

# SPECIFICATION CONTROL DRAWING

SCD **ATF+0311**

Title **AUTOMATIC TRANSMISSION CABLE,  
RADIATION-CROSSLINKED, MODIFIED FLUOROPOLYMER-INSULATED, 600 VOLT**

Date **1-29-15**

Revision **H**

This specification sheet forms a part of the latest issue of Raychem Specification 63.

CONDUCTOR - TIN-COATED COPPER

INSULATION - RADIATION-CROSSLINKED,  
MODIFIED FLUOROPOLYMER



TABLE I. CONSTRUCTION DETAILS

PART NUMBER <i>1/</i>	WIRE SIZE (AWG)	CONDUCTOR STRANDING (number x AWG)	CONDUCTOR DIAMETER (inch) (mm)		MAXIMUM RESISTANCE AT 20°C (ohms/1000 ft.) (ohms/km)	FINISHED CABLE			NOMINAL WEIGHT (lbs/1000 ft.) (kg/km)
			LOWER SPEC LIMIT	UPPER SPEC LIMIT		DIAMETER (inch) (mm)			
						LOWER SPEC LIMIT	TARGET VALUE	UPPER SPEC LIMIT	
ATFC0311-22-*	22	19 x 34	.029 (.737)	.031 (.787)	16.2 (53.1)	.044 (1.12)	.046 (1.17)	.048 (1.22)	3.0 (4.46)
ATFC0311-20-*	20	19 x 32	.037 (.940)	.039 (.991)	9.88 (32.4)	.052 (1.32)	.054 (1.37)	.056 (1.42)	4.4 (6.55)
ATFC0311-18-*	18	19 x 30	.046 (1.17)	.049 (1.24)	6.23 (20.4)	.061 (1.55)	.063 (1.60)	.065 (1.65)	6.6 (9.82)
ATFC0311-16-*	16	19 x 29	.052 (1.32)	.055 (1.40)	4.81 (15.8)	.066 (1.68)	.069 (1.75)	.072 (1.83)	8.3 (12.4)
ATFC0311-14-*	14	19 x 27	.065 (1.65)	.069 (1.75)	3.06 (10.0)	.083 (2.11)	.086 (2.18)	.089 (2.26)	12.9 (19.2)
ATFD0311-16-*	16	37 x 32	.051 (1.30)	.056 (1.42)	4.98 (16.3)	.067 (1.70)	.070 (1.78)	.073 (1.85)	8.5 (12.6)
ATFD0311-14-*	14	37 x 30	.067 (1.70)	.072 (1.83)	3.11 (10.2)	.089 (2.26)	.093 (2.36)	.097 (2.46)	15.5 (23.1)

Users should evaluate the suitability of this product for their application. Specifications are subject to change without notice.  
Tyco Electronics Corporation also reserves the right to make changes in materials or processing, which do not affect compliance with any specification, without notification to Buyer.

*1/* COLORS SHALL BE IN ACCORDANCE WITH SAE J1128. COLOR CODE DESIGNATORS SHALL BE IN ACCORDANCE WITH SPEC 63.  
OTHER CODES AND SUFFIXES MAY BE ADDED TO THE PART NUMBER, AS NECESSARY, TO CAPTURE ANY ADDITIONAL REQUIREMENTS IMPOSED BY THE PURCHASE ORDER.

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DIMENSIONS ARE IN INCHES AND, UNLESS OTHERWISE DESIGNATED, ARE NOMINAL.

THIS SPECIFICATION SHEET TAKES PRECEDENCE OVER DOCUMENTS REFERENCED HEREIN.  
REFERENCED DOCUMENTS SHALL BE OF THE ISSUE IN EFFECT ON DATE OF INVITATION FOR BID.



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**TABLE II. PERFORMANCE DETAILS**

PART NUMBER <u>1/</u>	HEAT RESISTANCE - BEND TESTING		DYNAMIC CUT-THROUGH (lb) (kg) (minimum)	
	MANDREL DIAMETER (inch) (mm) (± 3%)	WEIGHT (lb) (kg) (± 3%)	INITIAL	AFTER IMMERSION
ATFC0311-22-*	.750 (19.1)	.375 (.170)	TBD	TBD
ATFC0311-20-*	.750 (19.1)	.375 (.170)	20 (9.07)	20 (9.07)
ATFC0311-18-*	.750 (19.1)	.375 (.170)	TBD	TBD
ATFC0311-16-*	.750 (19.1)	.375 (.170)	TBD	TBD
ATFC0311-14-*	.750 (19.1)	.375 (.170)	TBD	TBD
ATFD0311-16-*	1.00 (25.4)	.500 (.227)	TBD	TBD
ATFD0311-14-*	1.00 (25.4)	.500 (.227)	TBD	TBD

**CABLE RATINGS AND ADDITIONAL REQUIREMENTS**

VOLTAGE RATING: 600 volts (dc) at sea level

CONCENTRICITY: 70% (minimum)

CROSSLINK PROOF TEST: Per QC/3/117

FLAMMABILITY: 70 seconds (maximum) afterburn

HEAT RESISTANCE: 150 ± 2°C for 1 hour

no cracking, no dielectric breakdown

INSULATION ELONGATION AND TENSILE STRENGTH:

(Pulled at 2 inches (51 mm) per minute)

Elongation, 150% (minimum)

Tensile Strength, 3000 lbf/in<sup>2</sup> (20.7 N/mm<sup>2</sup>) (minimum)

INSULATION FLAWS:

Impulse Dielectric,

ATFC0311, 14 AWG and smaller, 5.0 kV (peak)

ATFD0311-16, 5.0 kV (peak)

ATFD0311-14, 6.0 kV (peak)

INSULATION RESISTANCE:

1000 kohms for 1000 ft. (305 kohms for 1 km) (minimum)

LOW TEMPERATURE-COLD BEND: -55 ± 3°C for 4 hours

SHRINKAGE: 0.050 inch (1.27 mm) (maximum)

STRIP FORCE: 4.5 lbs (2.04 kg) (minimum)

THERMAL STABILITY: Short Term, 200 ± 3°C for 168 hours

Elongation Retention, 80% (minimum)

Tensile Strength Retention, 80% (minimum)

TRANSMISSION FLUID RESISTANCE: Dexron VI, 150 ± 2°C for 720 hours

Diameter Swell, 5% (maximum)

Mandrel Wrap, 1x diameter mandrel, no dielectric breakdown

Dynamic Cut-Through, see Table II

VOLTAGE WITHSTAND (Post Environmental):

1000 volts (rms), 60 Hz, 1 minute

1/ PART NUMBER:

The "+" in the part number in the upper right hand corner of pages 1 and 2 shall be replaced with a letter designator to define conductor stranding (see part numbers in table).

C = 19 Strands D = 37 Strands

The "\*" in the part numbers in Tables I and II shall be replaced by a color code designator.

Example: AWG 20, 19 strands, dark blue: ATFC0311-20-6D

1/ See footer section on page 1



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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