

Single Insulated Wires

Rubadue Wire manufactures several wires with a single layer of insulation. Single insulated wires can be used to meet several design requirements:

- Hook-up or lead wires
- High voltage
- Applications requiring basic isolation
- Leakage or loss reduction
- Increased safety
- High speed winding capable

Single insulated wires can be manufactured in a variety of types, sizes, insulations, ratings, and colors.

Insulation	Size Range	Avg.Wall/ Layer	Ins. Layers	Temp. Raging	Voltage Rating	Page
Tefzel®ETFE	22-40 AWG	.0015"	1	155°C	600 V	31
Tefzel®ETFE	18-40 AWG	.002"	1	155°C	600 V	32
Tefzel®ETFE	10-40 AWG	.003"	1	155°C	600 V	33
TCA	22-40 AWG	.001"	1	155°C	600 V	34
FEP	18-40 AWG	.002"	1	155°C	600 V	35
FEP	10-40 AWG	.003"	1	155°C	600 V	36
PFA	28-40 AWG	.0015"	1	155°C	600 V	37
PFA	28-40 AWG	.002"	1	155°C	600 V	38
PFA	28-40 AWG	.003"	1	155°C	600 V	39

DuPont™ Tefzel® ETFE-
Fluoropolymer compound with excellent electrical properties, heat resistance, chemical resistance, and abrasion resistance.

DuPont™ Teflon® FEP-
Fluoropolymer compound with exceptional dielectric properties, heat resistance, chemical resistance, and flexibility.

TCA-Modified ETFE-
designed for more economical/efficient manufacturing. Comes standard in one color, most sizes readily available.

DuPont™ Teflon® PFA-
Fluoropolymer compound with superior heat resistance, exceptional dielectric properties, and chemical resistance.

See the Technical Information section for additional information on insulation types and comparative properties.



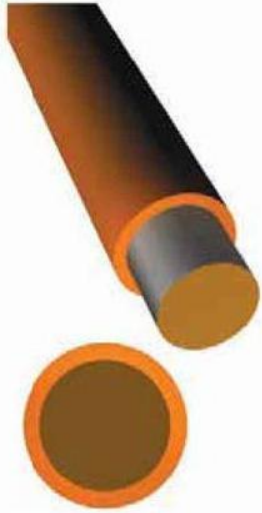
Single Insulated DuPont™ Tefzel® ETFE .0015"



<p>Product Construction:</p> <p>Size Range: UL: 22 AWG-40 AWG VDE:14 AWG-40 AWG Not all sizes listed in chart</p> <p>Conductor: Tin plated copper Solid or stranded(ASTM B-33/ASTM B-286) Bare copper and other conductors available</p> <p>Insulations: DuPont™ Tefzel® ETFE</p> <p>Rating: Temperature: 155°C Voltage: 600 V</p>	<p>Applications: Telecom/Electronic Basic isolation applications</p> <p>Compliances: UL OBJT2 File No. E206198 UL/IEC 60950-1 (Ed. 2), Annex U IEC 61558-12-16 VDE License Nr.136743: Class F System approvals: UL 1446 RXT-2 Class F Other systems available upon request RoHS Compliant</p> <p>Tensile Strength: 6500 psi Breakdown: Approx. 2000V</p>
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PART NUMBER	AWG	CONDUCTOR		NOMINAL O.D.		WEIGHT LB/KFT
		INCHES	MM	INCHES	MM	
S22A01TX-1.5	22	0.0253	0.643	0.0283	0.719	2.03
S23A01TX-1.5	23	0.0226	0.574	0.0256	0.650	1.63
S24A01TX-1.5	24	0.0201	0.511	0.0231	0.587	1.30
S25A01TX-1.5	25	0.0179	0.455	0.0209	0.531	1.04
S26A01TX-1.5	26	0.0159	0.404	0.0189	0.480	0.83
S27A01TX-1.5	27	0.0142	0.361	0.0172	0.437	0.66
S28A01TX-1.5	28	0.0126	0.320	0.0156	0.396	0.53
S29A01TX-1.5	29	0.0113	0.287	0.0143	0.363	0.43
S30A01TX-1.5	30	0.0100	0.254	0.0130	0.330	0.34
S31A01TX-1.5	31	0.0089	0.226	0.0119	0.302	0.28
S32A01TX-1.5	32	0.0080	0.203	0.0110	0.279	0.23
S33A01TX-1.5	33	0.0071	0.180	0.0101	0.257	0.18
S34A01TX-1.5	34	0.0063	0.160	0.0093	0.236	0.15
S35A01TX-1.5	35	0.0056	0.142	0.0086	0.218	0.12
S36A01TX-1.5	36	0.0050	0.127	0.0080	0.203	0.10
S37A01TX-1.5	37	0.0045	0.114	0.0075	0.191	0.08
S38A01TX-1.5	38	0.0040	0.101	0.0070	0.178	0.07
S39A01TX-1.5	39	0.0035	0.089	0.0065	0.165	0.05
S40A01TX-1.5	40	0.0031	0.079	0.0061	0.155	0.05

Single Insulated DuPont™ Tefzel® ETFE .002”



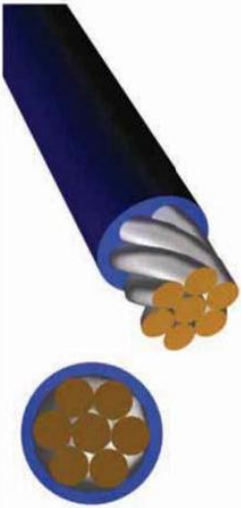
<p>Product Construction:</p> <p>Size Range: UL: 18 AWG-40 AWG VDE:14 AWG-40 AWG Not all sizes listed in chart</p> <p>Conductor: Tin plated copper Solid or stranded(ASTM B-33/ASTM B-286) Bare copper and other conductors available</p> <p>Insulations: DuPont™ Tefzel® ETFE</p> <p>Rating: Temperature: 155°C Voltage: 600 V</p>	<p>Applications: Telecom/Electronic Basic isolation applications</p> <p>Compliances: UL OBJT2 File No. E206198 UL/IEC 60950-1 (Ed. 2), Annex U IEC 61558-2-16 VDE License Nr.136743: Class F System approvals: UL 1446 RXT-2 Class F Other systems available upon request RoHS Compliant</p> <p>Tensile Strength: 6500 psi Breakdown: Approx. 3000V</p>
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PART NUMBER	AWG	CONDUCTOR		NOMINAL O.D.		WEIGHT LB/KFT
		INCHES	MM	INCHES	MM	
S18A01TX-2	18	0.0403	1.024	0.0443	1.125	5.12
S19A01TX-2	19	0.0359	0.912	0.0399	1.013	4.08
S20A01TX-2	20	0.0320	0.813	0.0360	0.914	3.25
S21A01TX-2	21	0.0285	0.724	0.0325	0.826	2.60
S22A01TX-2	22	0.0253	0.644	0.0293	0.744	2.07
S23A01TX-2	23	0.0226	0.574	0.0266	0.676	1.66
S24A01TX-2	24	0.0201	0.511	0.0241	0.612	1.32
S25A01TX-2	25	0.0179	0.455	0.0219	0.556	1.06
S26A01TX-2	26	0.0159	0.404	0.0199	0.505	0.85
S27A01TX-2	27	0.0142	0.361	0.0182	0.462	0.69
S28A01TX-2	28	0.0126	0.320	0.0166	0.422	0.55
S29A01TX-2	29	0.0113	0.287	0.0153	0.389	0.45
S30A01TX-2	30	0.0100	0.254	0.0140	0.356	0.36
S31A01TX-2	31	0.0089	0.226	0.0129	0.328	0.29
S32A01TX-2	32	0.0080	0.203	0.0120	0.305	0.24
S33A01TX-2	33	0.0071	0.180	0.0111	0.282	0.20
S34A01TX-2	34	0.0063	0.160	0.0103	0.262	0.16
S35A01TX-2	35	0.0056	0.142	0.0096	0.244	0.13
S36A01TX-2	36	0.0050	0.127	0.0090	0.229	0.11
S37A01TX-2	37	0.0045	0.114	0.0085	0.216	0.09
S38A01TX-2	38	0.0040	0.102	0.0080	0.203	0.08
S39A01TX-2	39	0.0035	0.089	0.0075	0.191	0.06
S40A01TX-2	40	0.0031	0.079	0.0071	0.180	0.05

<p>Product Construction:</p> <p>Size Range: UL: 10 AWG-40 AWG VDE: 14 AWG-40 AWG Not all sizes listed in chart</p> <p>Conductor: Tin plated copper Solid or stranded(ASTM B-33/ASTM B-286) Bare copper and other conductors available</p> <p>Insulations: DuPont™ Tefzel® ETFE</p> <p>Rating: Temperature: 155°C Voltage: 600 V</p>	<p>Applications: Electronic Basic isolation applications Medical/ Dental</p> <p>Compliances: UL OBJT2 File No. E206198 UL/IEC 60950-1 (Ed. 2), Annex U UL 60601-1(Ed.3), IEC 61558-2-16 VDE License Nr.136743: Class F System approvals: UL 1446 RXT-2 Class F Other systems available upon request RoHS Compliant</p> <p>Tensile Strength: 6500 psi Breakdown: Approx. 4500V</p>
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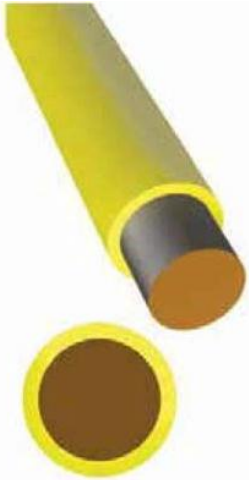
Single Insulated DuPont™ Tefzel® ETFE .003"



AWG	CONDUCTOR		NOMINAL O.D.		WEIGHT LB/KFT
	INCHES	MM	INCHES	MM	
10(37/26)	0.1070	2.718	0.1130	2.870	29.64
12(19/25)	0.0862	2.189	0.0922	2.342	19.42
14	0.0641	1.628	0.0701	1.781	12.87
14(19/27)	0.0679	1.725	0.0739	1.877	12.29
16	0.0508	1.290	0.0568	1.443	8.18
18	0.0403	1.024	0.0463	1.176	5.22
20	0.0320	0.813	0.0380	0.965	3.33
21	0.0285	0.724	0.0345	0.876	2.68
22	0.0253	0.643	0.0313	0.795	2.14
S23A01TX-3	23	0.0226	0.574	0.0286	1.73
S24A01TX-3	24	0.0201	0.511	0.0261	1.38
S25A01TX-3	25	0.0179	0.455	0.0239	1.12
S26A01TX-3	26	0.0159	0.404	0.0219	0.90
S27A01TX-3	27	0.0142	0.361	0.0202	0.73
S28A01TX-3	28	0.0126	0.320	0.0186	0.59
S29A01TX-3	29	0.0113	0.287	0.0173	0.49
S30A01TX-3	30	0.0100	0.254	0.0160	0.39
S31A01TX-3	31	0.0089	0.226	0.0149	0.32

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Single Insulated FEP .002"



Product Construction:

Size Range:
18 AWG-40 AWG
Not all sizes listed in chart

Conductor:
Tin plated copper
Solid or stranded(ASTM B-33/ASTM B-286)
Bare copper and other conductors available

Insulations:
FEP

Rating:
Temperature: 155°C
Voltage: 600 V

Applications:

Telecom/Electronic
Basic isolation applications

Compliances:

UL OBJT2 File No. E206198
UL/IEC 60950-1 (Ed. 2), Annex U
System approvals: UL 1446
RXT-2 Class F
Other systems available upon request
RoHS Compliant

Tensile Strength: 3000 psi
Breakdown: Approx. 3000V

PART NUMBER	AWG	CONDUCTOR		NOMINAL O.D.		WEIGHT LB/KFT
		INCHES	MM	INCHES	MM	
S18A01FX-2	18	0.0403	1.024	0.0443	1.125	5.17
S18A19FX-2	18(19/30)	0.0476	1.209	0.0516	1.311	6.17
S20A01FX-2	20	0.0320	0.813	0.0360	0.914	3.29
S20A19FX-2	20(19/32)	0.0385	0.978	0.0425	1.080	3.99
S22A01FX-2	22	0.0253	0.643	0.0293	0.744	2.10
S22A19FX-2	22(19/32)	0.0295	0.749	0.0335	0.851	2.52
S24A01FX-2	24	0.0201	0.511	0.0241	0.612	1.35
S24A19FX-2	24(19/36)	0.0242	0.615	0.0282	0.716	1.63
S25A01FX-2	25	0.0179	0.455	0.0219	0.556	1.18
S26A01FX-2	26	0.0159	0.404	0.0199	0.505	0.89
S27A01FX-2	27	0.0142	0.361	0.0182	0.462	0.71
S28A01FX-2	28	0.0126	0.320	0.0166	0.422	0.57
S29A01FX-2	29	0.0113	0.287	0.0153	0.389	0.47
S30A01FX-2	30	0.0100	0.254	0.0140	0.356	0.38
S31A01FX-2	31	0.0089	0.226	0.0129	0.328	0.31
S32A01FX-2	32	0.0080	0.203	0.012	0.305	0.25
S33A01FX-2	33	0.0071	0.180	0.0111	0.282	0.21
S34A01FX-2	34	0.0063	0.160	0.0103	0.262	0.17

S35A01FX-2	35	0.0056	0.142	0.0096	0.244	0.14
S36A01FX-2	36	0.0050	0.127	0.0090	0.229	0.12
S37A01FX-2	37	0.0045	0.114	0.0085	0.216	0.10
S38A01FX-2	38	0.0040	0.102	0.0080	0.203	0.08
S39A01FX-2	39	0.0035	0.089	0.0075	0.191	0.07
S40A01FX-2	40	0.0031	0.079	0.0071	0.180	0.06



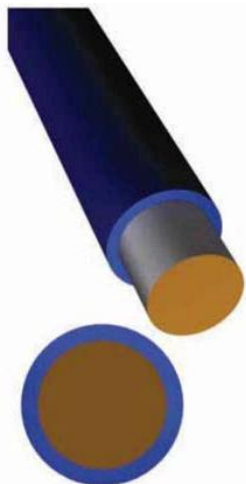
Single Insulated FEP .003"



<p>Product Construction:</p> <p>Size Range: 10 AWG-40 AWG Not all sizes listed in chart</p> <p>Conductor: Tin plated copper Solid or stranded (ASTM B-33/ASTM B-286) Bare copper and other conductors available</p> <p>Insulations: FEP</p> <p>Rating: Temperature: 155°C Voltage: 600 V</p>	<p>Applications: Telecom/Electronic Basic isolation applications</p> <p>Compliances: UL OBJT2 File No. E206198 UL 60950-1 (Ed. 2), Annex U System approvals: UL 1446 RXT-2 Class F Other systems available upon request RoHS Compliant</p> <p>Tensile Strength: 3000 psi Breakdown: Approx. 4500V</p>
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PART NUMBER	AWG	CONDUCTOR		NOMINAL O.D.		WEIGHT LB/KFT
		INCHES	MM	INCHES	MM	
S16A01FX-3	16	0.0508	1.290	0.0568	1.443	8.29
S16A19FX-3	16(19/29)	0.0539	1.369	0.0599	1.521	8.00
S18A01FX-3	18	0.0403	1.024	0.0463	1.176	5.31
S18A19FX-3	18(19/30)	0.0476	1.209	0.0536	1.361	6.33
S20A01FX-3	20	0.0320	0.813	0.0380	0.965	3.41
S20A19FX-3	20(19/32)	0.0385	0.978	0.0445	1.130	4.12
S22A01FX-3	22	0.0253	0.643	0.0313	0.795	2.19
S22A19FX-3	22(19/32)	0.0295	0.749	0.0355	0.902	2.62
S24A01FX-3	24	0.0201	0.511	0.0261	0.663	1.43
S24A19FX-3	24(19/36)	0.0242	0.615	0.0302	0.767	1.71
S25A01FX-3	25	0.0179	0.455	0.0239	0.607	1.25
S26A01FX-3	26	0.0190	0.483	0.0250	0.635	0.96
S27A01FX-3	27	0.0142	0.361	0.0202	0.513	0.76
S28A01FX-3	28	0.0126	0.320	0.0186	0.472	0.62
S29A01FX-3	29	0.0113	0.287	0.0173	0.439	0.52
S30A01FX-3	30	0.0100	0.254	0.0160	0.406	0.42
S31A01FX-3	31	0.0089	0.226	0.0149	0.378	0.35
S32A01FX-3	32	0.0080	0.203	0.0140	0.356	0.29
S33A01FX-3	33	0.0071	0.180	0.0131	0.333	0.24
S34A04FX-3	34	0.0063	0.160	0.0123	0.312	0.20
S35A01FX-3	35	0.0056	0.142	0.0116	0.295	0.17
S36A01FX-3	36	0.0050	0.127	0.0110	0.279	0.15
S37A01FX-3	37	0.0045	0.114	0.0105	0.267	0.13
S38A01FX-3	38	0.0040	0.102	0.0100	0.254	0.11
S39A01F-X3	39	0.0035	0.089	0.0095	0.241	0.10
S40A01FX-3	40	0.0031	0.079	0.0091	0.231	0.08

Single Insulated PFA .0015"



Size Range:
28 AWG-40 AWG

Conductor:
Tin plated copper
Solid or stranded (ASTM B-33/ASTM B-286)
Bare copper and other conductors available

Insulations:
PFA

Rating:
Temperature: 180°C
Voltage:
600 V for electronic equipment
UL: 425 V for medical equipment

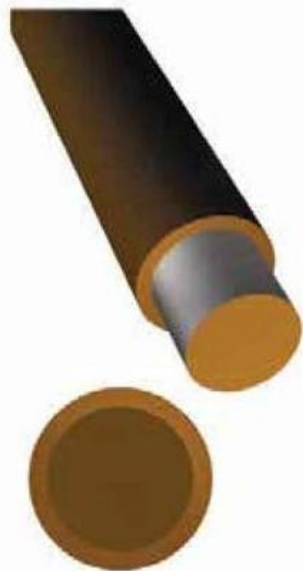
Applications:
Telecom/Electronic
Basic isolation applications
Medical/Dental equipment
High temperature resistance:
Lead free reflow

Compliances:
UL OBJT2 File No. E206198
UL/IEC 60950-1 (Ed. 2), Annex U
UL60601-1 (Ed.3),
VDE License Nr.6716: Class H
IEC 61558-2-16

RoHS Compliant
Tensile Strength: 3500 psi
Breakdown: Approx. 3000V
Insulation Temperature Capacity: 260°C

PART NUMBER	AWG	CONDUCTOR		NOMINAL O.D.		WEIGHT LB/KFT
		INCHES	MM	INCHES	MM	
S28A01PX-1.5	28	0.0126	0.320	0.0156	0.396	0.54
S29A01PX-1.5	29	0.0113	0.287	0.0143	0.363	0.44
S30A01PX-1.5	30	0.0100	0.254	0.0130	0.330	0.35
S31A01PX-1.5	31	0.0089	0.226	0.0119	0.302	0.29
S32A01PX-1.5	32	0.0080	0.203	0.0110	0.279	0.24
S33A01PX-1.5	33	0.0071	0.180	0.0101	0.257	0.19
S34A01PX-1.5	34	0.0063	0.160	0.0093	0.236	0.16
S35A01PX-1.5	35	0.0056	0.142	0.0086	0.218	0.13
S36A01PX-1.5	36	0.0050	0.127	0.0080	0.203	0.10
S37A01PX-1.5	37	0.0045	0.114	0.0075	0.191	0.09
S38A01PX-1.5	38	0.0040	0.102	0.0070	0.178	0.07
S39A01PX-1.5	39	0.0035	0.089	0.0065	0.165	0.06
S40A01PX-1.5	40	0.0031	0.079	0.0061	0.155	0.05

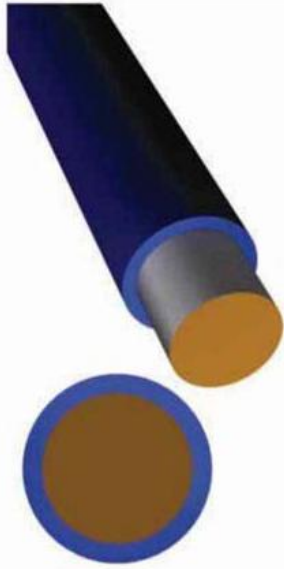
Single Insulated PFA .002"



<p>Product Construction:</p> <p>Size Range: ul: 28 AWG-40 AWG</p> <p>Conductor: Tin plated copper Solid or stranded(ASTM B-33/ASTM B-286) Bare copper and other conductors available</p> <p>Insulations: PFA</p> <p>Rating: Temperature: 180°C Voltage: 600 V for electronic equipment UL: 425 V for medical equipment</p>	<p>Applications: Telecom/Electronic Basic isolation applications Medical/Dental equipment High temperature resistance: Lead free reflow</p> <p>Compliances: UL OBJT2 File No. E206198 UL/IEC 60950-1 (Ed. 2), Annex U UL60601-1 (Ed.3), IEC 61558-2-16 VDE License Nr.6716: Class H</p> <p>RoHS Compliant</p> <p>Tensile Strength: 3500 psi Breakdown: Approx. 4000V Insulation Temperature Capacity: 260°C</p>
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PART NUMBER	AWG	CONDUCTOR		NOMINAL O.D.		WEIGHT LB/KFT
		INCHES	MM	INCHES	MM	
S28A01PX-2	28	0.0126	0.320	0.0166	0.422	0.57
S29A01PX-2	29	0.0113	0.287	0.0153	0.389	0.47
S30A01PX-2	30	0.0100	0.254	0.0140	0.356	0.38
S31A01PX-2	31	0.0089	0.226	0.0129	0.328	0.31
S32A01PX-2	32	0.0080	0.203	0.0120	0.305	0.25
S33A01PX-2	33	0.0071	0.180	0.0111	0.282	0.21
S34A01PX-2	34	0.0063	0.160	0.0103	0.262	0.17
S35A01PX-2	35	0.0056	0.142	0.0096	0.244	0.14
S36A01PX-2	36	0.0050	0.127	0.0090	0.229	0.12
S37A01PX-2	37	0.0045	0.114	0.0085	0.216	0.10
S38A01PX-2	38	0.0040	0.102	0.0080	0.203	0.08
S39A01PX-2	39	0.0035	0.089	0.0075	0.191	0.07
S40A01PX-2	40	0.0031	0.079	0.0071	0.180	0.06

Single Insulated PFA .003"



<p>Product Construction:</p> <p>Size Range: ul: 28 AWG-40 AWG</p> <p>Conductor: Tin plated copper Solid or stranded(ASTM B-33/ASTM B-286) Bare copper and other conductors available</p> <p>Insulations: PFA</p> <p>Rating: Temperature: 180°C Voltage: 600 V for electronic equipment UL: 425 V for medical equipment</p>	<p>Applications: Telecom/Electronic Basic isolation applications Medical/Dental equipment High temperature resistance: Lead free reflow</p> <p>Compliances: UL OBJT2 File No. E206198 UL/IEC 60950-1 (Ed. 2), Annex U UL60601-1 (Ed.3), IEC 61558-2-16 VDE License Nr.6716: Class H</p> <p>RoHS Compliant</p> <p>Tensile Strength: 3500 psi Breakdown: Approx. 6000V Insulation Temperature Capacity: 260°C</p>
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PART NUMBER	AWG	CONDUCTOR		NOMINAL O.D.		WEIGHT LB/KFT
		INCHES	MM	INCHES	MM	
S28A01PX-3	28	0.0126	0.320	0.0186	0.472	0.62
S29A01PX-3	29	0.0113	0.287	0.0173	0.439	0.52
S30A01PX-3	30	0.0100	0.254	0.0160	0.406	0.42
S31A01PX-3	31	0.0089	0.226	0.0149	0.378	0.35
S32A01PX-3	32	0.0080	0.203	0.0140	0.356	0.29
S33A01PX-3	33	0.0071	0.180	0.0131	0.333	0.24
S34A01PX-3	34	0.0063	0.160	0.0123	0.312	0.20
S35A01PX-3	35	0.0056	0.142	0.0116	0.295	0.17
S36A01PX-3	36	0.0050	0.127	0.0110	0.279	0.15
S37A01PX-3	37	0.0045	0.114	0.0105	0.267	0.13
S38A01PX-3	38	0.0040	0.102	0.0100	0.254	0.11
S39A01PX-3	39	0.0035	0.089	0.0095	0.241	0.010
S40A01PX-3	40	0.0031	0.079	0.0091	0.231	0.08