

REVISIONS			
REV.	DESCRIPTION	DATE	APPROVED
H.	Add Part Number, See Page 2	3/31/16	J.C.
J.	Engineering Update w/o Changes	5/13/16	J.C.
K.	Corrected Typo Dimensions on Page 2 & 3	7/29/16	J.C.
L.	ECO # 1014 , Update tables on Page 2 & 3 (EOL related)	6/6/2019	G. O.

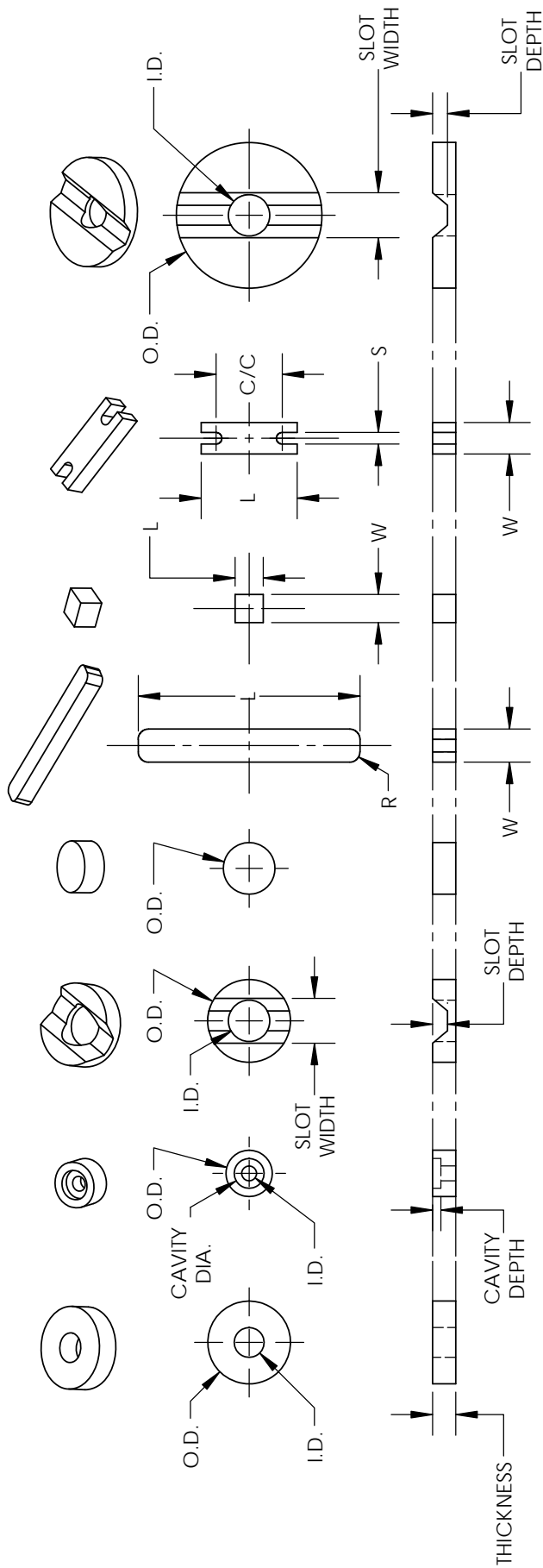


FIG. A FIG. B FIG. C FIG. D FIG. E FIG. F FIG. G FIG. H

TABLE 1		NOTES
SUFFIX I.D.	I.D. DESCRIPTION	
NONE	Wax	Offered for all part numbers
E	Effervescent	Offered for all part numbers
CR	Color Removed	Offered for all part numbers
DR	Detergent Removed	Offered for all part numbers
H	Salt	Not offered for P/Ns: TO-10, TO-11, TO-64, TO-65, TO-68
XH	Extra Hard	Not offered for P/Ns: TO-10, TO-11, TO-64, TO-65, TO-68

EXAMPLE:
TO-200-100 E
 _____ Suffix I.D. (see Table 1)
 _____ Part Thickness
 _____ TO Style
 _____ Series

STANDARD TOLERANCE (UNLESS OTHERWISE SPECIFIED)	
DECIMALS	$\pm .1$
ANGULAR	$X^\circ \pm 1^\circ$
.XX	$\pm .01$
.XXX	$\pm .005$

DESIGNED:	D.GREEN	DATE:	10/15/03	REVISION:	L
REVISED:	A.VALDEZ	DATE:	06/06/19	PART NO.:	TO-XXX-XXX
CHECKED:	A.VALDEZ	DATE:	06/06/19	CAGE CODE:	32559
		SCALE:	1:1	SHEET #	1 OF 3

BIVAR
 4 THOMAS, IRVINE, CA. 92618
 TEL: (949) 951-8808 FAX: (949) 951-3974

TITLE: DISS-O-PADS, WASH AWAY
 SPACERS

REVISIONS		DATE	APPROVED
REV.	DESCRIPTION		
-	See Sheet	-	-

GENERAL PURPOSE				FIG.
Part No	I.D.	O.D.	THICKNESS	
TO-46	.090 (2.3mm)	.250 (6.4mm)	.040, .050, .060, .070, .090, .100, .120, .130, .150, .200	A
TO-19	.250 (6.4mm)	.480 (12.2mm)	.040, .050, .060, .070, .090, .100, .120, .130, .150, .190	A
TO-22	.225 (5.7mm)	.437 (11.1mm)	.040, .050, .060, .070, .080, .090, .100, .110	A
TO-23	.090 (2.3mm)	.310 (7.9mm)	.040, .050, .055, .060, .070, .090, .100, .120	A
TO-24	.090 (2.3mm)	.340 (8.6mm)	.040, .050, .060, .070, .090, .100	A
TO-30	.275 (7.0mm)	.397 (10.0mm)	.040, .050, .060, .070, .090, .100	A
TO-25	.180 (4.6mm)	.480 (12.2mm)	.040, .050, .060, .070, .090, .100, .120, .130	A
TO-28	.172 (4.4mm)	.343 (8.7mm)	.040, .050, .060, .070, .090, .100, .120, .130	A
TO-41	.156 (4.0mm)	.360 (9.1mm)	.030, .040, .050, .060, .070, .090, .100, .120, .130, .140	A
TO-42	.250 (6.4mm)	.438 (11.1mm)	.040, .050, .060, .070, .090, .100, .120	A

RECTANGULAR & SQUARE						
Part No	L	W	R	THICKNESS	FIG.	SHAPE
TO-100	.670 (17.0mm)	.100 (2.5mm)	.031 (.79mm)	.030, .040, .045, .050, .060, .065, .070, .075, .080, .090, .100, .120, .130	E	Rectangular
TO-101	.562 (14.3mm)	.185 (4.7mm)	-	.030, .040, .050, .060, .070, .080, .090, .100, .120, .130, .150	E	Rectangular
TO-102	.505 (12.8mm)	.160 (4.1mm)	-	.040, .050, .060, .070, .090, .100, .120, .130, .150	E	Rectangular
TO-116	.666 (16.9mm)	.300 (7.6mm)	.063 (1.6mm)	.030, .040, .050, .055, .060, .065, .070, .075, .080, .090, .100, .110, .120, .125, .130, .150	E	Rectangular
TO-117	.666 (16.9mm)	.281 (7.1mm)	.100 (2.54mm)	.040, .050, .060, .070, .080, .090, .100, .120, .125, .130, .140	E	Rectangular
TO-118	.705 (17.9mm)	.260 (6.6mm)	.080 (2.0mm)	.030, .040, .050, .060, .070, .080, .090, .100, .110, .120, .130, .150	E	Rectangular
TO-120	.085 (2.2mm)	.085 (2.2mm)	-	.040, .045, .050, .060, .070, .090, .100	F	Square
TO-121	.095 (2.4mm)	.095 (2.4mm)	-	.040, .045, .050, .060, .070, .075, .085, .090, .095, .100	F	Square

RADIAL & AXIAL DEVICE						
Part No	C/C	S	W	L	THICKNESS	FIG.
TO-200	.100 (2.5mm)	.035 (.89mm)	.095 (2.4mm)	.190 (4.8mm)	.040, .050, .060, .070, .080, .090, .100, .120, .130, .150	G
TO-201	.150 (3.8mm)	.035 (.89mm)	.095 (2.4mm)	.240 (6.1mm)	.040, .050, .060, .070, .090, .100, .120, .130	G
TO-203	.200 (5.1mm)	.035 (.89mm)	.095 (2.4mm)	.290 (7.4mm)	.040, .050, .060, .070, .090, .100, .120, .130	G
TO-204	.250 (6.4mm)	.040 (1.0mm)	.145 (3.7mm)	.340 (8.6mm)	.040, .050, .060, .070, .080, .090, .100, .120, .130	G
TO-205	.300 (7.6mm)	.040 (1.0mm)	.145 (3.7mm)	.390 (9.9mm)	.040, .050, .060, .070, .090, .100, .120, .130, .150	G
TO-206	.400 (10.2mm)	.045 (1.1mm)	.195 (5.0mm)	.490 (12.4mm)	.040, .050, .060, .070, .080, .090, .100, .120, .130, .150	G
TO-207	.500 (12.7mm)	.045 (1.1mm)	.195 (5.0mm)	.590 (15.0mm)	.040, .050, .060, .070, .090, .100, .120, .130	G

STANDARD TOLERANCE
(UNLESS OTHERWISE SPECIFIED)

DECIMALS
X ± .1
.XX ± .01
.XXX ± .005

ANGULAR
X° ± 1°



DESIGNED:	D.GREEN	DATE:	10/15/03
REVISED:	A.VALDEZ	DATE:	06/06/19
CHECKED:	A.VALDEZ	DATE:	06/06/19



4 THOMAS, IRVINE, CA. 92618
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TITLE: DISS-O-PADS, WASH AWAY
SPACERS

PART NO:	TO-XXX-XXX	REVISION:	L
CAGE CODE:	32559		
SCALE:	1:1		
SHEET #	2 OF 3		

CAD GENERATED DOCUMENT, DO NOT MEASURE DRAWING

REVISIONS		DESCRIPTION	DATE	APPROVED
REV.	-	See Sheet	-	-

Part No	I.D.	O.D.	THICKNESS	FIG.	TO--5
TO-5	.225 (5.7mm)	.375 (9.5mm)	.040, .050, .060, .070, .085, .090, .100, .120, .130, .150	A	Spacer
TO-6	.250 (6.4mm)	.375 (9.5mm)	.040, .050, .060, .070, .090, .100, .120, .130, .150	A	I.C. Spacer
TO-9	.300 (7.6mm)	.437 (11.1mm)	.040, .050, .070, .080, .090, .100, .120, .130, .150, .180	A	-
TO-13	.225 (5.7mm)	.310 (7.9mm)	.050, .060, .070, .080, .090, .100, .120, .130	A	Epoxy Case

Part No	I.D.	O.D.	CAVITY DIA.	CAVITY DEPTH	THICKNESS	FIG.
TO-12	.125 (3.2mm)	.310 (7.9mm)	.215 (5.5mm)	.065 (1.7mm)	.080, .090, .100, .120	TO-18
TO-16	.125 (3.2mm)	.205 (5.2mm)	-	-	.040, .045, .050, .060, .070, .080, .090, .100, .120, .130, .150, .175, .200	Epoxy Case
TO-17	.170 (4.3mm)	.250 (6.4mm)	-	-	.035, .040, .050, .060, .070, .090, .100, .120, .130, .140, .150, .170, .180, .200	Thin Walls
TO-18	.125 (3.2mm)	.250 (6.4mm)	-	-	.040, .045, .050, .055, .060, .070, .080, .090, .100, .120, .125, .130, .150, .170, .190	Standard
TO-20	.125 (3.2mm)	.290 (7.4mm)	.200 (5.1mm)	.065 (1.7mm)	.070, .090, .100, .120, .130, .150	B
TO-27	.125 (3.2mm)	.290 (7.4mm)	-	-	.040, .050, .060, .070, .090	A

Part No	I.D.	O.D.	THICKNESS	SLOT DEPTH	SLOT WIDTH	FIG.
TO-21	.125 (3.2mm)	.250 (6.4mm)	.050, .070, .080, .090, .100, .120, .130, .150	.045 (1.1mm)	.060 (1.5mm)	C
TO-35	-	.440 (11.2mm)	.100, .120, .130, .140, .150, .170, .180, .190, .220	.065 (1.7mm)	.230 (5.8mm)	H
TO-36	-	.187 (4.7mm)	.050, .060, .070, .080, .090, .100, .120, .130, .150	.040 (1.0mm)	.080 (2.0mm)	H
TO-37	-	.156 (4.0mm)	.050, .070, .080, .090, .100, .120	.025 (.64mm)	.050 (1.3mm)	H

Part No	I.D.	O.D.	CAVITY DIA.	CAVITY DEPTH	THICKNESS	FIG.
TO-7	.075 (1.9mm)	.175 (4.4mm)	-	-	.030, .040, .050, .060, .070, .090, .100, .120, .130, .150	A
TO-8	.062 (1.6mm)	.156 (4.0mm)	-	-	.030, .035, .040, .050, .055, .060, .065, .070, .080, .085, .090, .100, .105, .120, .130, .150, .160	A
TO-10	.040 (1.0mm)	.085 (2.2mm)	-	-	.030, .040, .050, .060, .065, .070, .080, .090, .100	A
TO-11	.045 (1.1mm)	.100 (2.5mm)	-	-	.030, .040, .050, .060, .070, .080, .100	A
TO-26	.070 (1.8mm)	.187 (4.7mm)	-	-	.030, .040, .050, .060, .070, .090, .100, .120	A
TO-40	.045 (1.1mm)	.156 (4.0mm)	-	-	.030, .040, .050, .060, .070, .080, .090, .100, .120, .130, .150	A
TO-64	.045 (1.1mm)	.140 (3.6mm)	-	-	.030, .035, .040, .050, .060, .070, .090, .100, .120, .125, .130, .140, .150	A
TO-65	.075 (1.9mm)	.140 (3.6mm)	-	-	.030, .035, .040, .045, .050, .060, .070, .080, .090, .100, .120, .125, .130	A
TO-67	.045 (1.1mm)	.140 (3.6mm)	.090 (2.3mm)	.025 (.64mm)	.050, .055, .060, .070, .090	B
TO-68	.045 (1.1mm)	.110 (2.8mm)	.075 (1.9mm)	.025 (.64mm)	.040, .050, .055, .060, .070, .090, .100, .120, .130	B

Part No	I.D.	O.D.	THICKNESS	FIG.
TO-29	-	.156 (4.0mm)	.040, .050, .060, .070, .090, .100	D
TO-31	-	.125 (3.2mm)	.040, .050, .060, .070, .090, .100, .120, .130	D
TO-32	-	.187 (4.7mm)	.030, .040, .050, .060, .070, .080, .090, .100	D
TO-33	-	.250 (6.4mm)	.030, .040, .050, .060, .070, .080, .090, .100, .120, .130	D
TO-34	-	.375 (9.5mm)	.040, .050, .060, .070, .090, .100	D

STANDARD TOLERANCE
(UNLESS OTHERWISE SPECIFIED)

DECIMALS
X ± .1
.XX ± .01
.XXX ± .005

ANGULAR
X° ± 1°

DESIGNED BY: D.GREEN
DATE: 10/15/03

REVISION: 10-XXX-XXX L

CAGE CODE: 32559

CHECKED: A.VALDEZ
DATE: 06/06/19

SCALE: 1:1

SHEET # 3 OF 3

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