	12D3
13-111A-138	3.90	2.60	0.2	0.2	0.2	55°	1.0	4.0x4.0	0.4	0.2	12U1/3
13-111A-137	8.05	7.73	0.25	0.25	0.25	50°	1.3	9.6x9.6	0.3	0.4	12C
13-111A-136	7.10	6.80	0.3	0.3	0.3	50°	□ 2.5	9.6x9.6	1.0	0.4	12C
13-111A-135	2.90	2.90	0.2	0.2	0.2	50°	1.0	5.0x5.0	0.4	0.3	12U1/3
13-111A-134	3.80	2.40	0.2	0.2	0.2	50°	1.0	4.0x4.0	0.4	0.3	12U1/3
13-111A-133	3.70	2.40	0.2	0.2	0.2	50°	1.0	4.0x4.0	0.4	0.2	12U1/3
13-111A-132	5.00	4.50	0.25	0.25	0.25	50°	1.0	7.0x7.0	0.4	0.4	12C
13-111A-131	5.90	4.90	0.4	0.4	0.4	50°	1.0	7.0x7.0	0.3	0.4	12C
13-111A-130	6.50	6.20	0.4	0.4	0.4	50°	1.0	7.0x7.0	0.3	0.4	12C
13-111A-129	3.42	2.92	0.3	0.3	0.3	50°	□ 1.5	4.0x4.0	1.0	0.4	12U1/3
13-111A-128	6.32	5.32	0.3	0.3	0.3	50°	□ 2.5	7.0x7.0	1.0	0.4	12C
13-111A-127	8.00	8.00	0.3	0.3	0.3	50°	□ 2.5	9.6x9.6	1.0	0.4	12C
13-111A-126	3.50	2.50	0.4	0.4	0.4	50°	1.0	5.0x5.0	0.3	0.2	12U1/3
13-111A-125	4.80	3.30	0.2	0.2	0.2	50°	1.0	5.0x5.0	0.3	0.4	12U1/3
13-111A-124	2.80	2.80	0.2	0.2	0.2	50°	1.0	4.0x4.0	0.4	0.2	12U1/3
13-111A-123	OBSOLETE, REFER TO 13-149C-02										
13-111A-122	5.50	5.50	0.3	0.3	0.3	50°	1.0	7.0x7.0	0.3	0.4	12C
13-111A-121	6.15	5.85	0.4	0.4	0.4	50°	□ 2.5	7.0x7.0	1.0	0.4	12C
13-111A-120	5.24	5.02	0.4	0.4	0.4	50°	□ 2.5	7.0x7.0	1.0	0.4	12C
13-111A-119	4.75	4.66	0.4	0.4	0.4	50°	□ 2.5	7.0x7.0	1.0	0.4	12C
13-111A-118	5.00	4.60	0.4	0.4	0.4	50°	□ 2.5	7.0x7.0	1.0	0.4	12C
13-111A-117	8.00	8.00	0.2	0.2	0.2	50°	1.3	9.6x9.6	0.3	0.4	12C
13-111A-116	5.00	5.00	0.2	0.2	0.2	50°	1.0	7.0x7.0	0.3	0.4	12C
13-111A-115	3.00	2.90	0.2	0.2	0.2	50°	1.0	4.0x4.0	0.3	0.3	12U1/3
13-111A-114	3.60	3.20	0.2	0.2	0.2	50°	1.0	5.0x5.0	0.3	0.3	12U1/3
13-111A-113	3.00	3.00	0.2	0.2	0.2	50°	1.0	5.0x5.0	0.3	0.3	12U1/3
PART NO.	A	B	C $\pm 0.1(2x)$	D $\pm 0.1$	K $\pm 0.1$	E°	ØF	G	H	MAX. J	HOLDER

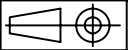
12.71 (501) ~ 63.00 (1600)	+0.03 -0.25
5.10 (201) ~ 12.70 (500)	+0.03 -0.20
1.78 (070) ~ 5.09 (200)	+0.03 -0.10
0 ~ 1.77 (069)	+0.03 -0.05
DIMENSION A & B (MILS)	TOLERANCE (MM)

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<b>TOLERANCE UNLESS SPECIFIED</b> X.X $\pm 0.10$ GENERAL TOL. $\pm 0.2$ X.XX $\pm 0.05$ ANGLE $\pm 0.5^\circ$ SURFACE FINISH $\frac{1.6}{\sqrt{R}}$ REMOVE BURRS AND SHARP EDGES ALL DIMENSIONS IN MM. 13-99-027 R03	MATERIAL: NBR	PROCESS: -	TITLE: RUBBER TIP (MODIFICATION FRAME TIP)	REV.	
	 <b>MICRO-MECHANICS PTE LTD</b> mmsingapore@micro-mechanics.com TEL: 67468800 FAX: 67467700	DATE: 22-4-09	DRAWING NO: 13-111A-XX		140
		DRAFTSMAN: SH XIE	SCALE: 5:1	SHEET 5	
		CHECKER: HS TOK		8	

1 2 3 4 5 6




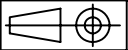
PART NO.	A	B	C $\pm 0.1(2x)$	D $\pm 0.1$	K $\pm 0.1$	E*	ØF	G	H	MAX. J	HOLDER
13-111A-168	3.50	3.00	0.3	0.3	0.3	50°	□ 1.5	5.0x5.0	1.0	0.3	12U1/3
13-111A-167	2.80	2.80	0.2	0.2	0.2	50°	1.0	4.0x4.0	0.35	0.3	12U1/3
13-111A-166	3.60	3.60	0.2	0.2	0.2	50°	1.0	5.0x5.0	0.35	0.4	12U1/3
13-111A-165	5.00	4.20	0.3	0.3	0.3	50°	1.0	7.0x7.0	0.3	0.4	12C
13-111A-164	4.80	4.80	0.65	0.3	0.3	50°	1.0	7.0x7.0	0.3	0.4	12C
13-111A-163	4.00	4.88	0.25	0.25	0.25	50°	1.0	5.0x5.0	0.3	0.4	12U1/3
13-111A-162	3.30	3.30	0.2	0.2	0.2	50°	1.0	5.0x5.0	0.4	0.3	12U1/3
13-111A-161	3.68	2.62	0.2	0.2	0.2	50°	1.0	4.0x4.0	0.4	0.3	12U1/3
13-111A-160	5.50	5.50	0.2	0.2	0.2	50°	1.0	7.0x7.0	0.3	0.4	12C
13-111A-159	4.60	4.60	0.2	0.2	0.2	50°	1.0	5.0x5.0	0.3	0.4	12U1/3
13-111A-158	3.78	3.38	0.16 $\pm 0.05$	0.16 $\pm 0.05$	0.16 $\pm 0.05$	50°	1.0	4.0x4.0	0.3	0.3	12U1/3
13-111A-157	6.10	5.10	0.3	0.3	0.3	50°	1.0	7.0x7.0	0.3	0.4	12C
13-111A-156	6.30	6.30	0.4	0.4	0.4	50°	1.0	7.0x7.0	0.3	0.4	12C
13-111A-155	6.70	5.90	0.3	0.3	0.3	50°	1.0	7.0x7.0	0.3	0.4	12C
13-111A-154	2.54	8.13	1.0	0.5	0.5	50°	1.0	5.0x9.6	0.4	0.2	12C
13-111A-153	6.20	5.70	0.15 $\pm 0.05$	0.2	0.2	50°	1.0	7.0x7.0	0.4	0.4	12C
13-111A-152	12.30	9.20	0.5	0.5	0.5	50°	2.0	15.0x12.0	0.4	0.4	12D3
13-111A-151	10.00	3.50	1.2	2.0	2.0	50°	1.0	7.0x12.0	0.5	0.3	12C
13-111A-150	3.80	3.40	0.3	0.3	0.3	50°	□ 1.5	5.0x5.0	1.0	0.3	12U1/3
13-111A-149	13.50	13.50	0.5	0.5	0.5	50°	2.0	15.0x15.0	0.4	0.4	12D3
13-111A-148	3.80	3.30	0.2	0.2	0.2	50°	1.0	4.0x4.0	0.3	0.3	12U1/3
13-111A-147	3.90	3.60	0.3	0.3	0.3	50°	1.0	4.0x4.0	0.3	0.3	12U1/3
13-111A-146	4.00	4.00	0.3	0.3	0.3	50°	□ 1.5	5.0x5.0	1.0	0.4	12U1/3
13-111A-145	10.00	10.00	0.3	0.3	0.3	50°	□ 2.5	12.0x12.0	1.0	0.4	12C
13-111A-144	4.35	4.35	0.2	0.2	0.2	50°	1.0	5.0x5.0	0.4	0.4	12U1/3
13-111A-143	3.30	2.90	0.2	0.2	0.2	50°	1.0	4.0x4.0	0.4	0.3	12U1/3
13-111A-142	8.70	8.50	0.3	0.3	0.3	50°	1.3	9.6x9.6	0.3	0.4	12C
13-111A-141	4.00	3.00	0.5	0.5	0.5	50°	1.0	5.0x5.0	0.3	0.3	12C

12.71 (501) ~ 63.00 (1600)	+0.03 -0.25
5.10 (201) ~ 12.70 (500)	+0.03 -0.20
1.78 (070) ~ 5.09 (200)	+0.03 -0.10
0 ~ 1.77 (069)	+0.03 -0.05
<b>DIMENSION A &amp; B (MILS)</b>	<b>TOLERANCE (MM)</b>

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<b>TOLERANCE UNLESS SPECIFIED</b> X.X $\pm 0.10$ GENERAL TOL. $\pm 0.2$ X.XX $\pm 0.05$ ANGLE $\pm 0.5^\circ$ SURFACE FINISH $\frac{1.6}{\sqrt{R}}$ REMOVE BURRS AND SHARP EDGES ALL DIMENSIONS IN MM. 13-99-027 R03	MATERIAL: NBR	PROCESS: -	TITLE: RUBBER TIP (MODIFICATION FRAME TIP)	REV. 140	
	 <b>MICRO-MECHANICS PTE LTD</b> mmsingapore@micro-mechanics.com TEL: 67468800 FAX: 67467700	DATE: 22-4-09	DRAFTSMAN: SH XIE	SCALE: 5:1	DRAWING NO: 13-111A-XX
		CHECKER: HS TOK			SHEET 6
					8



PART NO.	A	B	C $\pm 0.1(2x)$	D $\pm 0.1$	K $\pm 0.1$	E*	ØF	G	H	MAX. J	HOLDER
13-111A-196	4.10	4.10	0.35	0.7	0.7	50°	1.0	5.0x5.0	0.3	0.2	12U1/3
13-111A-195	4.10	4.10	0.55	0.75	0.75	50°	1.0	5.0x5.0	0.3	0.2	12U1/3
13-111A-194	4.10	4.10	0.5	0.5	0.5	50°	1.0	5.0x5.0	0.3	0.2	12U1/3
13-111A-193	7.70	2.80	0.3	0.3	0.3	50°	1.0	8.3x5.0	0.3	0.3	12C
13-111A-192	5.60	5.60	0.3	0.3	0.3	50°	1.0	7.0x7.0	0.3	0.4	12C
13-111A-191	3.45	3.45	0.415	0.2	0.2	50°	1.0	5.0x5.0	0.3	0.4	12U1/3
13-111A-190	7.00	7.00	1.75	1.75	1.75	50°	1.0	9.6x9.6	0.3	0.3	12C
13-111A-189	4.00	4.00	0.75	0.75	0.75	50°	1.0	6.0x6.0	0.3	0.3	12C
13-111A-188	7.00	10.00	0.3	0.3	0.3	50°	□ 6.0	10.0x12.0	1.0	0.4	12D3
13-111A-187	7.80	7.80	0.3	0.3	0.3	50°	1.3	9.6x9.6	0.3	0.4	12C
13-111A-186	7.36	7.36	0.4	0.4	0.4	50°	1.0	10.0x10.0	0.3	0.4	12C
13-111A-185	6.90	6.15	0.2	0.2	0.2	50°	1.0	7.0x7.0	0.3	0.4	12C
13-111A-184	4.00	4.00	0.2	0.2	0.2	50°	1.0	5.0x5.0	0.4	0.4	12U1/3
13-111A-183	3.80	3.80	0.3	0.35	0.35	50°	1.0	4.0x4.0	0.3	0.3	12U1/3
13-111A-182	3.50	3.50	0.3	0.3	0.3	50°	□ 1.5	5.0x5.0	1.0	0.3	12U1/3
13-111A-181	5.30	2.80	0.4	0.4	0.4	50°	1.0	7.0x7.0	0.3	0.3	12C
13-111A-180	10.00	7.00	0.25	0.25	0.25	50°	1.0	12.0x12.0	0.5	0.4	12C
13-111A-179	10.10	10.10	0.25	0.25	0.25	50°	1.0	12.0x12.0	0.4	0.4	12C
13-111A-178	8.10	8.10	0.25	0.25	0.25	50°	1.3	9.6x9.6	0.4	0.4	12C
13-111A-177	4.00	4.00	0.25	0.25	0.25	50°	1.0	5.0x5.0	0.4	0.4	12U1/3
13-111A-176	3.00	3.00	0.25	0.25	0.25	50°	1.0	5.0x5.0	0.4	0.3	12U1/3
13-111A-175	4.66	4.66	0.3	0.3	0.3	50°	□ 1.5	5.0x5.0	1.0	0.4	12U1/3
13-111A-174	4.23	4.23	0.3	0.3	0.3	50°	□ 2.5	7.0x7.0	1.0	0.4	12C
13-111A-173	2.80	7.20	0.5	0.5	0.5	50°	1.0	5.0x9.6	0.3	0.3	12C
13-111A-172	5.60	5.20	0.2	0.2	0.2	50°	1.0	7.0x7.0	0.2	0.4	12C
13-111A-171	4.06	4.06	0.3	0.3	0.3	50°	1.0	7.0x7.0	0.3	0.4	12C
13-111A-170	4.60	4.00	0.4	0.4	0.4	50°	□ 2.5	7.0x7.0	1.0	0.4	12C
13-111A-169	5.50	5.50	0.3	0.3	0.3	50°	1.0	7.0x7.0	0.4	0.4	12C


12.71 (501) ~ 63.00 (1600)	+0.03 -0.25
5.10 (201) ~ 12.70 (500)	+0.03 -0.20
1.78 (070) ~ 5.09 (200)	+0.03 -0.10
0 ~ 1.77 (069)	+0.03 -0.05
<b>DIMENSION A &amp; B (MILS)</b>	<b>TOLERANCE (MM)</b>

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TOLERANCE UNLESS SPECIFIED
X.X $\pm 0.10$ GENERAL TOL. $\pm 0.2$ X.XX $\pm 0.05$ ANGLE $\pm 0.5^\circ$ SURFACE FINISH $\frac{1.6}{\sqrt{R}}$ REMOVE BURRS AND SHARP EDGES ALL DIMENSIONS IN MM.

MATERIAL: NBR



**MICRO-MECHANICS PTE LTD**  
mmsingapore@micro-mechanics.com  
TEL: 67468800 FAX: 67467700

PROCESS: -
DATE: 22-4-09
DRAFTSMAN: SH XIE
CHECKER: HS TOK

TITLE: RUBBER TIP (MODIFICATION FRAME TIP)	REV. 140
SCALE: 5:1	DRAWING NO: 13-111A-XX
	SHEET 7
	8

1 2 3 4 5 6

A

B

C

D

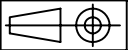
A

B

C

D

1 2 3 4 5 6



1 2 3 4 5 6

A

A

B

B

C

C

D


D

13-111A-208	7.50	5.70	0.4	0.4	0.4	50°	1.0	10.0x8.0	0.3	0.4	12C
13-111A-207	4.30	4.30	0.3	0.3	0.3	50°	1.0	5.0x5.0	0.4	0.4	12U1/3
13-111A-206	6.95	5.50	0.4	0.2	0.2	50°	1.0	7.0x7.0	0.3	0.4	12C
13-111A-205	6.40	5.20	0.35	0.2	0.2	50°	1.0	7.0x7.0	0.3	0.4	12C
13-111A-204	10.60	4.60	0.5	0.5	0.5	50°	1.0	12.0x7.0	0.3	0.4	12C
13-111A-203	9.50	6.00	0.25	0.25	0.25	50°	1.0	12.0x9.0	0.5	0.4	12C
13-111A-202	11.20	9.80	0.5	0.5	0.5	50°	1.0	12.0x12.0	0.3	0.4	12C
13-111A-201	6.25	5.61	0.25	0.25	0.25	50°	1.0	7.0x7.0	0.2	0.4	12C
13-111A-200	10.90	10.90	0.2	0.2	0.2	50°	1.0	12.0x12.0	0.4	0.4	12C
13-111A-199	6.05	4.27	0.3	0.3	0.3	50°	1.0	7.0x7.0	0.4	0.4	12C
13-111A-198	4.50	4.50	0.3	0.3	0.3	50°	1.0	7.0x7.0	0.4	0.4	12C
13-111A-197	4.30	2.30	0.4	0.4	0.4	50°	1.0	5.0x5.0	0.3	0.2	12C
<b>PART NO.</b>	<b>A</b>	<b>B</b>	<b>C <math>\pm 0.1(2x)</math></b>	<b>D <math>\pm 0.1</math></b>	<b>K <math>\pm 0.1</math></b>	<b>E°</b>	<b>ØF</b>	<b>G</b>	<b>H</b>	<b>MAX. J</b>	<b>HOLDER</b>

12.71 (501) ~ 63.00 (1600)	+0.03 -0.25
5.10 (201) ~ 12.70 (500)	+0.03 -0.20
1.78 (070) ~ 5.09 (200)	+0.03 -0.10
0 ~ 1.77 (069)	+0.03 -0.05
<b>DIMENSION A &amp; B (MILS)</b>	<b>TOLERANCE (MM)</b>

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<b>TOLERANCE UNLESS SPECIFIED</b> X.X $\pm 0.10$ GENERAL TOL. $\pm 0.2$ X.XX $\pm 0.05$ ANGLE $\pm 0.5^\circ$ SURFACE FINISH $\sqrt{1.6}$ REMOVE BURRS AND SHARP EDGES ALL DIMENSIONS IN MM.	MATERIAL: NBR	PROCESS: -	TITLE: RUBBER TIP (MODIFICATION FRAME TIP)	REV. 140	
	 <b>MICRO-MECHANICS PTE LTD</b> mmsingapore@micro-mechanics.com TEL: 67468800 FAX: 67467700	DATE: 22-4-09	SCALE: 5:1 DRAWING NO: 13-111A-XX		SHEET 8
		DRAFTSMAN: SH XIE			SHEET 8
		CHECKER: HS TOK			SHEET 8

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