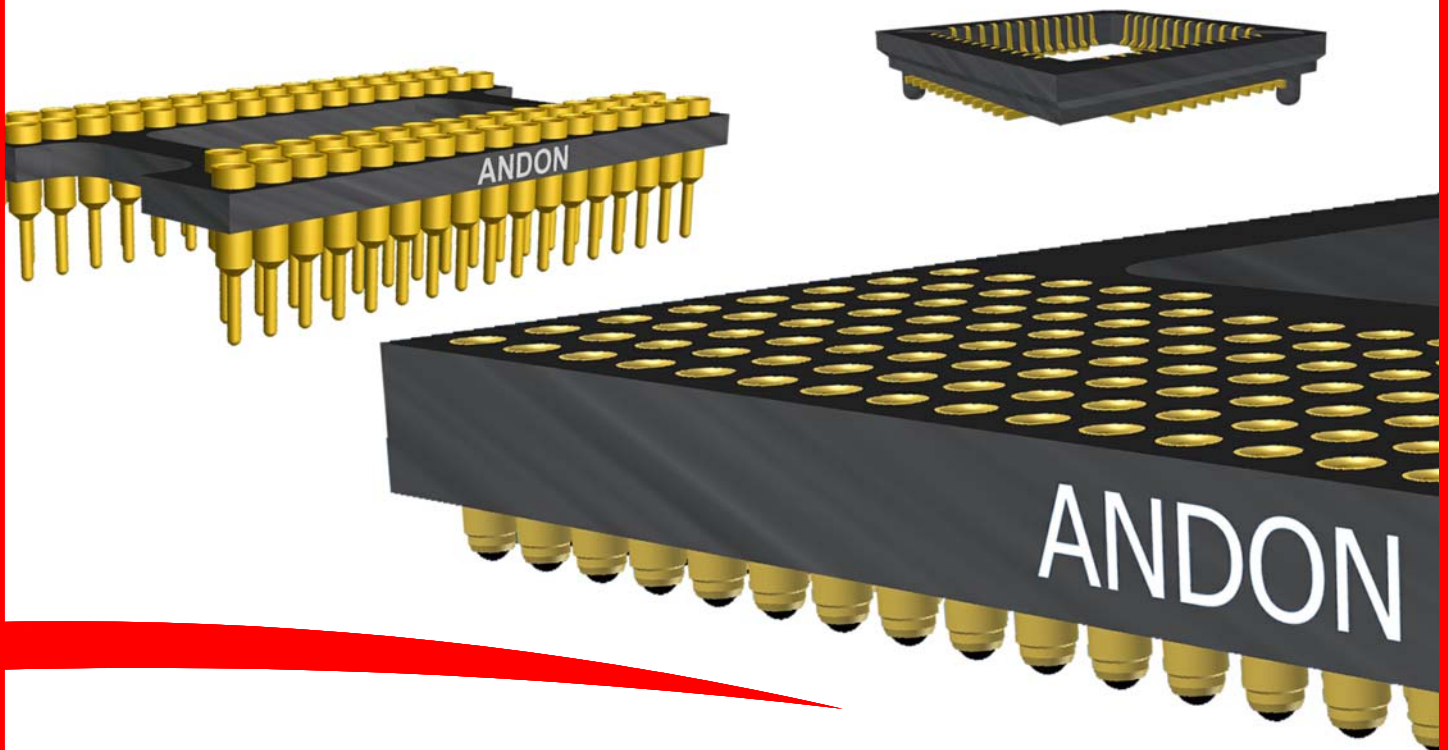




## *High-Reliability Image Sensor Sockets for ON Semiconductor*



Rollerball® U.S. PATENTED  
CANADIAN PATENTED

*Featuring Andon's Unique Senstac<sup>TM</sup> Contact*

ON SEMICONDUCTOR								
Part Number	Product Name	Andon Part Number Replace "XXX" with Terminal Type	Terminal Type			Pin Ø [in]	Figure Number	Page Number
			Thru-Hole	Surface Mount	Rollerball®			
-	AGS67M	10-35-11-383-XXX-R27-L14	400T4	414T4	RB501T4	.012	21	10
-	AR0130CS	685-48-XX-XXX-R27-L14-X	TH-491	SM-500	-	-	13	7
-	AR0132AT	12-08-03-063-XXX-R27-L14	347T	319T	RB339T	.010	1	2
-	AR0134CS	685-48-XX-XXX-R27-L14-X	TH-491	SM-500	-	-	13	7
-	AR0134CS	12-08-03-063-XXX-R27-L14	347T	319T	RB339T	.010	1	2
-	AR0135AT/CS	12-08-03-063-XXX-R27-L14	347T	319T	-	.010	1	2
-	AR0138AT	17-11-02-109-XXX-R27-L14	437T	329T	-	.010	23	10
-	AR0140AT/CS	12-08-03-063-XXX-R27-L14	347T	319T	RB339T	.010	1	2
-	AR0141CS	12-08-03-063-XXX-R27-L14	347T	319T	RB339T	.010	1	2
-	AR0143AT	17-09-05-080-XXX-R27-L14	437T	329T	-	.010	26	11
-	AR0220AT	12-11-05-087-XXX-R27-L14	347T	319T	-	.010	22	10
-	AR0221	12-11-05-087-XXX-R27-L14	347T	319T	RB339T	.010	22	10
-	AR0230AT	12-09-03-080-XXX-R27-L14	437T	329T	RB339T	.010	14	7
-	AR023Z	12-09-03-080-XXX-R27-L14	437T	329T	RB339T	.010	14	7
-	AR0233AT	12-09-03-080-XXX-R27-L14	437T	329T	RB339T	.010	14	7
-	AR0234AT	17-11-02-076-XXX-R27-L14	437T	329T	-	.010	25	11
-	AR0237	12-09-03-080-XXX-R27-L14	437T	329T	RB339T	.010	14	7
-	AR0237AT	12-09-03-080-XXX-R27-L14	437T	329T	RB339T	.010	14	7
-	AR0239	12-08-03-063-XXX-R27-L14	347T	319T	RB339T	.010	1	2
-	AR0330	690-48-SM-G10-L14-X	-	-	-	-	10	5
-	AR0331	685-48-XX-XXX-R27-L14-X	TH-491	SM-500	-	-	13	7
-	AR0430	685-48-XX-XXX-R27-L14-X	TH-491	SM-500	-	-	13	7
-	AR0431	684-052-XX-XXX-R27-L14-X	TH-491	SM-500	-	-	16	8
-	AR0522	684-052-XX-XXX-R27-L14-X	TH-491	SM-500	-	-	16	8
-	AR0820AT	17-12-07-095-XXX-R27-L14	347T	319T	RB339T	.010	7	3
-	AR0835	685-48-XX-XXX-R27-L14-X	TH-491	SM-500	-	-	20	10
-	AR1011	687-124-XX-XXX-R27-L14-X	-	-	-	-	24	11
-	AR1820HS	12-09-04-060-XXX-R27-L14	347T	319T	RB339T	.010	15	7
-	ARX550AT	12-08-03-063-XXX-R27-L14	347T	319T	RB339T	.010	1	2
-	ASX344AT	12-08-03-063-XXX-R27-L14	347T	319T	RB339T	.010	1	2
-	AS0142AT	12-08-03-063-XXX-R27-L14	347T	319T	RB339T	.010	1	2
NOI4SM6600A	IBIS4-6600	620-68-SM-G10-S14-X	-	-	-	-	12	6
NOI4SM6600ABJLCC	IBIS4-6600	710-84-SM-T1	-	-	-	-	3	2
-	KAI-50140	IS230-1371D-XXX-R27-L14-A	75M	265M	RB338K	.018	17	8
NOIL1SN3000A	LUPA 3000	10-21-06-369-XXX-R27-L14	400T4	414T4	RB501T4	.012	4	3
NOIL2SM1300A	LUPA- 1300-2	10-24-05-168-XXX-R27-L14	400T4	414T4	RB501T4	.012	5	3
NOIL2SM1300A	LUPA- 1300-2	10-24-05A-168-XXX-R27-L14	400T4	414T4	RB501T4	.012	5	3
NOIL1SM0300A	LUPA-300	680-48-SM-G10-R14-X	-	-	-	-	11	6
-	MT9D131	680-48-SM-G10-R14-X	-	-	-	-	11	6
-	MT9F002	685-48-XX-XXX-R27-L14-X	TH-491	SM-500	-	-	13	7
-	MT9J001/ MT9J003	685-48-XX-XXX-R27-L14-X	TH-491	SM-500	-	-	13	7
-	MT9M001	680-48-SM-G10-R14-X	-	-	-	-	11	6
-	MT9M021	12-08-03-063-XXX-P27-L14	347T	319T	RB339T	.010	1	2
-	MT9M024	685-48-XX-XXX-R27-L14-X	TH-491	SM-500	-	-	13	7
-	MT9M034	685-48-XX-XXX-R27-L14-X	TH-491	SM-500	-	-	13	7
-	MT9M131	690-48-SM-G10-L14-X	-	-	-	-	10	5
-	MT9P001	685-48-XX-XXX-R27-L14-X	TH-491	SM-500	-	-	13	7
-	MT9P006	685-48-XX-XXX-R27-L14-X	TH-491	SM-500	-	-	13	7
-	MT9P031	685-48-XX-XXX-R27-L14-X	TH-491	SM-500	-	-	13	7
-	MT9V022	12-08-02-052-XXX-R27-L14	347T	319T	RB339T	.010	2	2
-	MT9V023	12-08-02-052-XXX-R27-L14	347T	319T	RB339T	.010	2	2
-	MT9V024	12-08-02-052-XXX-R27-L14	347T	319T	RB339T	.010	2	2
-	MT9V032	690-48-SM-G10-L14-X	-	-	-	-	10	5
-	MT9V032 (LCC)	690-48-SM-G10-L14-X	-	-	-	-	10	5
-	MT9V034	690-48-SM-G10-L14-X	-	-	-	-	10	5
-	MT9V126	12-08-03-063-XXX-P27-L14	347T	319T	RB339T	.010	1	2
-	MT9V127	12-08-03-063-XXX-P27-L14	347T	319T	RB339T	.010	1	2
-	MT9V128	12-08-03-063-XXX-P27-L14	347T	319T	RB339T	.010	1	2
NOIP1SN2000A / NOIP1SN5000A	PYTHON 2K / PYTHON 5K (LCC)	686-84A-SM-G10-L14-X	-	-	-	-	8	4
NOIP1SN2000A / NOIP1SN5000A	PYTHON 2K / PYTHON 5K (LCC)	686-84B-SM-G10-L14-X	-	-	-	-	9	5
NOIP1SN2000A / NOIP1SN5000A	PYTHON 2K / PYTHON 5K (LGA)	683-128-XX-XXX-R27-L14-1	TH-491	SM-500	SM-RB593	-	18	9
NOIP1SN016KA	PYTHON 16K	10-31-13A-355-XXX-R27-L14	400T4	414T4	RB501T4	.012	6	3
NOIP1SN025KA	PYTHON 25K	10-31-13A-355-XXX-R27-L14	400T4	414T4	RB501T4	.012	6	3
NOIP1SN0300A	PYTHON 300	680-48-SM-G10-R14-X	-	-	-	-	11	6
NOIP1SN0500A	PYTHON 500	680-48-SM-G10-R14-X	-	-	-	-	11	6
NOIP1SN1300A	PYTHON1300	680-48-SM-G10-R14-X	-	-	-	-	11	6
NOIV1SN012KA	VITA 12K	10-31-13A-355-XXX-R27-L14	400T4	414T4	RB501T4	.012	6	3
NOIV1SN1300A / NOIV2SN1300A	VITA 1300	680-48-SM-G10-R14-X	-	-	-	-	11	6
NOIV1SN016KA	VITA 16K	10-31-13A-355-XXX-R27-L14	400T4	414T4	RB501T4	.012	6	3
NOIV1SN2000A / NOIV2SN2000A	VITA 2000	620-52-SM-G10-L14-X	-	-	-	-	12	6
NOIV1SN025KA	VITA 25K	10-31-13-355-XXX-R27-L14	400T4	414T4	RB501T4	.012	6	3
NOIV1SN025KA	VITA 25K	10-31-13A-355-XXX-R27-L14	400T4	414T4	RB501T4	.012	6	3
NOIV1SN5000A	VITA 5000	620-68-SM-G10-S14-X	-	-	-	-	12	6

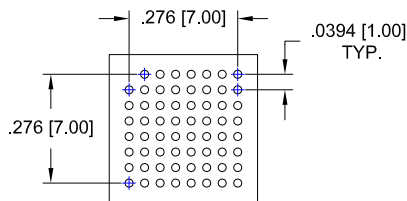
Replace "X" with "1" for index pins or  
"0" for none

See back cover for Carrier and low profile options including other socket mounting types.  
Heat sink socket available to reduce heat and noise. Contact Andon for details.

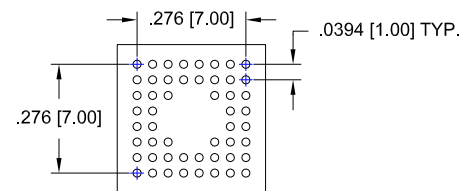
ON SEMICONDUCTOR							
Part Number	Product Name	Andon Part Number Replace "XXX" with Terminal Type	Terminal Type			Pin Ø [in]	Figure Number
			Thru-Hole	Surface Mount	Rollerball®		
-	XGS 2000	694-163B-XX-XXX-R27-L14-1	TH-491	SM-500	SM-RB593	-	28
-	XGS 3000	694-163B-XX-XXX-R27-L14-1	TH-491	SM-500	SM-RB593	-	28
-	XGS 5000	694-163B-XX-XXX-R27-L14-1	TH-491	SM-500	SM-RB593	-	28
-	XGS 8000	694-163-XX-XXX-R27-L14-1	TH-491	SM-500	SM-RB593	-	19
-	XGS 9400	694-163-XX-XXX-R27-L14-1	TH-491	SM-500	SM-RB593	-	19
-	XGS 12000	694-163-XX-XXX-R27-L14-1	TH-491	SM-500	SM-RB593	-	19
-	XGS 16000	694-163A-XX-XXX-R27-L14-1	TH-491	SM-500	SM-RB593	-	27
-	XGS 20000	10-26-39-251-XXXXX-R27-L14	400T4	414T4	RB501T4	.012	20
-	XGS 30000	10-26-39-251-XXXXX-R27-L14	400T4	414T4	RB501T4	.012	20
-	XGS 45000	10-26-39-251-XXXXX-R27-L14	400T4	414T4	RB501T4	.012	20

Replace "X" with "1" for index pins or  
"0" for none

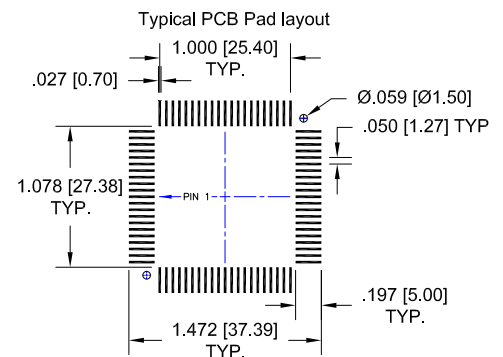
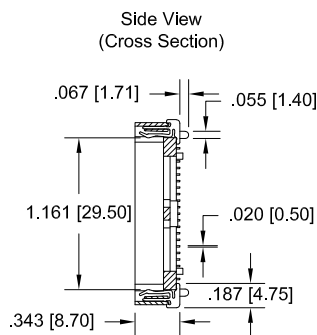
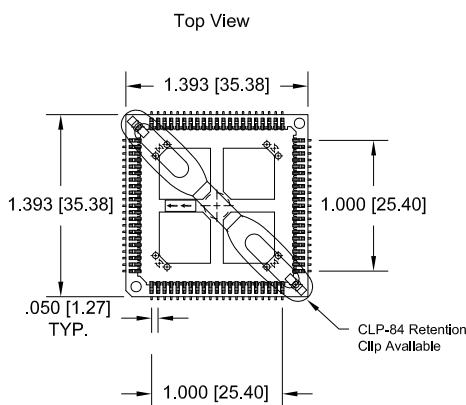
See back cover for Carrier and low profile options including other socket mounting types.  
Heat sink socket available to reduce heat and noise. Contact Andon for details.



**Fig. 1 63 Pins**  
Thru-Hole: 12-08-03-063-347T-R27-L14  
Surface Mount: 12-08-03-063-319T-R27-L14  
Rollerball®: 12-08-03-063-RB339T-R27-L14  
Adapter: 12-08-03-063-321-G10-L14

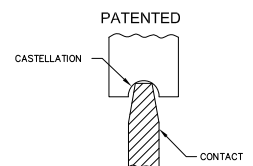


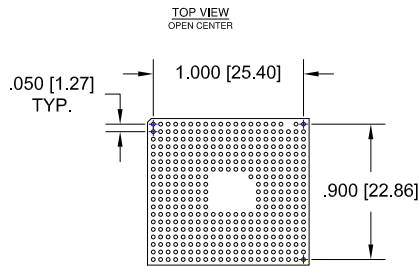
**Fig. 2 52 Pins**  
Thru-Hole: 12-08-02-052-347T-R27-L14  
Surface Mount: 12-08-02-052-319T-R27-L14  
Rollerball®: 12-08-02-052-RB339T-R27-L14  
Adapter: 12-08-02-052-321-G10-L14



**Fig. 3 84 Contacts**  
Surface Mount: 710-84-SM-T1

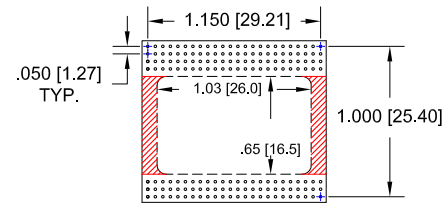
Contact Plating = Tin  
-SM = Without Index Pins  
-SM3 = 2 index Pins Diagonally





**Fig. 4 369 Pins**

**Thru-Hole:** 10-21-06-369-400T4-R27-L14  
**Surface Mount:** 10-21-06-369-414T4-R27-L14  
**Rollerball®:** 10-21-06-369-RB501T4-R27-L14



**Fig. 5 168 Pins**

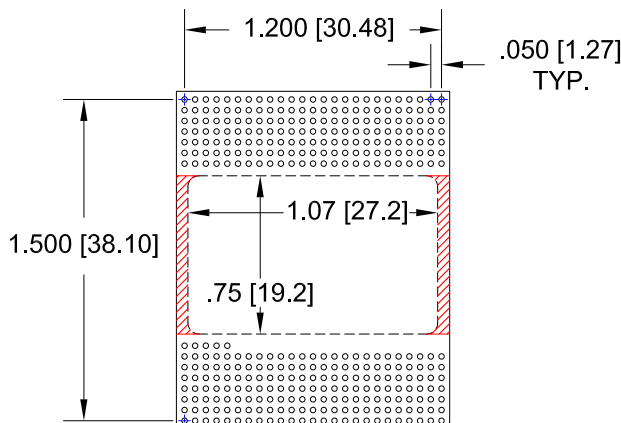
**Thru-Hole:** 10-24-05-168-400T4-R27-L14  
**Surface Mount:** 10-24-05-168-414T4-R27-L14  
**Rollerball®:** 10-24-05-168-RB501T4-R27-L14  
**PART NUMBER WITH OPTIONAL WINDOW**

**Thru-Hole:** 10-24-05A-168-400T4-R27-L14 (With Window)  
**Surface Mount:** 10-24-05A-168-414T4-R27-L14 (With Window)  
**Rollerball®:** 10-24-05A-168-RB501T4-R27-L14 (With Window)

**Note:** The Insulator sections denoted in red can be omitted and replaced with the following DIP Carrier-dual SIP socket combination:  
 9-10-24-05-168-XXX-R27-L14-SIP

Replace "XXX" with  
choice of terminal

See last page for other Carrier Assembly configurations.



**Fig. 6 355 Pins**

**Thru-Hole:** 10-31-13-355-400T4-R27-L14  
**Surface Mount:** 10-31-13-355-414T4-R27-L14  
**Rollerball®:** 10-31-13-355-RB501T4-R27-L14

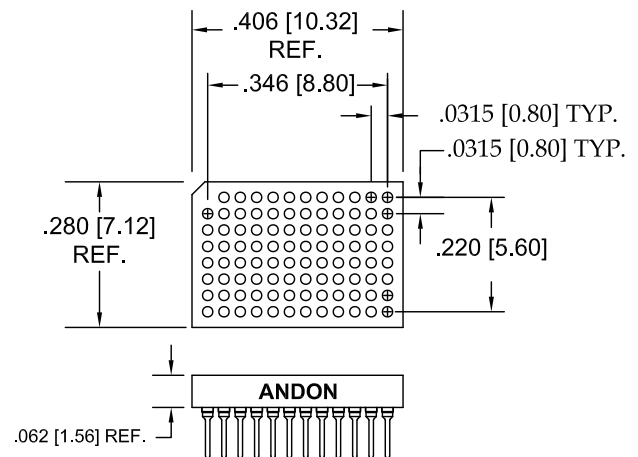
**PART NUMBER WITH OPTIONAL WINDOW**

**Thru-Hole:** 10-31-13A-355-400T4-R27-L14 (With Window)  
**Surface Mount:** 10-31-13A-355-414T4-R27-L14 (With Window)  
**Rollerball®:** 10-31-13A-355-RB501T4-R27-L14 (With Window)

**Note:** The Insulator sections denoted in red can be omitted and replaced with the following DIP Carrier-dual SIP socket combination:  
 9-10-31-13B-355-XXX-R27-L14-SIP

Replace "XXX" with  
choice of terminal

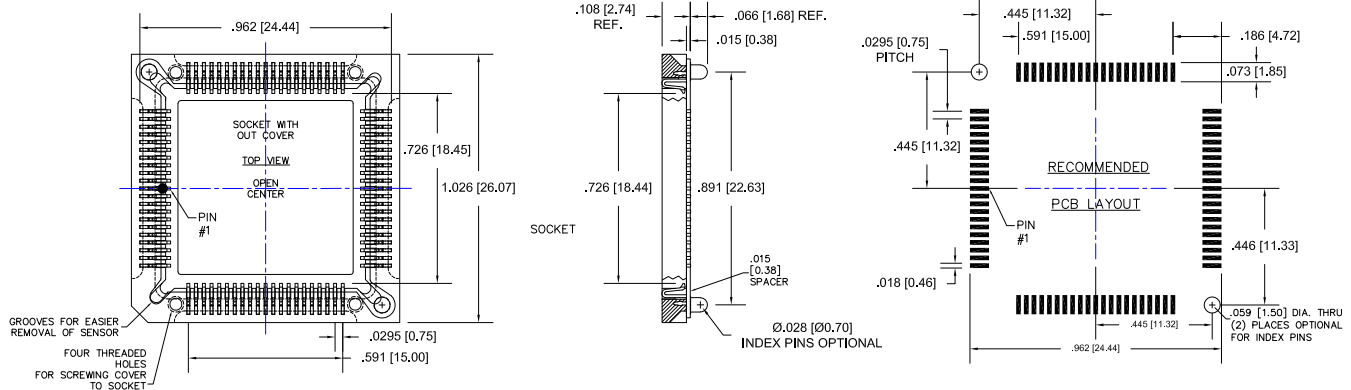
See last page for other Carrier Assembly configurations.



**Fig. 7 95 Pins**

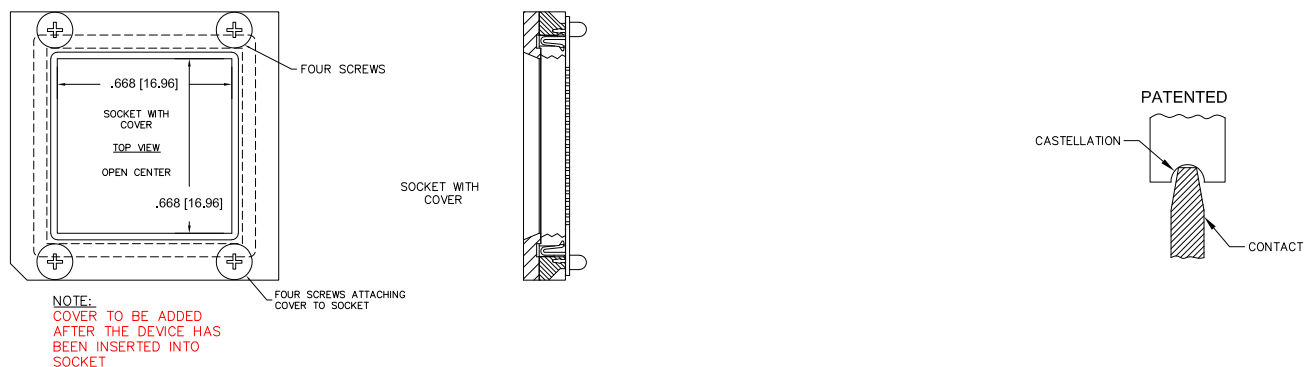
**Thru-Hole:** 17-12-07-095-347T-R27-L14  
**Surface Mount:** 17-12-07-095-319T-R27-L14  
**Adapter:** 17-12-07-095-321-G10-L14

**ON Semiconductor** *Continued*  
**Image Sensor Socket Footprints**  
*Units: in [mm]*



NOTE:

.015 [0.38] SPACER TO BE ADDED  
TO THE SOCKET BEFORE THE  
SOCKET HAS BEEN SOLDERED ON  
THE PCB



### Fig.8 84 Contacts

**Surface Mount:** 686-84A-SM-G10-L14-X  
Contact Plating = Gold

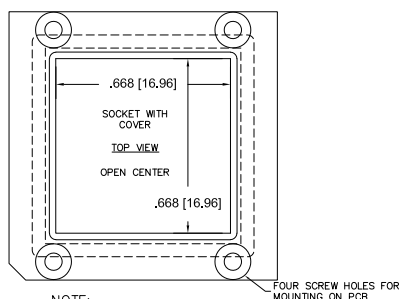
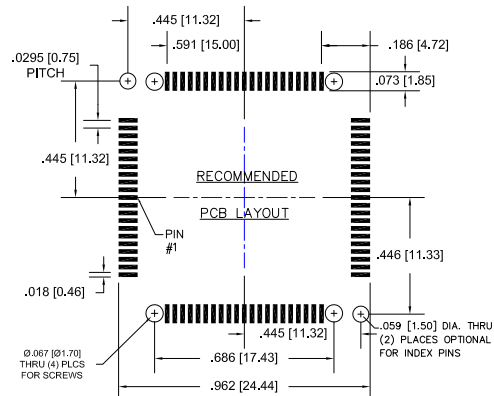
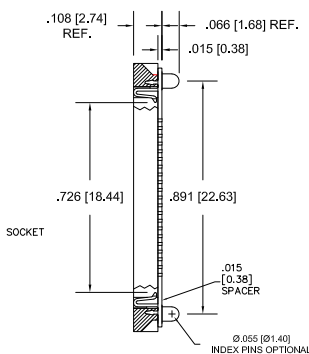
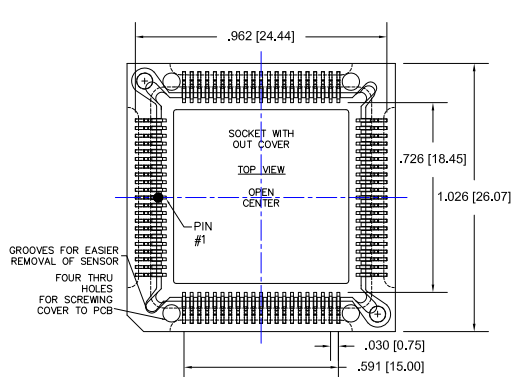
Replace "-X" with "-1" for index pins or "-0" for none



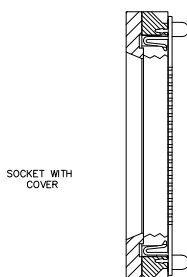
## ON Semiconductor *Continued*

### Image Sensor Socket Footprints

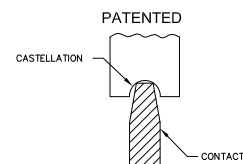
*Units: in [mm]*



**NOTE:**  
COVER TO BE ADDED  
AFTER THE DEVICE HAS  
BEEN INSERTED INTO  
SOCKET



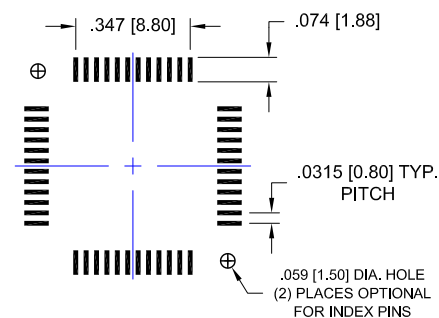
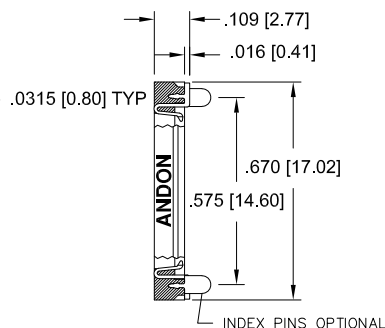
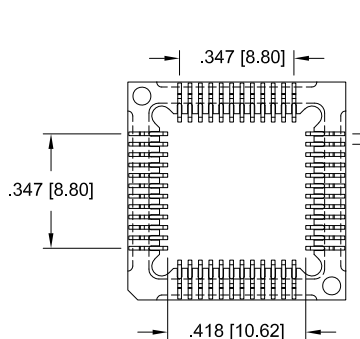
**NOTE:**  
.015 [0.38] SPACER TO BE ADDED  
TO THE SOCKET BEFORE THE  
SOCKET HAS BEEN SOLDERED ON  
THE PCB



**Fig.9      84 Contacts**

**Surface Mount:** 686-84B-**SM**-G10-L14-X  
Contact Plating = Gold

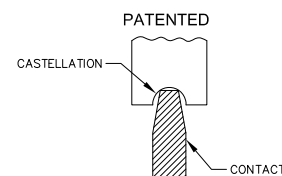
Replace "-X" with "-1" for index pins or "-0" for none



### Fig.10 48 Contacts

**Surface Mount:** 690-48-**SM**-G10-L14-X  
Contact Plating = Gold

Replace "-X" with "-1" for index pins or "-0" for none



## ON Semiconductor Continued

### Image Sensor Socket Footprints

Units: in [mm]

#### .040 [1.02] Pitch LCC Socket

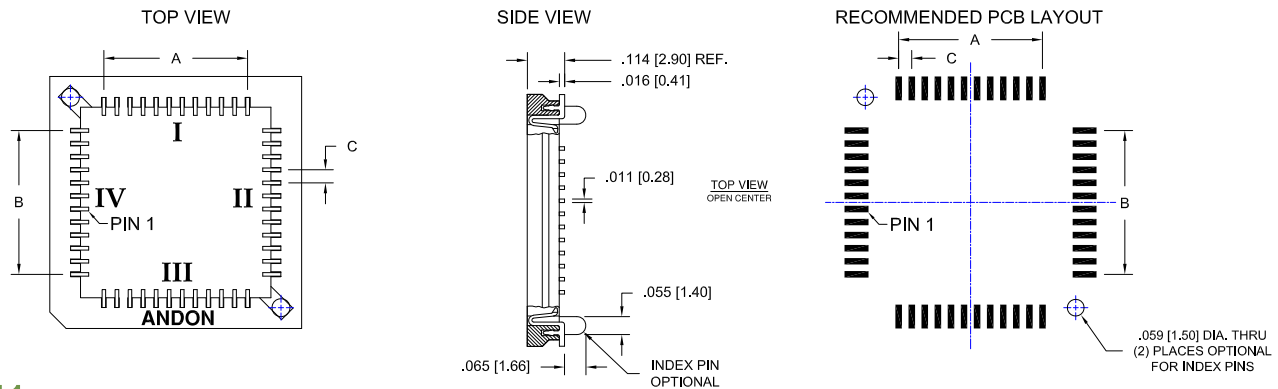


Fig. 11

Andon Part Number	Pin QTY.	A	B	C	Number of Pins (per side)			
					I	II	III	IV
680-32-SM-G10-L14-X	32	.280 (7.11)	.280 (7.11)	.040 (1.01)	8	8	8	8
680-40-SM-G10-L14-X	40	.360 (9.14)	.360 (9.14)	.040 (1.01)	10	10	10	10
680-44-SM-G10-L14-X	44	.520 (13.21)	.520 (13.21)	.040 (1.01)	11	11	11	11
680-48-SM-G10-R14-X	48	.440 (11.18)	.440 (11.18)	.040 (1.01)	12	12	12	12
680-64-SM-G10-R14-X	64	.600 (15.24)	.600 (15.24)	.040 (1.01)	16	16	16	16
680-84-SM-G10-L14-X	84	.800 (20.32)	.800 (20.32)	.040 (1.01)	21	21	21	21
680-100-SM-G10-L14-X	100	1.120 (28.45)	.800 (20.32)	.040 (1.01)	29	21	29	21

Replace "-X" with "-1" for Index pins or "-0" for none

Contact Plating = Gold

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For Other Pin Configuration or Layouts, Contact Factory.

#### .050 [1.27] Pitch LCC Sockets

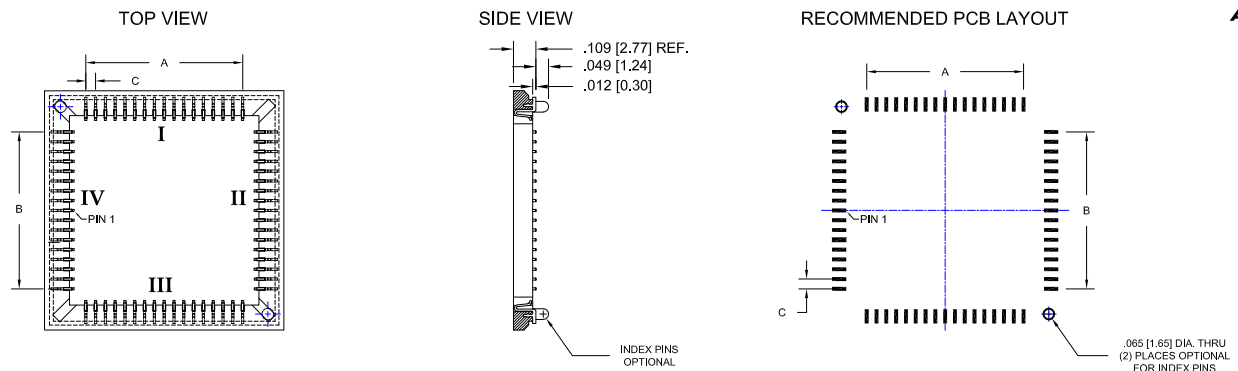


Fig. 12

For Other Pin Configurations or Layouts, Contact Factory.

Andon Part Number	Pin QTY.	A	B	C	Number of Pins (per side)			
					I	II	III	IV
620-16-SM-G10-L14-X	16	.150 (3.81)	.150 (3.81)	.050 (1.27)	4	4	4	4
620-20-SM-G10-L14-X	20	.200 (5.08)	.200 (5.08)	.050 (1.27)	5	5	5	5
620-28-SM-G10-L14-X	28	.300 (7.62)	.300 (7.62)	.050 (1.27)	7	7	7	7
620-40A-SM-G10-L14-X	40	.950 (24.13)	.950 (24.13)	.050 (1.27)	20	0	20	0
620-44-SM-G10-L14-X	44	.500 (12.70)	.500 (12.70)	.050 (1.27)	11	11	11	11
620-52-SM-G10-L14-X	52	.600 (15.24)	.600 (15.24)	.050 (1.27)	13	13	13	13
620-68-SM-G10-S14-X	68	.800 (20.32)	.800 (20.32)	.050 (1.27)	17	17	17	17
620-84-SM-G10-L14-X	84	1.000 (25.40)	1.000 (25.40)	.050 (1.27)	21	21	21	21
620-100-SM-G10-L14-X	100	1.200 (30.48)	1.200 (30.48)	.050 (1.27)	25	25	25	25

Replace "-X" with "-1" for index pins or "-0" for none

NON MAGNETIC PLATING AVAILABLE - G55

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**ANDON ELECTRONICS CORPORATION**  
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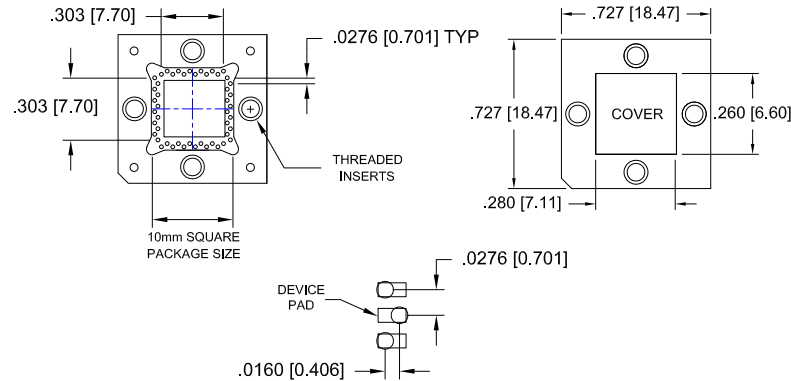
RoHS Compliant

Andon Proprietary Information

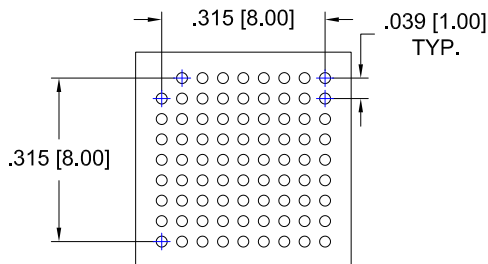
\*Sockets are not drawn to scale ON Semiconductor 03/31/2022

## ON Semiconductor *Continued* Image Sensor Socket Footprints Units: in [mm]

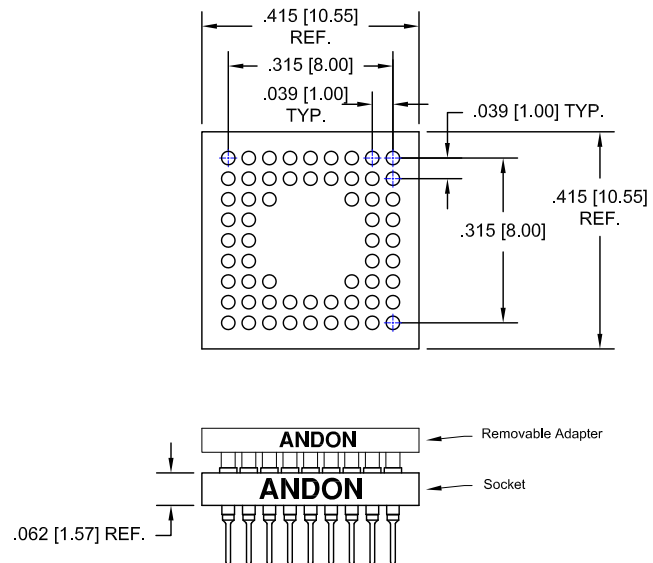
### .0276 [0.70] Pitch iLCC LGA Thru-Hole Spring Socket



**Fig. 13 48 Pins**  
Thru-Hole: 685-48-**TH-491**-R27-X14-X  
Surface Mount: 685-48-**SM-500**-R27-X14-X



**Fig. 14 080 Pins**  
Thru-Hole: 12-09-03-080-**437T**-R27-L14  
Surface Mount: 12-09-03-080-**329T**-R27-L14  
Rollerball®: 12-09-03-080-**RB339T**-R27-L14  
Adapter: 12-09-03-080-321-G10-L14



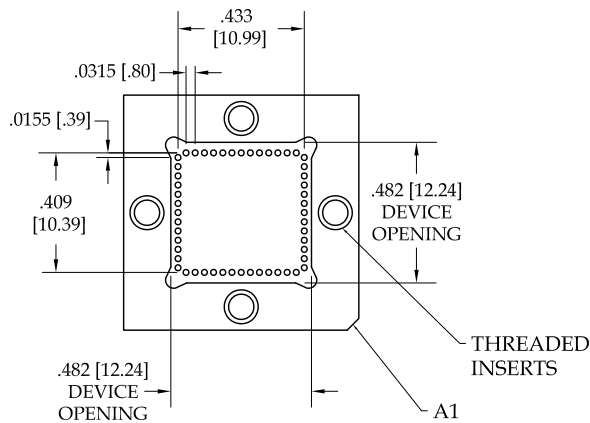
**Fig. 15 60 Pins**  
Thru-Hole: 12-09-04-060-**347T**-R27-L14  
Surface Mount: 12-09-04-060-**319T**-R27-L14  
Rollerball®: 12-09-04-060-**RB339T**-R27-L14  
Adapter: 12-09-04-060-321-G10-L14



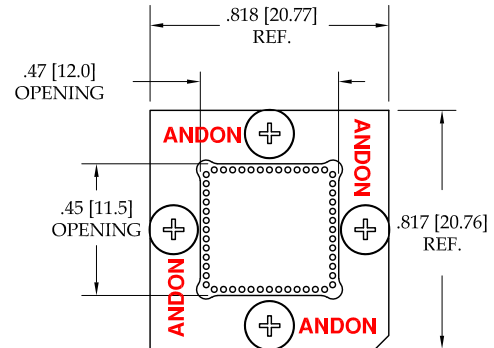
## ON Semiconductor Continued

### Image Sensor Socket Footprints

Units: in [mm]

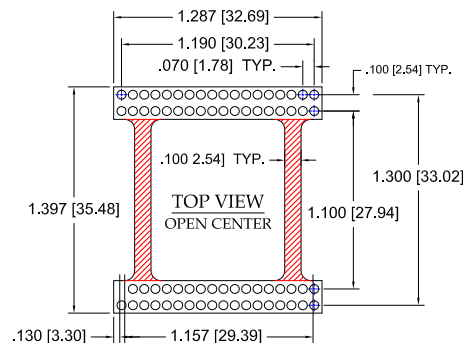


GUIDE & BASE SHOWN



COVER & HARDWARE SHOWN

**Fig. 16 52 Pins**  
**Thru-Hole:** 684-052-TH-491-R27-L14-1  
**Surface Mount:** 684-052-SM-500-R27-L14-1



**Fig. 17 71 Pins**  
**Thru-Hole:** IS230-1371D-75M-R27-L14-A  
**Surface Mount:** IS230-1371D-265M-R27-L14-A  
**Rollerball® :** IS230-1371D-RB338K-R27-L14-A

Note: The Insulator sections denoted in red can be omitted and replaced with the following DIP Carrier-dual SIP socket combination:

9-IS230-1371D-XXX-R27-L14-SIP

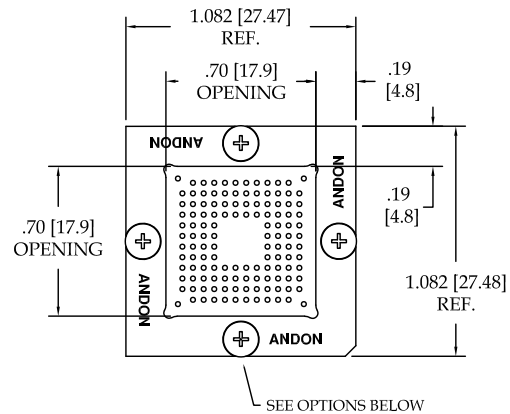
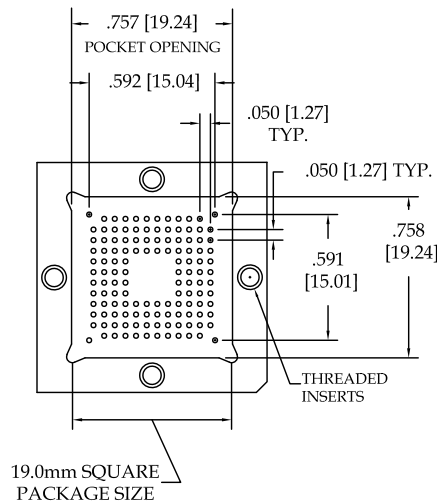
Replace "XXX" with choice of terminal

See last page for other Carrier Assembly configurations.

## ON Semiconductor Continued

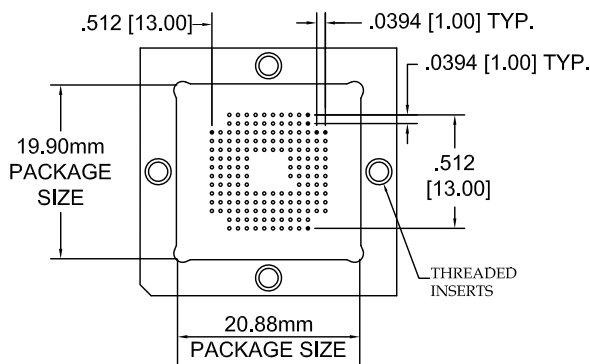
### Image Sensor Socket Footprints

Units: in [mm]

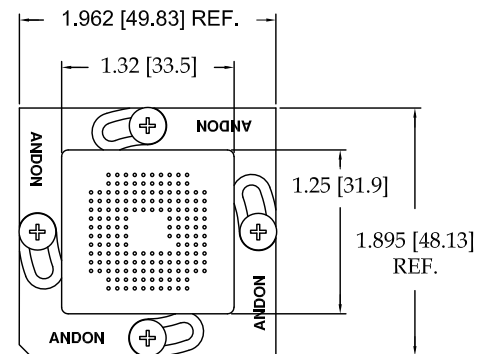


COVER & HARDWARE SHOWN

**Fig. 18 128 Pins**  
**Thru-Hole:** 683-128-TH-491-R27-L14-1  
**Surface Mount:** 683-128-SM-500-R27-L14-1  
**Rollerball®:** 683-128-SM-RB593-R27-L14-1



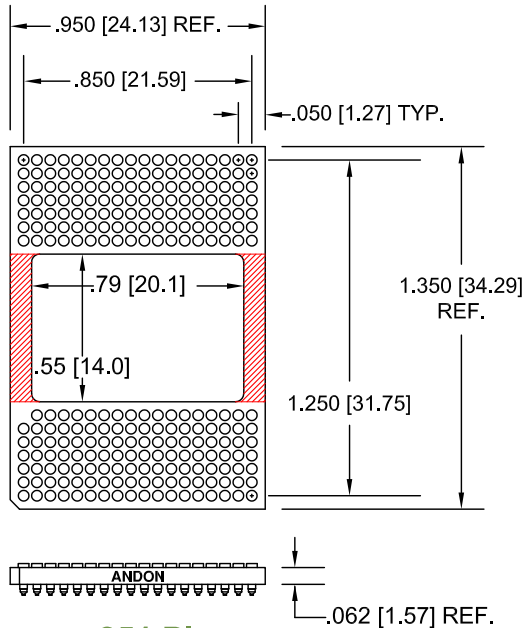
GUIDE & BASE SHOWN



COVER & HARDWARE SHOWN

**Fig. 19 163 Pins**  
**Thru-Hole:** 694-163-TH-491-R27-L14-1  
**Surface Mount:** 694-163-SM-500-R27-L14-1  
**Rollerball®:** 694-163-SM-RB593-R27-L14-1

## ON Semiconductor *Continued* Image Sensor Socket Footprints Units: in [mm]



**Fig. 20 251 Pins**

**Thru-Hole:** 10-26-39-251-400T4-R27-L14

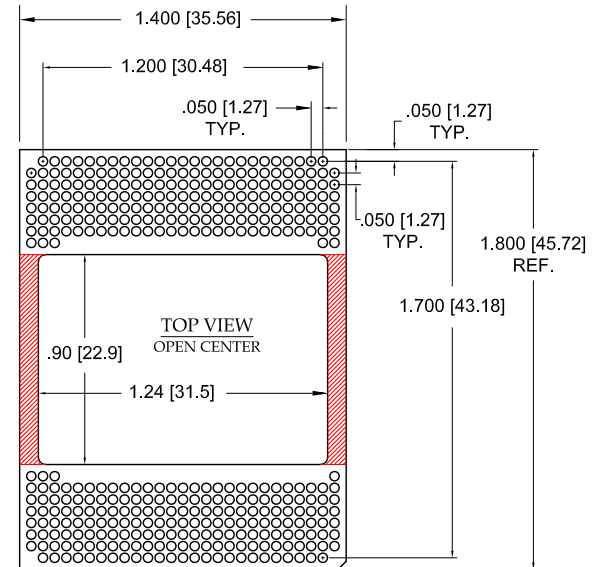
**Surface Mount:** 10-26-39-251-414T4-R27-L14

**Rollerball®:** 10-26-39-251-RB501T4-R27-L14

Note: The Insulator sections denoted in red can be omitted and replaced with the following DIP Carrier-dual SIP socket combination:  
9-10-26-39-251-XXX-R27-L14-SIP

Replace "XXX" with choice of terminal

See last page for other Carrier Assembly configurations.



**Fig. 21 383 Pins**

**Thru-Hole:** 10-35-11-383-400T4-R27-L14

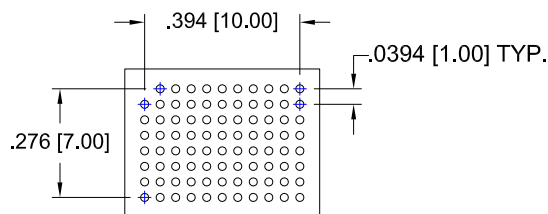
**Surface Mount:** 10-35-11-383-414T4-R27-L14

**Rollerball®:** 10-35-11-383-RB501T4-R27-L14

Note: The Insulator sections denoted in red can be omitted and replaced with the following DIP Carrier-dual SIP socket combination:  
9-10-35-11-383-XXX-R27-L14-SIP

Replace "XXX" with choice of terminal

See last page for other Carrier Assembly configurations.



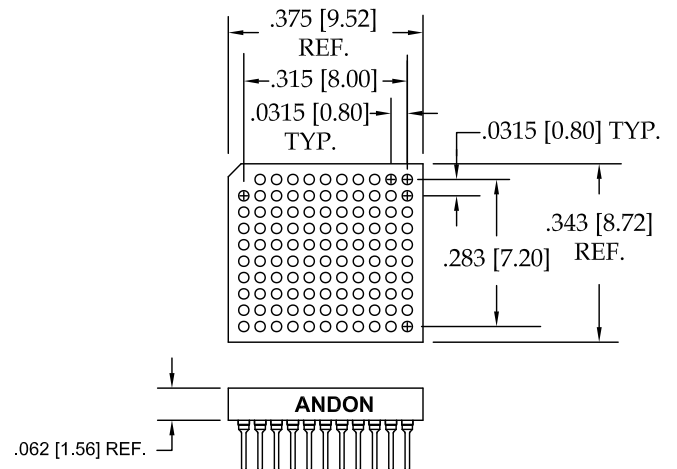
**Fig. 22 87 Pins**

**Thru-Hole:** 12-11-05-087-347T-R27-L14

**Surface Mount:** 12-11-05-087-319T-R27-L14

**Rollerball®:** 12-11-05-087-RB339T-R27-L14

**Adapter:** 12-11-05-087-321-G10-L14



**Fig. 23 109 Pins**

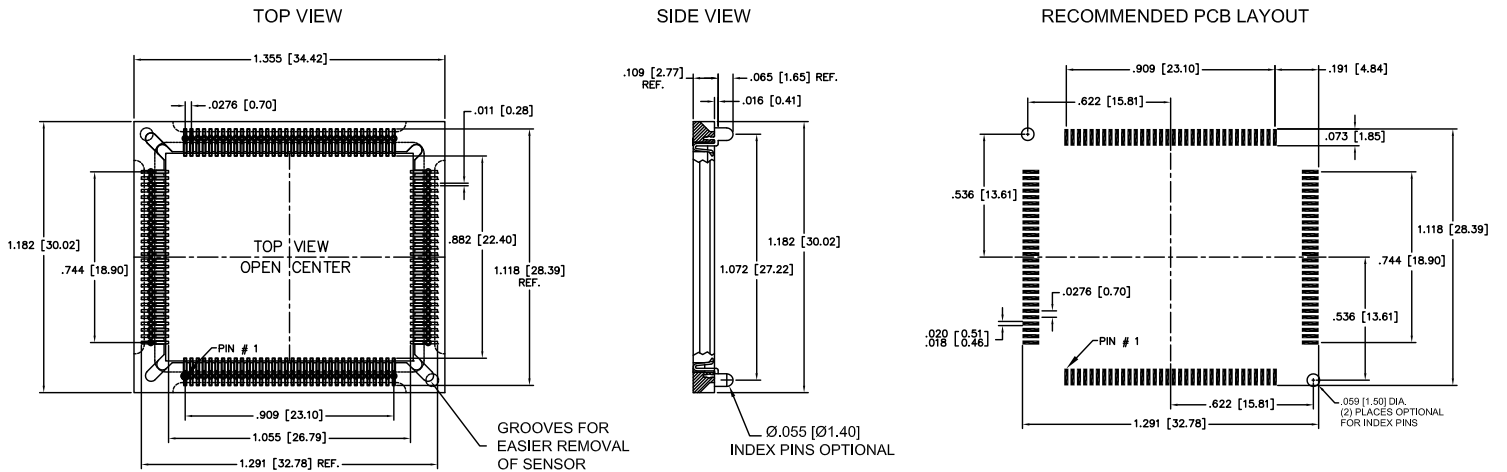
**Thru-Hole:** 17-11-02-109-437T-R27-L14

**Surface Mount:** 17-11-02-109-329T-R27-L14

**Adapter:** 17-11-02-109-321-G10-L14

## ON Semiconductor *Continued* Image Sensor Socket Footprints Units: in [mm]

### .0276 [0.70] Pitch CLCC Socket

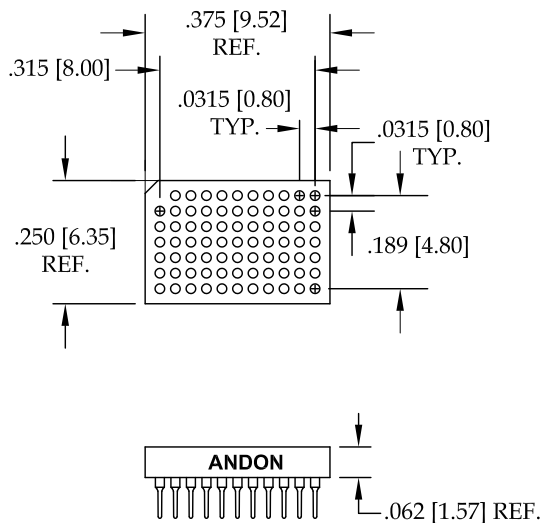
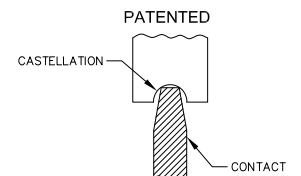


**Fig. 24 124 Contacts**

Surface Mount: 687-124-SM-G10-L14-X

Contact Plating = Gold

Replace "-X" with "-1" for index pins or "-0" for none

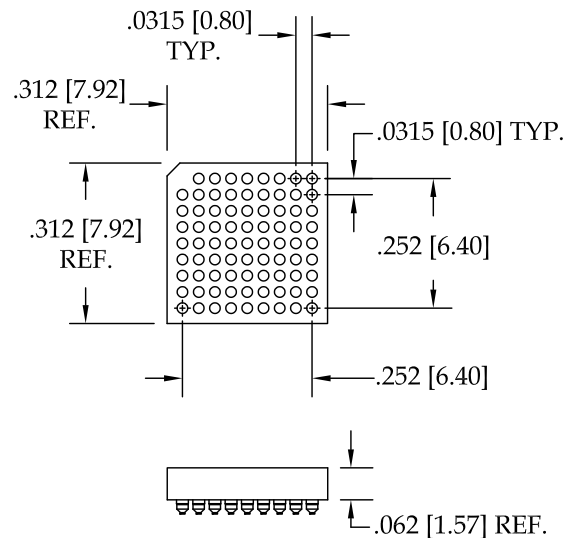


**Fig. 25 76 Pins**

Thru-Hole: 17-11-02-076-437T-R27-L14

Surface Mount: 17-11-02-076-329T-R27-L14

Adapter: 17-11-02-076-321-G10-L14



**Fig. 26 80 Pins**

Thru-Hole: 17-09-05-080-437T-R27-L14

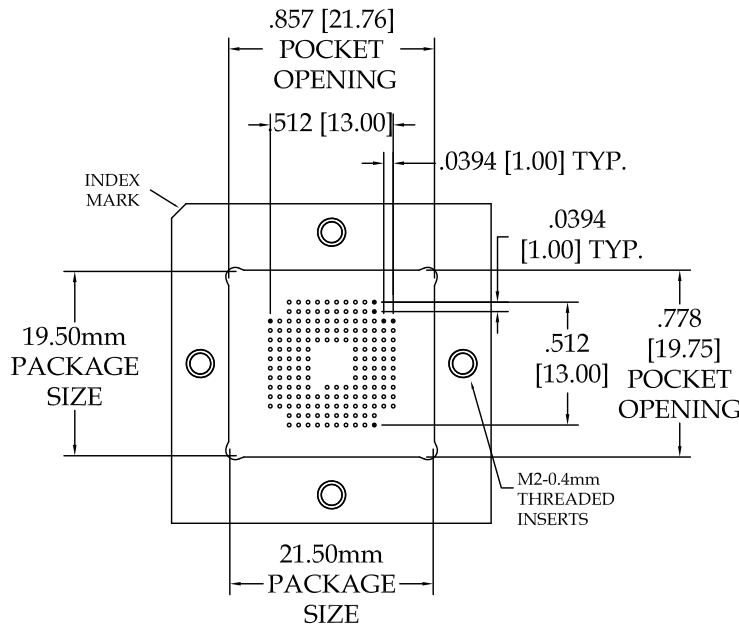
Surface Mount: 17-09-05-080-329T-R27-L14

Adapter: 17-09-05-080-321-G10-L14

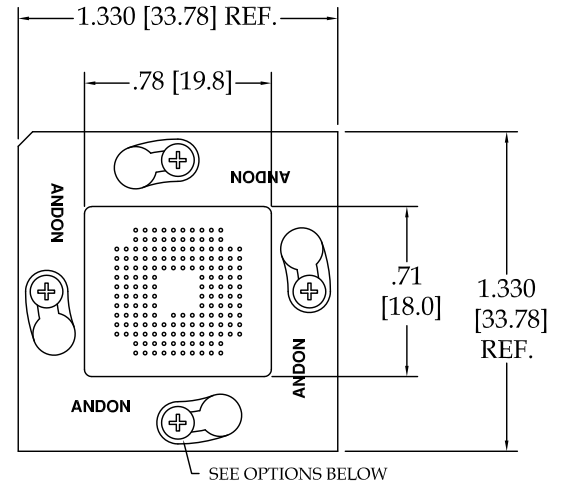
## ON Semiconductor Continued

### Image Sensor Socket Footprints

Units: in [mm]



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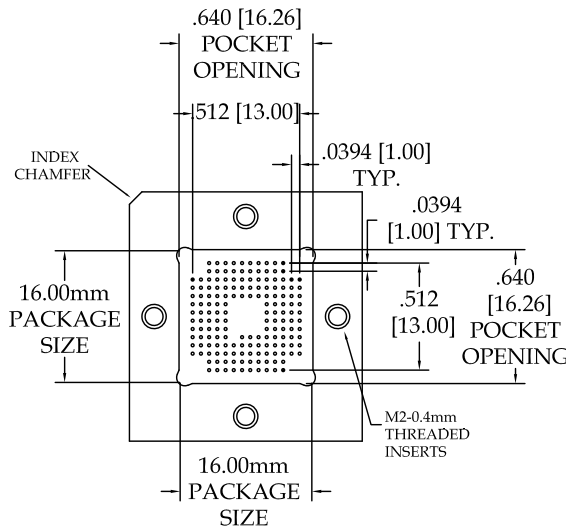
COVER & HARDWARE SHOWN

**Fig. 27 163 Pins**

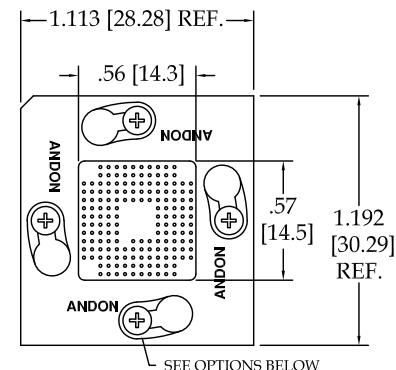
Thru-Hole: 694-163A-TH-491-R27-L14-1

Surface Mount: 694-163A-SM-500-R27-L14-1

Rollerball® : 694-163A-SM-RB593-R27-L14-1



GUIDE & BASE SHOWN



COVER & HARDWARE SHOWN

**Fig. 28 163 Pins**

Thru-Hole: 694-163B-TH-491-R27-L14-1

Surface Mount: 694-163B-SM-500-R27-L14-1

Rollerball® : 694-163B-SM-RB593-R27-L14-1

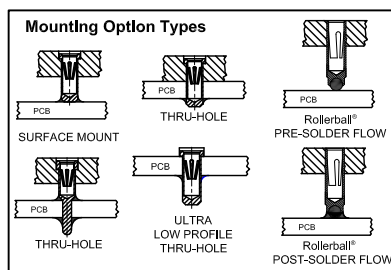
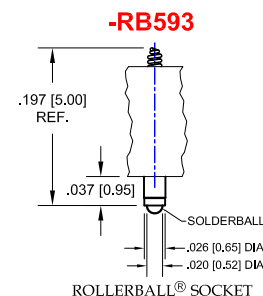
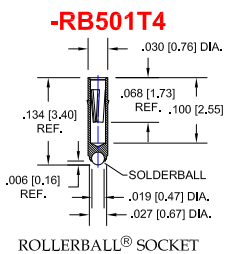
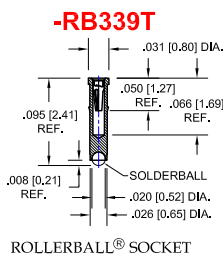
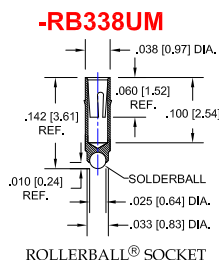
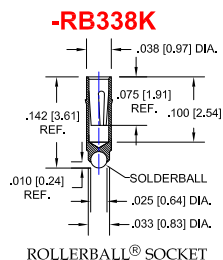
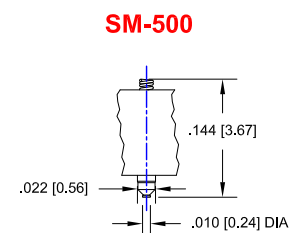
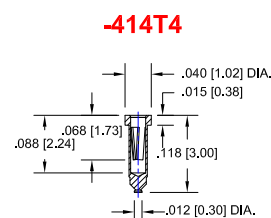
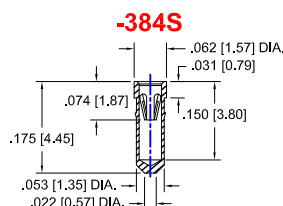
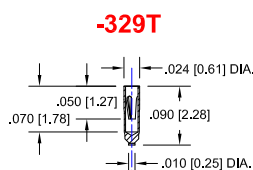
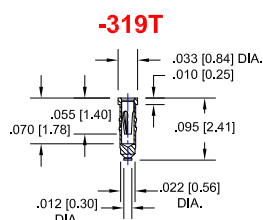
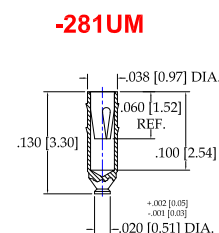
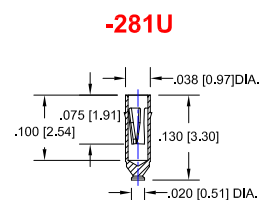
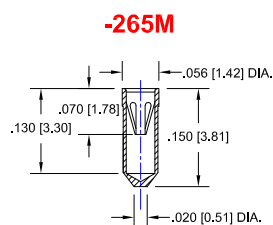
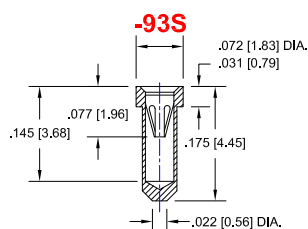
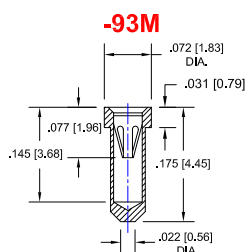
## ON Semiconductor *Continued*

## Socket Terminal Details

**Cross Section View Shown Units: in [mm]**

Other Terminal Layouts and Configurations available

## SURFACE MOUNT OPTION



**Material:**

Insulator: Hi-Temp UL 94V-O  
Terminal: Brass, per ASTM-B16  
Contact: BeCu, Per ASTM-B194

## Technical Information

### Plating: RoHS COMPLIANT

**R27 TERMINAL: GOLD / CONTACT: GOLD**

**R29 TERMINAL: MATTE TIN / CONTACT: GOLD**

R32 TERMINAL: MATTE TIN / CONTACT: TIN

**OTHER PLATINGS AVAILABLE**

Surface Mount Terminal	Accepts Pin Diameter	Insertion Force	Withdrawal Force
<b>-93S</b>	Ø.018 [Ø0.46]	9.00 oz Max	2.00 oz Min
<b>-329T</b>	Ø.010 [Ø0.25]	1.00 oz Max	0.30 oz Min
<b>-384S</b>	Ø.018 [Ø0.46]	9.00 oz Max	2.00 oz Min
<b>-265M</b>	Ø.018 [Ø0.46]	1.60 oz Max	0.50 oz Min
<b>-93M</b>	Ø.018 [Ø0.46]	1.60 oz Max	0.50 oz Min
<b>-414T4</b>	Ø.012 [Ø0.30]	1.05 oz Max	0.32 oz Min
<b>-319T</b>	Ø.010 [Ø0.25]	1.00 oz Max	0.30 oz Min
<b>-281U</b>	Ø.018 [Ø0.46]	2.80 oz Max	0.50 oz Min
<b>-281UM</b>	Ø.018 [Ø0.46]	2.11 oz Max	0.53 oz Min
<b>-SM-500</b>	-	-	-
<b>-RB338K</b>	Ø.018 [Ø0.46]	1.24 oz Max	0.50 oz Min
<b>-RB338UM</b>	Ø.018 [Ø0.46]	2.11 oz Max	0.53 oz Min
<b>-RB339T</b>	Ø.010 [Ø0.25]	1.00 oz Max	0.30 oz Min
<b>-RB501T4</b>	Ø.012 [Ø0.30]	1.05 oz Max	0.32 oz Min

## RoHS Compliant

**Andon Proprietary Information**

\*Sockets are not drawn to scale **ON Semiconductor** 03/31/2022

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**ANDON ELECTRONICS CORPORATION**  
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**Phone 401-333-0388 Fax 401-333-0287**

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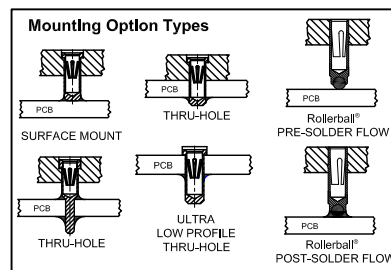
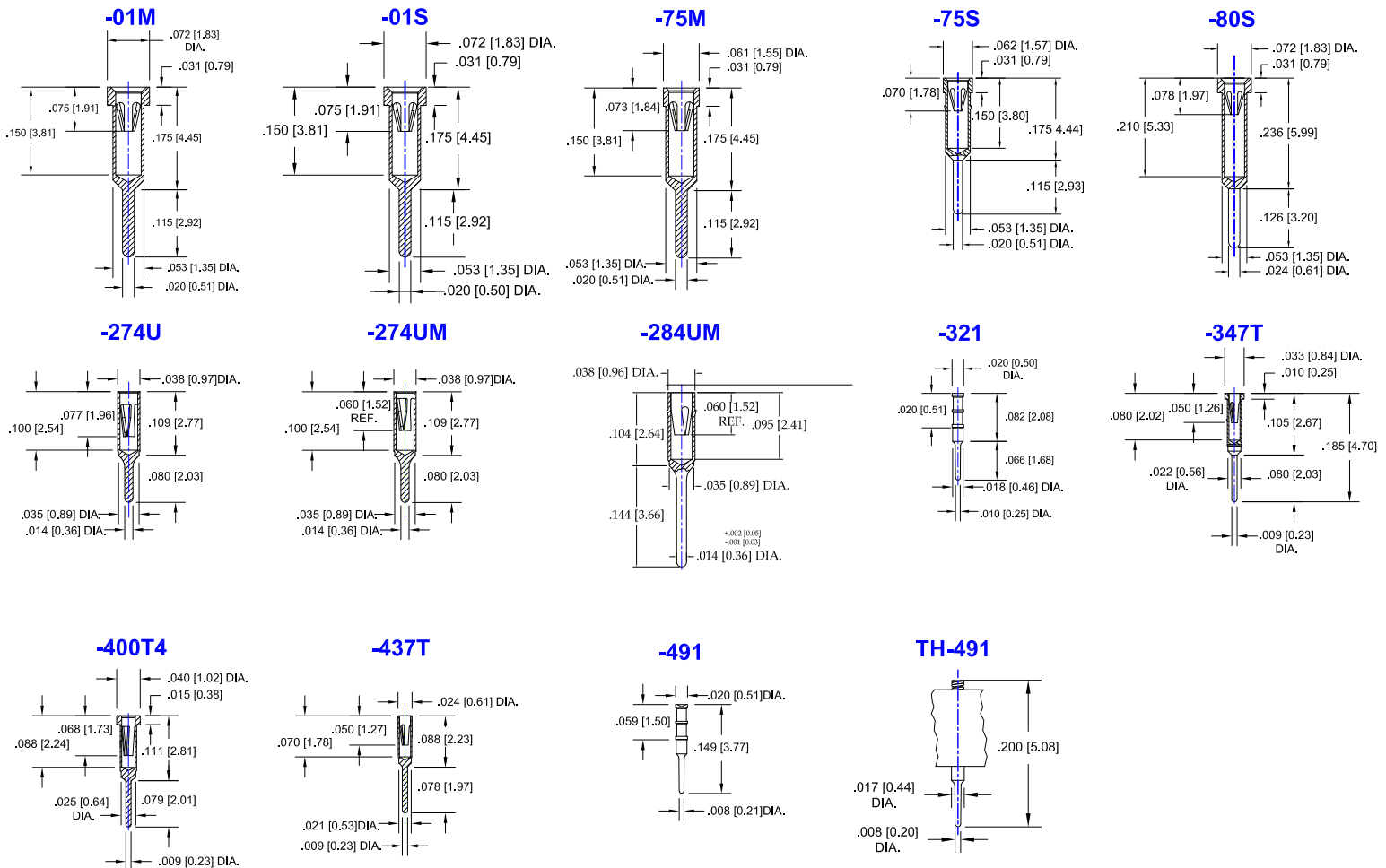
## ON Semiconductor Continued

### Socket Terminal Details

Cross Section View Shown Units: in [mm]

Other Terminal Layouts and Configurations available

### THRU HOLE OPTION



#### Material:

Insulator: Hi-Temp UL 94V-O  
Terminal: Brass, per ASTM-B16  
Contact: BeCu, Per ASTM-B194

## Technical Information

**Plating: RoHS COMPLIANT**

**R27 TERMINAL: GOLD / CONTACT: GOLD**

**R29 TERMINAL: MATTE TIN / CONTACT: GOLD**

**R32 TERMINAL: MATTE TIN / CONTACT: TIN**

**OTHER PLATINGS AVAILABLE**

Thru Hole Terminal	Accepts Pin Diameter	Insertion Force	Withdrawal Force
<b>-80S</b>	Ø.018 [Ø.46]	9.00 oz Max	2.00 oz Min
<b>-437T</b>	Ø.010 [Ø.25]	1.00 oz Max	0.30 oz Min
<b>-75S</b>	Ø.018 [Ø.46]	9.00 oz Max	2.00 oz Min
<b>-75M</b>	Ø.018 [Ø.46]	1.60 oz Max	0.50 oz Min
<b>-01M</b>	Ø.018 [Ø.46]	1.60 oz Max	0.50 oz Min
<b>-400T4</b>	Ø.012 [Ø.30]	1.05 oz Max	0.32 oz Min
<b>-347T</b>	Ø.010 [Ø.25]	1.00 oz Max	0.30 oz Min
<b>-274U</b>	Ø.018 [Ø.46]	2.80 oz Max	0.50 oz Min
<b>-274UM</b>	Ø.018 [Ø.46]	2.11 oz Max	0.53 oz Min
<b>-284UM</b>	Ø.018 [Ø.46]	2.11 oz Max	0.53 oz Min
<b>-TH-491</b>	-	-	-

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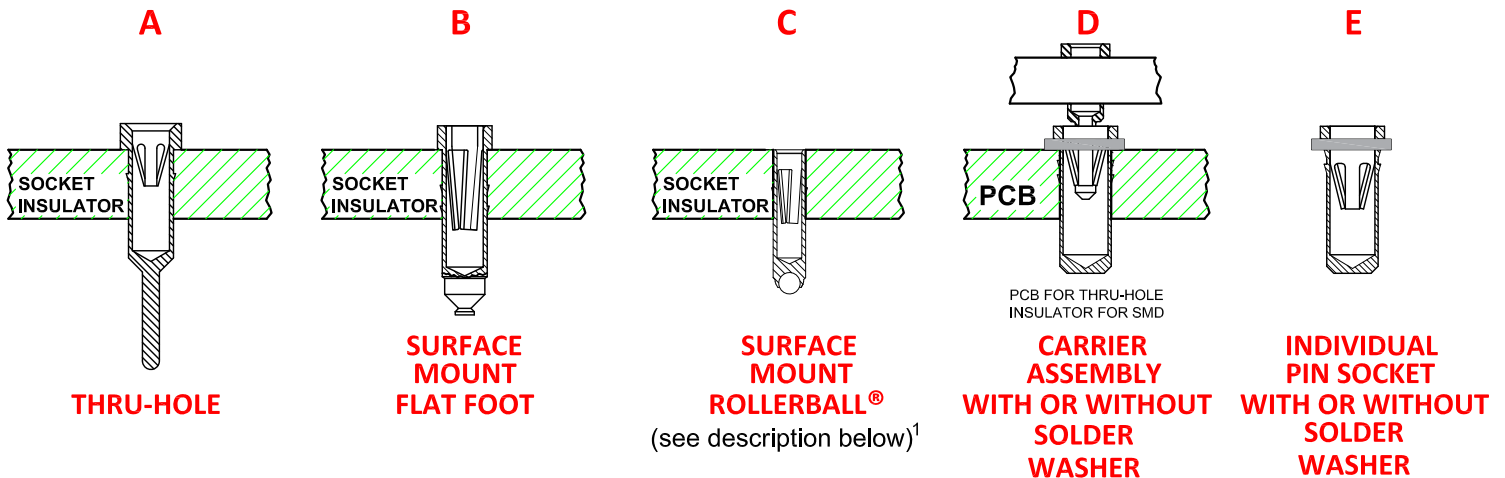
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**RoHS Compliant**

**Andon Proprietary Information**

\*Sockets are not drawn to scale ON Semiconductor 03/31/2022

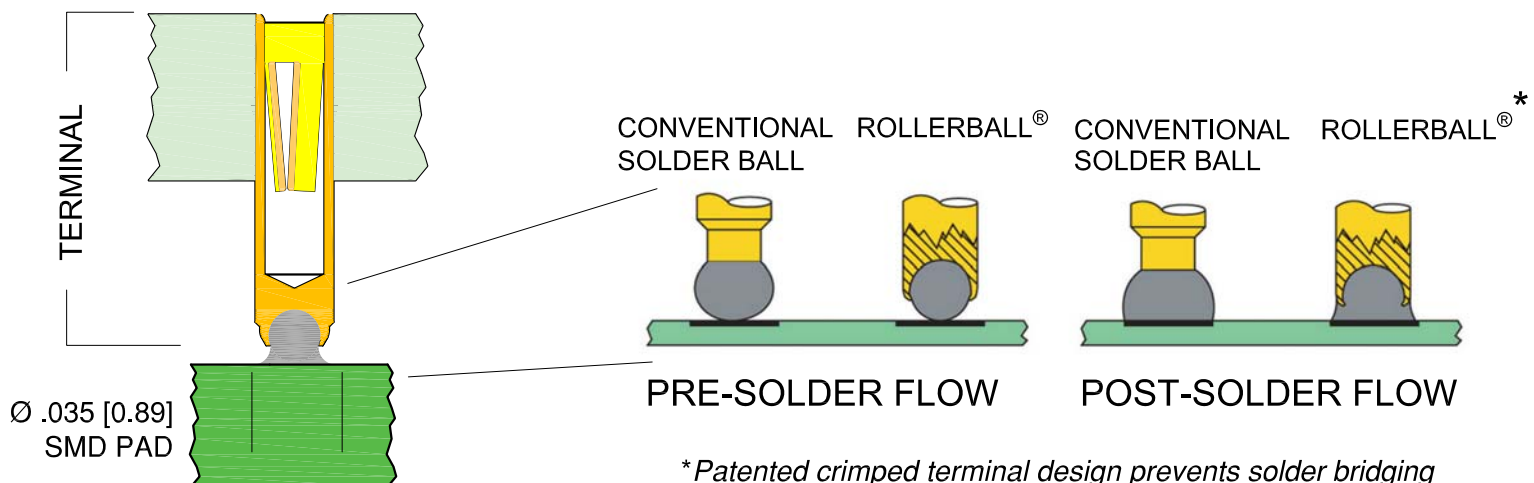
## Socket Mounting Options



Andon's patented Rollerball® socket terminal option provides more accurate soldering, a stronger connection, and improved electrical connectivity - especially under shock and vibration - than other solder ball terminal designs. Better yet, it can enable you to avoid expensive rework and scrap - especially with larger PCBs where coplanarity is an inherent challenge.

The bottom of these terminals has a radiused hole, to prevent gas entrapment. The terminal is crimped over the solder ball beyond its hemisphere, encapsulating it - leaving just enough of the solder ball exposed to provide sufficient solder without the solder bridging common in conventional solder ball terminal designs.

With this unique design, the critical distance between the terminal and the PC board pad is typically reduced from .036"-.040" to .018"-.022". As such, the solder becomes part of the "anchor" cross-section - providing additional mechanical strength to the connection, as well as improved electrical connectivity. Because it also provides controlled dispersion of solder, this encapsulated solder ball reduces the risk of solder bridging inherent in conventional solder ball terminal designs.



## For fast, accurate placement of SIP sockets and ultra-low profile terminals

**Phase 1:**  
Receive Carrier Assemblies designed to your pin layout.



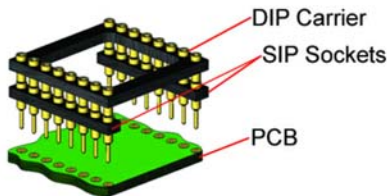
**Phase 2:**  
Place carrier assemblies onto PCB; run through your soldering process.



**Phase 3:**  
Remove carrier and plug in your device; discard carrier.

### DIP

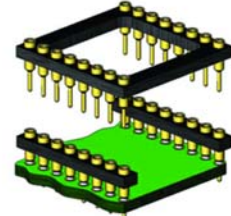
#### Before Soldering



#### During Soldering

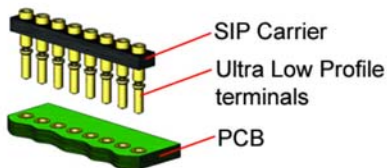


#### After Soldering

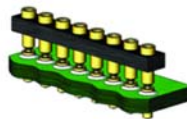


### ULTRA-LOW PROFILE SIP

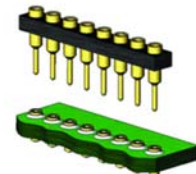
#### Before Soldering



#### During Soldering

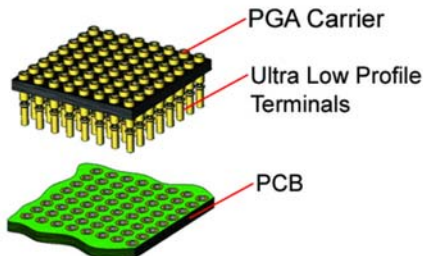


#### After Soldering

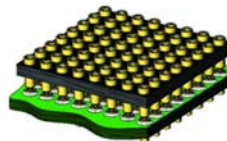


### ULTRA-LOW PROFILE PGA

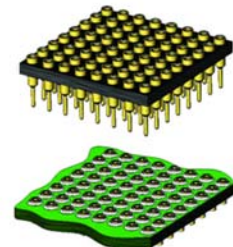
#### Before Soldering



#### During Soldering

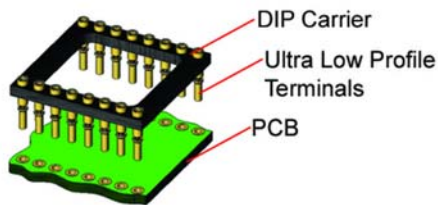


#### After Soldering

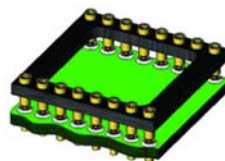


### ULTRA LOW PROFILE DIP

#### Before Soldering



#### During Soldering



#### After Soldering

