Features/Benefits

- *Broad range of operating forces*
- *Ratings up to 21 AMPS*
- *Wide variety of actuator styles*
- *Quick connect terminations*

Typical Applications

- *Motor controls*
- *Thermostatics*
- *Portable tools*

Specifications

CONTACT RATING: From low level* to 21 AMPS @ 277 V AC.

ELECTRICAL LIFE: 300,000 cycles at 10 AMPS @ 250 V AC, consult Customer Service Center for typical life of higher rated switches.

INSULATION RESISTANCE: 1,000 M ohm min.

DIELECTRIC STRENGTH: 1,500 Vrms min. @ sea level.

OPERATING TEMPERATURE: –40ºF to 185ºF (–40ºC to 85ºC).

OPERATING FORCE: From 15 to 400 grams at actuator button available.

MOUNTING: Torque screws 2-5 in/lbs.

* Low Level=conditions where no arcing occurs during switching, i.e., 0.4 VA max. @ 20 V AC or DC max. Standard electrical life per UL 1054, rated for 6,000 operations.

Materials

SWITCH HOUSING: Thermoplastic (UL 94V-0).

ACTUATOR BUTTON: Thermoplastic (UL 94V-0).

SPRING: Copper alloy.

PIVOT: Brass alloy.

MOVABLE CONTACTS: Gold alloy for ratings 1 AMP or less. Fine silver for ratings greater than 1 AMP up to 15 AMPS. Precious metal alloy for ratings greater than 15 AMPS.

STATIONARY CONTACTS: Gold alloy for ratings 1 AMP or less. Fine silver for ratings greater than 1 AMP.

TERMINALS: Brass alloy for ratings up to 10 AMPS. Copper alloy for ratings greater than 10 AMPS.

NOTE: Specifications and materials listed above are switches with standard options. For information on specific and custom switches, consult Customer Service Center.

Build-A-Switch

To order, simply select desired option from each category and place in the appropriate box. Available options are shown and described on pages J-6 through J-10. For additional options not shown in catalog, consult Customer Service Center.

T F

Series
TF SP, Mom.

Operating Force
CJ 5.29 oz./150 grams
CC .53 oz./15 grams
CD .88 oz./25 grams
CF 1.76 oz./50 grams
CG 2.65 oz./75 grams
EC 7.94 oz./225 grams
EE 14.11 oz./400 grams

Electrical Rating
J6 15 A, 277 V AC; 1/2 HP, 125, 250 V AC; 5 A, 125 V AC "L", 0.5 A, 125 V DC; 0.25 A, 250 V DC
F5 1 A,125 V AC; 1 A, 30 V DC
H8 5 A, 277 V AC; 1/10 HP, 125, 250 V AC
J3 21 A, 277 V AC; 1 HP, 125 V AC; 2 HP, 250 V AC; 5 A, 125 V AC "L"
K6 11 A, 277 V AC; 1/3 HP, 125, 250 V AC; 0.5 A, 125 V DC; 0.25 A, 250 V DC
L3 20 A, 250 V AC; 1 HP, 125 V AC; 2 HP 250 V AC
V1 1 AMP @ 125 V AC; 1 AMP @ 30 V DC (UL/CSA); 0.1 (0.05) AMP @ 250 V~µ T85 50E3 (VDE)
V2 5 A, 277 V AC; 1/10 HP, 125, 250 V AC (UL/CSA); 5(2) A, 250 V AC (VDE)
V3 11 A, 277 V AC; 1/3 HP, 125, 250 V AC; 0.5 A, 125 V DC; 0.25 A, 250 V DC (UL/CSA); 10(3) A, 250 V AC (VDE)
V4 21 A, 277 V AC; 1 HP, 125 V AC; 2 HP, 250 V AC; 5 A, 125 V AC "L"; 16(3) A, 250 V AC (VDE)

Mounting Style
S Standard
V Metric

Actuator
P00 Pin plunger
A10 .81" lever roller, high force
A15 1.34" lever roller, high force
A20 1.05" lever roller, low force
A25 1.56" lever roller, low force
T10 .84" lever, high force
T13 1.34" simulated roller, high force
T14 1.29" simulated roller, high force
T15 1.40" lever, high force
T16 2.34" lever, high force
T18 2.75" lever, high force
T20 1.10" lever, low force
T23 1.56" simulated roller, low force
T24 1.50" simulated roller, low force
T25 1.62" lever, low force
T26 2.57" lever, low force
T28 2.97" lever, low force
WP0 Wide pin plunger

Terminations
40 .187" quick connect
4A .250" quick connect
5A .250" offset quick connect
5B .187" offset quick connect

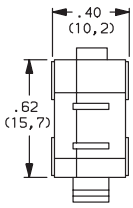
Circuitry
C SPDT
W SPST N.C.
Y SPST N.O.

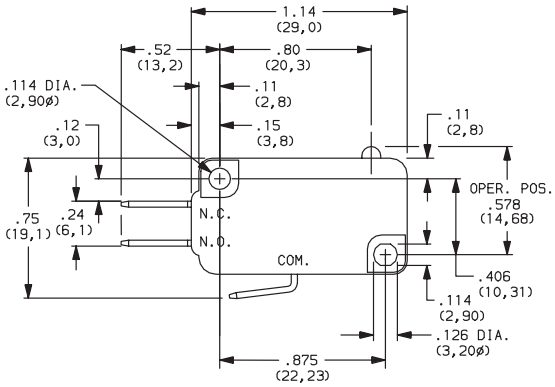
Dimensions are shown: Inches (mm)
Specifications and dimensions subject to change

TF Series
Miniature Snap-acting Switches

SERIES

TF MINIATURE SNAP-ACTING SWITCHES – SP MOMENTARY





OPERATING FORCE

OPTION CODE	BASIC SWITCH OPERATING FORCE (OZ./GRAMS)
CC	.53 15
CD	.88 25
CF	1.76 50
CG	2.65 75
CJ	5.29 150
EC	7.94 225
EE*	14.11 400

*Minimums may apply, consult Customer Service Center.

Operating Force option 'CC' not available with 'T18 & T26' Actuator options.
Operating force varies with actuator option, see ACTUATOR option section.

ELECTRICAL RATING

OPTION CODE	RoHS COMPLIANT *	RoHS COMPATIBLE *	CONTACT MATERIAL		ELECTRICAL RATING
			MOVABLE CONTACT	STATIONARY CONTACT	
F5	Yes	Yes	Gold alloy	Gold alloy	From low level* to 1 AMP @ 125 V AC, 1 AMP @ 30 V DC.
H8	Yes	Yes	Fine Silver	Fine Silver	5 AMPS @ 277 V AC; 1/10 HP @ 125 & 250 V AC.
J3	Yes	Yes			21 AMPS @ 277 V AC; 1 HP @ 125 V AC; 2 HP @ 250 V AC; 5 AMPS @ 125 V AC "L".
J6	Yes	Yes			15 AMPS @ 277 V AC; 1/2 HP @ 125 & 250 V AC; 5 AMPS @ 125 V AC "L". 0.5 AMP @ 125 V DC; 0.25 AMP @ 250 V DC.
K6	Yes	Yes			11 AMPS @ 277 V AC; 1/3 HP @ 125 & 250 V AC; 0.5 AMP @ 125 V DC; 0.25 AMP @ 250 V DC.
			Silver alloy		
L3	Yes	Yes			20 AMPS @ 250 V AC; 1 HP @ 125 V AC; 2 HP @ 250 V AC

* Note: See Technical Data section of this catalog for RoHS compliant and compatible definitions and specifications.

All models specific options .

Consult Customer Service center for availability and delivery of nonstandard ratings.

* Low Level=conditions where no arcing occurs during switching, i.e., 0.4 VA max. @ 20 V AC or DC max.

Third Angle Projection

Dimensions are shown: Inch (mm)
Specifications and dimensions subject to change

ELECTRICAL RATING

OPTION CODE	RoHS COMPLIANT	RoHS COMPATIBLE	CONTACT MATERIAL		INTERNATIONAL ELECTRICAL RATING
			MOVABLE CONTACT	STATIONARY CONTACT	
V1	Yes	Yes	Gold alloy	Gold alloy	From low level* to 1 AMP @ 125 V AC; 1 AMP @ 30 V DC (UL/CSA). 0.1 (0.05) AMP @ 250 V~µ T85 50E3 (VDE).
V2	Yes	Yes	Fine Silver	Fine Silver	5 AMPS @ 277 V AC; 1/10 HP @ 125 & 250 V AC (UL/CSA). 5 (2) AMPS @ 250 V~µ T85 50E3 (VDE).
V3	Yes	Yes			11 AMPS @ 277 V AC; 1/3 HP @ 125 & 250 V AC; 0.5 AMP @ 125 V DC; 0.25 AMP @ 250 V DC (UL/CSA). 10 (3) AMPS @ 250 V~µ 50E3 T85 (VDE).
V4	Yes	Yes	Precious metal alloy		21 AMPS @ 277 V AC; 1 HP @ 125 V AC; 2 HP @ 250 V AC; 16 (3) AMPS @ 250 V~µ T85 10E3 (VDE).

* Note: See Technical Data section of this catalog for RoHS compliant and compatible definitions and specifications.

NOTE: V1-V4 ratings available with '5A or 5B'terminal styles only.

INTERNATIONAL RATING SYMBOLS	
µ	Microgap construction (less than 3 mm).
~	Alternating current.
T__	Maximum rated use temperature.
50E3	Cycles over 50,000 at rated current.
10E3	Cycles over 10,000 at rated current.
10(3)	Current Rating: First number represents resistive rating; second number represents inductive (motor) rating.

All models specific options .

Consult Customer Service center for availability and delivery of nonstandard ratings.

* Low Level=conditions where no arcing occurs during switching, i.e., 0.4 VA max. @ 20 V AC or DC max.

ELECTRICAL RATING	AMPS (REF.)	OPERATING FORCE						
		CC (15)	CD (25)	CF (50)	CG (75)	CJ (150)	EC (225)	EE (400)
F5	1	•	•	•	•	•	•	
H8	5	•	•	•	•	•	•	•
J3	21	X	X	X	X	•	•	•
J6	15	X	X	X	X	•	•	•
K6	11	X	•	•	•	•	•	•
L3	20	X	X	X	X	•	•	•
V1	1	•	•	•	•	•	X	X
V2	5	X	X	•	•	•	•	•
V3	11	X	X	X	•	•	•	•
V4	16	X	X	X	X	•	•	•

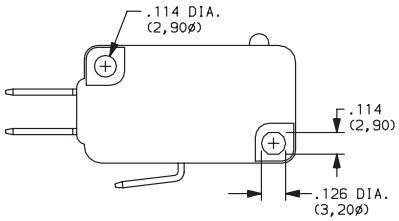
• AVAILABLE

x NOT AVAILABLE

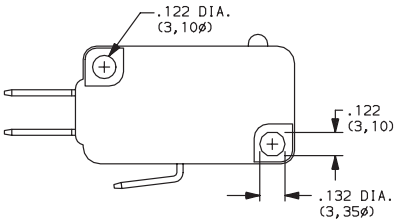
** Available with 4A & 5A terminations only, see page J-10.

MOUNTING STYLE

S STANDARD
For 4-40 screw size



V Metric
For 3 mm screw size



Third Angle Projection

Dimensions are shown: Inches (mm)
Specifications and dimensions subject to change

ACTUATOR

OPTION CODE	FIG.	DIM. A	DIM. B	DIM. C	DIM. D
P00	1	.80 (20,3)	–	.578 ± .015 (14,68 ± 0,38)	–
A10	2	.81 (20,6)	.32 (8,1)	.810 ± .020 (20,57 ± 0,51)	.19 dia. (4,8Ø)
A15	2	1.34 (34,0)	.32 (8,1)	.810 ± .030 (20,57 ± 0,76)	.19 dia. (4,8Ø)
A20	2	1.05 (26,7)	.54 (13,7)	.810 ± .050 (20,57)± 1,27	.19 dia. (4,8Ø)
A25	2	1.56 (39,6)	.54 (13,7)	.810 ± .075 (20,57 ± 1,91)	.19 dia. (4,8Ø)
T10	3	.84 (21,3)	.32 (8,1)	.600 ± .020 (15,24 ± 0,51)	–
T15	3	1.40 (35,6)	.32 (8,1)	.600 ± .040 (15,24 ± 1,02)	–
T16	3	2.34 (59,4)	.32 (8,1)	.600 ± .065 (15,24 ± 1,65)	–
T18	3	2.75 (69,9)	.32 (8,1)	.600 ± .080 (15,24 ± 2,03)	–
T20	3	1.10 (27,9)	.54 (13,7)	.600 ± .050 (15,24 ± 1,27)	–
T25	3	1.62 (41,1)	.54 (13,7)	.600 ± .070 (15,24 ± 1,78)	–
T26	3	2.57 (65,3)	.54 (13,7)	.600 ± .150 (15,24 ± 3,81)	–
T28	3	2.97 (75,4)	.54 (13,7)	.600 ± .187 (15,24) ± 4,75	–
T13	4	1.34 (34,0)	.32 (8,1)	.810 ± .030 (20,57 ± 0,76)	.19 dia. (4,8Ø)
T14	4	1.29 (32,8)	.32 (8,1)	.730 ± .030 (18,54 ± 0,76)	.19 dia. (6,4Ø)
T23	4	1.56 (39,6)	.54 (13,7)	.810 ± .065 (20,57 ± 1,65)	.19 dia. (4,8Ø)
T24	4	1.50 (38,1)	.54 (13,7)	.730 ± .060 (18,54)± 1,52	.25 dia. (6,4Ø)
WP0	5	.80 (20,3)	–	.635 ± .015 (16,13 ± 0,38)	–

NOTE: Switch characteristics chart on following page.

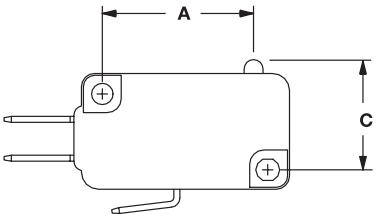


FIG. 1
Pin Plunger

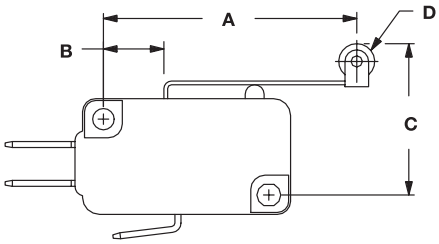


FIG. 2
Lever Roller

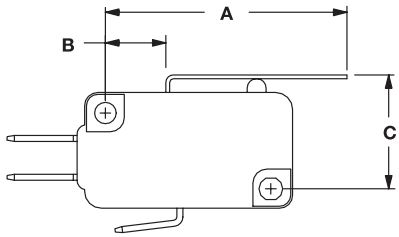


FIG. 3
Lever

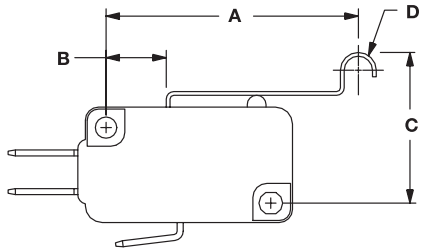


FIG. 4
Simulated Roller

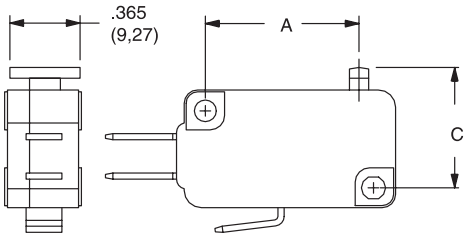


FIG. 5
Wide Pin

Third Angle Projection

Dimensions are shown: Inch (mm)
Specifications and dimensions subject to change

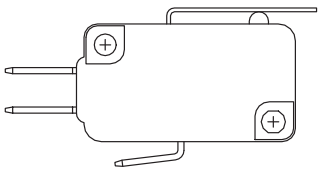
ACTUATOR

SWITCH CHARACTERISTICS

OPTION CODE	MAXIMUM OPERATING FORCE (OZ./GRAMS)							MINIMUM RELEASE FORCE (OZ./GRAMS)							MAXIMUM DIFFERENTIAL TRAVEL	MAXIMUM PRETRAVEL	MINIMUM OVERTRAVEL
	CC (15)	CD (25)	CF (50)	CG (75)	CJ (150)	EC (225)	EE (400)	CC (15)	CD (25)	CF (50)	CG (75)	CJ (150)	EC (225)	EE (400)	ALL FORCES	ALL FORCES	ALL FORCES
A10	.63 18	1.06 30	2.29 65	3.17 90	6.35 180	7.94 225	14.11 400	.21 6	.35 10	.35 10	.53 15	.71 20	1.98 56	3.88 110	.015 (0,38)	.060 (1,52)	.030 (0,76)
A15	.28 8	.42 12	1.06 30	1.59 45	3 85	4.59 130	7.94 225	.07 2	.14 4	.14 4	.18 5	.35 10	.71 20	2.82 80	.030 (0,76)	.100 (2,54)	.065 (1,65)
A20	0.53 15	0.71 20	1.41 40	2.12 60	4.23 120	6 170	9.7 275	0.07 2	0.11 3	0.11 3	0.18 5	0.42 12	0.71 20	1.41 40	0.025 (0,64)	0.12 (3,05)	0.055 (1,40)
A25	.18 5	.28 8	56 16	85 24	1.69 48	2.65 75	4.41 125	.04 1	.07 2	.07 2	.07 2	.21 6	.35 10	.71 20	.050 (1,27)	.250 (6,35)	.120 (3,05)
P00	.53 15	.88 25	1.76 50	2.65 75	5.29 150	7.94 225	14.11 400	.21 6	.35 10	.35 10	.53 15	1.23 35	1.98 56	3.88 110	.010 (0,25)	.047 (1,19)	.050 (1,27)
T10	.63 18	1.06 30	2.29 65	3.17 90	6.35 180	7.94 225	14.11 400	.21 6	.35 10	.35 10	.53 15	.71 20	1.98 56	3.88 110	.015 (0,38)	.060 (1,52)	.030 (0,76)
T13	.28 8	.42 12	1.06 30	1.59 45	3 85	4.59 130	7.94 225	.07 2	.14 4	.14 4	.18 5	.35 10	.71 20	2.82 80	.030 (0,76)	.100 (2,54)	.065 (1,65)
T14	.28 8	.42 12	1.23 35	1.76 50	3.17 90	4.76 135	7.94 225	.07 2	.14 4	.14 4	.18 5	.35 10	.71 20	2.82 80	.030 (0,76)	.100 (2,54)	.060 (1,52)
T15	.25 7	.42 12	1.06 30	1.41 40	2.82 80	4.41 125	7.94 225	.07 2	.14 4	.14 4	.18 5	.28 8	.63 18	2.82 80	.030 (0,76)	.110 (2,79)	.065 (1,65)
T16	.18 5	.28 8	.53 15	.78 22	1.59 45	2.47 70	4.23 120	.04 1	.07 2	.07 2	.07 2	.28 8	.35 10	.71 20	.045 (1,14)	.250 (6,35)	.125 (3,18)
T18	N/A	.21 6	.42 12	.71 20	1.41 40	2.12 60	3.53 100	N/A	.04 1	.04 1	.07 2	.18 5	.28 8	.56 16	.062 (1,57)	.300 (7,62)	.155 (3,94)
T20	.53 15	.71 20	1.41 40	2.12 60	4.23 120	6 170	9.70 275	.21 6	.35 10	.35 10	.53 15	.71 20	1.98 56	3.88 110	.030 (0,76)	.140 (3,56)	.060 (1,52)
T23	.18 5	.28 8	.56 16	.85 24	1.69 48	2.65 75	4.41 125	.04 1	.07 2	.07 2	.07 2	.21 6	.35 10	.71 20	.050 (1,27)	.250 (6,35)	.120 (3,05)
T24	0.18 5	0.28 8	0.56 16	0.88 25	1.76 50	2.65 75	4.76 135	0.04 1	0.07 2	0.07 2	0.11 3	0.21 6	0.35 10	0.71 20	.005 (1,27)	0.23 (5,84)	0.11 (2.79)
T25	.18 5	.28 8	.53 15	.88 25	1.59 45	2.47 70	4.23 120	.04 1	.07 2	.07 2	.07 2	.21 6	.35 10	.99 28	.055 (1,40)	.250 (6,35)	.125 (3,18)
T26	N/A	.14 4	.28 8	.42 12	.85 24	1.27 36	2.26 64	N/A	.04 1	.04 1	.05 1.5	.12 3.5	.21 6	.39 11	.100 (2,54)	.500 (12,70)	.235 (5,97)
T28	N/A	N/A	N/A	0.42 12	0.71 20	1.06 30	1.94 55	N/A	N/A	N/A	0.04 1	0.11 3	0.18 5	0.32 9	0.12 (3,05)	.0.560 (14.22)	0.285 (7,24)
WP0	.53 15	.88 25	1.76 50	2.65 75	5.29 150	7.94 225	14.11 400	.21 6	.35 10	.35 10	.53 15	1.23 35	1.97 56	3.88 110	.010 (0.25)	.047 (1,19)	.030 (0,51)

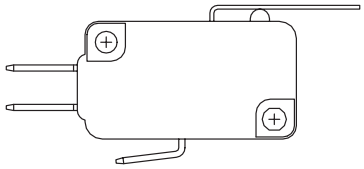
NOTE: For basic switch operating forces, see page J-6.

HIGH FORCE, LOW MOTION PIVOT POSITION



Available with actuators A10, A15, T10, T13, T14, T15, T16 and T18.

LOW FORCE, HIGH MOTION PIVOT POSITION



Available with actuators A20, A25, T20, T23, T24, T25, T26, and T28.

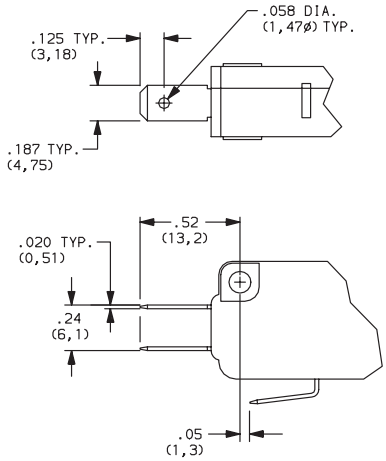
NOTE: Lever actuator options are available in either of two pivot positions.
Levers located in the forward pivot position have lower forces and higher motions.
Levers located in the rear pivot position have higher forces and lower motions.

Third Angle Projection

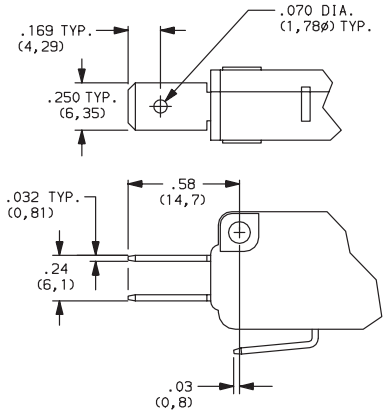
Dimensions are shown: Inches (mm)
Specifications and dimensions subject to change

TERMINATIONS

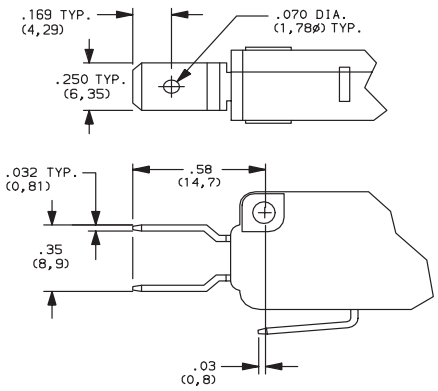
40 **.187" QUICK CONNECT**



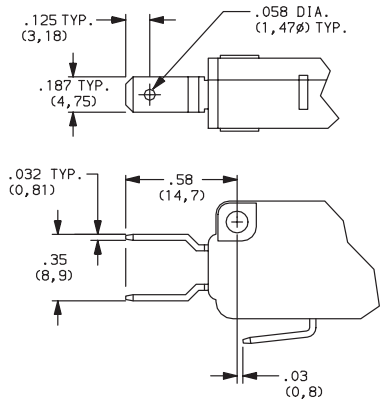
4A .250" QUICK CONNECT



5A OFFSET .250" QUICK CONNECT



5B OFFSET .187" QUICK CONNECT



CIRCUITRY

C SPDT (Single Pole, Double Throw)

W SPST N.C. (Single Pole, Single Throw, Normally Closed)

Y SPST N.O. (Single Pole, Single Throw, Normally Open)

Third Angle Projection

Dimensions are shown: Inch (mm)
Specifications and dimensions subject to change

Компания «ЭлектроПласт» предлагает заключение долгосрочных отношений при поставках импортных электронных компонентов на взаимовыгодных условиях!

Наши преимущества:

- Оперативные поставки широкого спектра электронных компонентов отечественного и импортного производства напрямую от производителей и с крупнейших мировых складов;
- Поставка более 17-ти миллионов наименований электронных компонентов;
- Поставка сложных, дефицитных, либо снятых с производства позиций;
- Оперативные сроки поставки под заказ (от 5 рабочих дней);
- Экспресс доставка в любую точку России;
- Техническая поддержка проекта, помощь в подборе аналогов, поставка прототипов;
- Система менеджмента качества сертифицирована по Международному стандарту ISO 9001;
- Лицензия ФСБ на осуществление работ с использованием сведений, составляющих государственную тайну;
- Поставка специализированных компонентов (Xilinx, Altera, Analog Devices, Intersil, Interpoint, Microsemi, Aeroflex, Peregrine, Syfer, Eurofarad, Texas Instrument, Miteq, Cobham, E2V, MA-COM, Hittite, Mini-Circuits,General Dynamics и др.);

Помимо этого, одним из направлений компании «ЭлектроПласт» является направление «Источники питания». Мы предлагаем Вам помощь Конструкторского отдела:

- Подбор оптимального решения, техническое обоснование при выборе компонента;
- Подбор аналогов;
- Консультации по применению компонента;
- Поставка образцов и прототипов;
- Техническая поддержка проекта;
- Защита от снятия компонента с производства.

Как с нами связаться

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