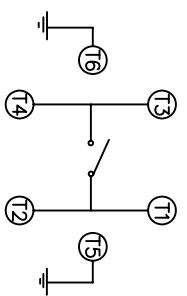
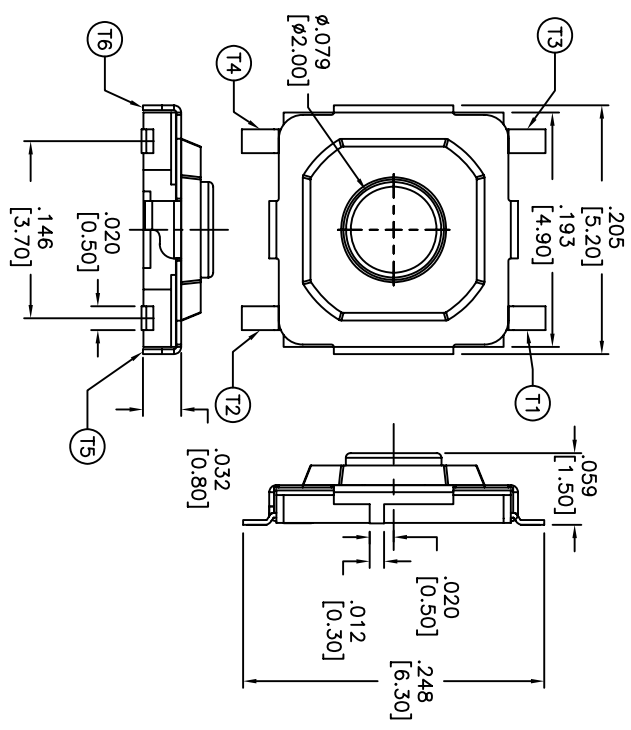
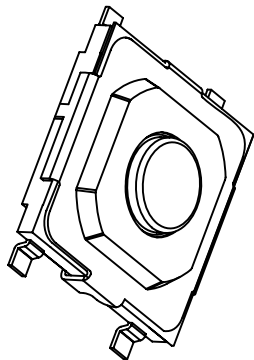
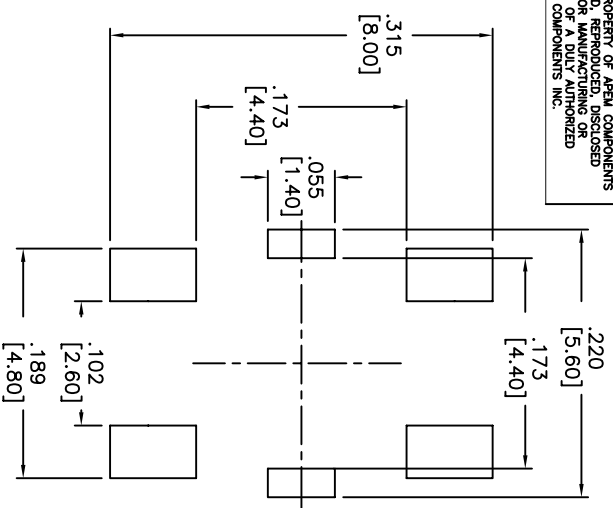


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ATMG53\*V\*  
 OPERATION FORCE: \_\_\_\_\_  
 3=160gf  
 4=260gf  
 PACKAGE STYLE:  
 T/R=TAPE AND REEL  
 LEAD FREE



CIRCUIT DIAGRAM

DATE	SYM	REVISION RECORD	DWN.	CK.
11/05	B	ECO# 495	CD	

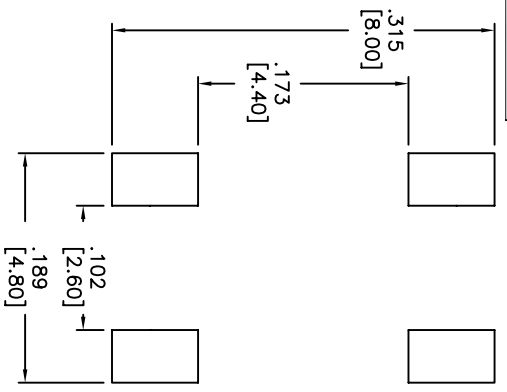
DESCRIPTION: MINIATURE MACHANICAL CONTACT SWITCH WITH SURFACE MOUNT TERMINALS AND GROUNDING TERMINALS.  
 SPECIFICATIONS:  
 STROKE: .010  $\pm$ .008 [0.25  $\pm$ 0.20]  
 OPERATION TEMPERATURE RANGE: -25°C TO +70°C  
 STORAGE TEMPERATURE RANGE: -30°C TO +80°C  
 VIBRATION TEST: PASSES METHOD 201A MIL-STD-202F.  
 SHOCK TEST: 50G PER METHOD 213B MIL-STD202F.  
 ELECTRICAL LIFE: 1,000,000 CYCLES MIN FOR 160gf. 200,000 CYCLES MIN FOR 260gf.  
 RATING: 50mA, 12VDC.  
 CONTACT RESISTANCE: 100mΩ MAX.  
 INSULATION RESISTANCE: 100MΩ MIN. AT 500VDC.  
 DIELECTRIC STRENGTH: 250VAC/1 MINUTE.  
 CONTACT ARRANGEMENT: 1POLE 1 THROW.  
 MATERIALS:  
 COVER: NICKEL SILVER.  
 BASE: HIGH-TEMP. THERMOPLASTIC.  
 COLOR: BLACK.  
 STEM: BRASS WITH NICKEL PLATING  
 CONTACT DISC: STAINLESS STEEL.  
 TERMINAL: BRASS WITH SILVER CLADDING.  
 TAPE: TEFLON  
 SOLDERING:  
 HAND SOLDERING: 30 WATT IRON AT 350°C FOR 5 SEC.  
 VAPOR & REFLOW: 255°C FOR 5 SEC. MAX.  
 NON-WASHABLE  
 LEAD FREE PROCESS COMPATIBLE  
 ROHS COMPLIANT

<b>APEN</b> APEN COMPONENTS, INC. 63 NACK RD. HERRING, MA 01839 TEL: 508-372-5554 FAX: 508-372-5554		DPN: CJD BR: PJD
DESIGNS: OPTICAL DIMENSION TOLERANCES (UNLESS OTHERWISE SPECIFIED) .XX = ±0.005 .XXX = ±0.004 .XXXX = ±0.002 ANGLE = 30.5°	SHEET 1 OF 1 SIZE B SCALE 10:1 THIRD ANGLE PROJECTION	TITLE <b>MECHANICAL CONTACT SWITCH</b>
DO NOT SCALE DIMENSIONS DATE: 08/15/05 DRAWING NO: ATMG53*V*		REV: B

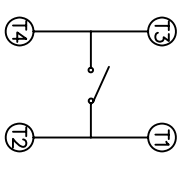
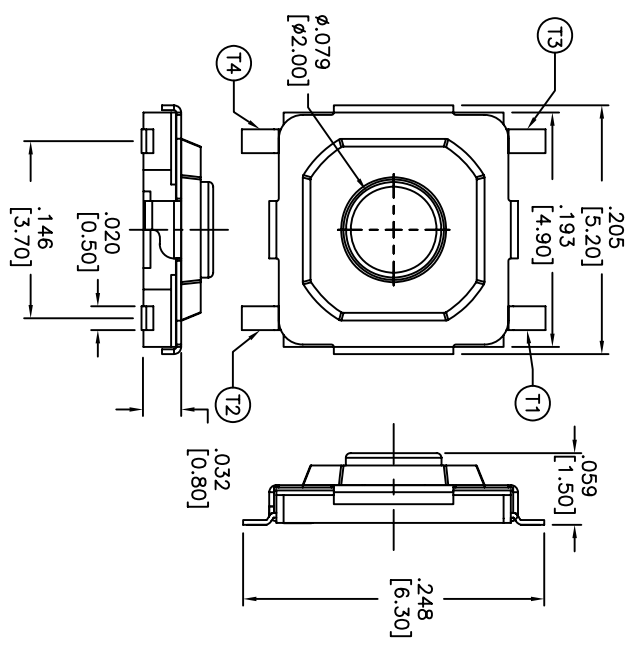
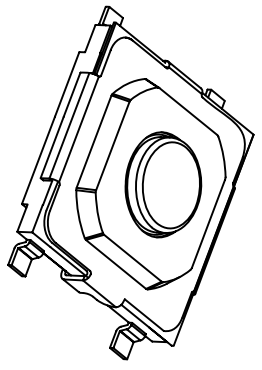
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OPERATION FORCE: ATM53\*V\*  
 2=100gf  
 3=160gf  
 4=260gf

PACKAGE STYLE:  
 T/R=TAPE AND REEL  
 LEAD FREE



P.C.B. LAYOUT



CIRCUIT DIAGRAM

DATE	SYM	REVISION RECORD	DWN.	CK.

DESCRIPTION: MINIATURE MECHANICAL CONTACT SWITCH SURFACE MOUNT TERMINALS.

SPECIFICATIONS:

STROKE: .010  $\pm$ .004  $\pm$ .006 [0.25  $\pm$ 0.10  $\pm$ 0.15]

OPERATION TEMPERATURE RANGE: -25°C TO +70°C

STORAGE TEMPERATURE RANGE: -30°C TO +80°C

VIBRATION TEST: PASSES METHOD 201A MIL-STD-202F.

SHOCK TEST: 50G PER METHOD 213B MIL-STD202F.

ELECTRICAL LIFE: 1,000,000 CYCLES MIN FOR 100gf, 16 200,000 CYCLES MIN FOR 260gf.

RATING: 50mA, 12VDC.

CONTACT RESISTANCE: 100mΩ MAX.

INSULATION RESISTANCE: 100MΩ MIN. AT 500VDC.

DIELECTRIC STRENGTH: 250VAC/1 MINUTE.

CONTACT ARRANGEMENT: 1POLE 1 THROW.

MATERIALS:

COVER: NICKEL SILVER.

BASE: HIGH-TEMP. THERMOPLASTIC.

COLOR: BLACK.

STEM: BRASS WITH NICKEL PLATING

CONTACT DISC: STAINLESS STEEL WITH SILVER PLATING.

TERMINAL: BRASS WITH SILVER CLADDING.

TAPE: TEFLON

SOLDERING:

HAND SOLDERING: 30 WATT IRON AT 350°C FOR 5 SEC VAPOR & REFLOW: 255°C FOR 5 SEC. MAX.

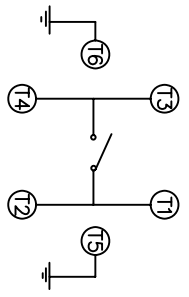
NON-WASHABLE

LEAD FREE PROCESS COMPATIBLE

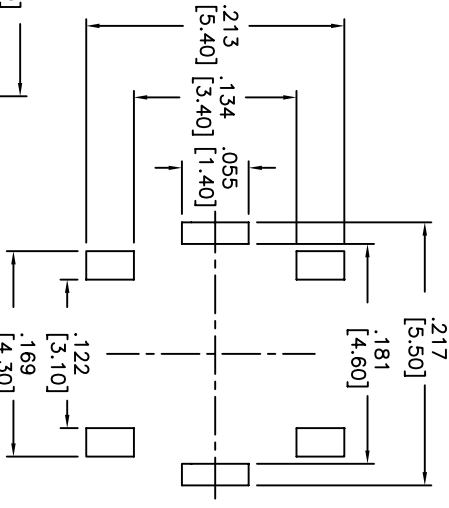
ROHS COMPLIANT

<b>Q.A. INSPECT:</b> 		<b>DESIGNER'S OPTICAL DIMENSION</b> <small>(DRAWN AS SHOWN)</small> .XX=±.02[0.05] .XXX=±.008[0.20] .XXXX=±.0008[0.02] ANGLE = 30.5°		 <b>APEM</b> <small>APERM COMPONENTS, INC.</small> 63 NACK RD. 01835 HARTFORD, CT 06183 TEL: 860-234-5554 FAX: 860-234-5554		DPN: CJD BR: PJD	
<b>TOLERANCES</b> <small>(DRAWN AS SHOWN)</small> .XX=±.02[0.05] .XXX=±.008[0.20] .XXXX=±.0008[0.02] ANGLE = 30.5°		<b>TITLE</b> MECHANICAL CONTACT SWITCH		SHEET 1 OF 1 SIZE B SCALE 10:1 THIRD ANGLE PROJECTION		DATE 4/26/06 DRAWING NO. ATM53*V* REV A	

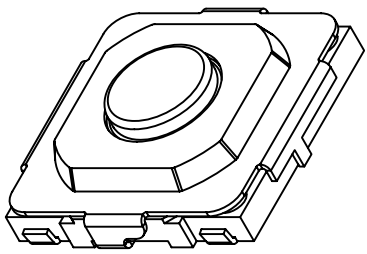
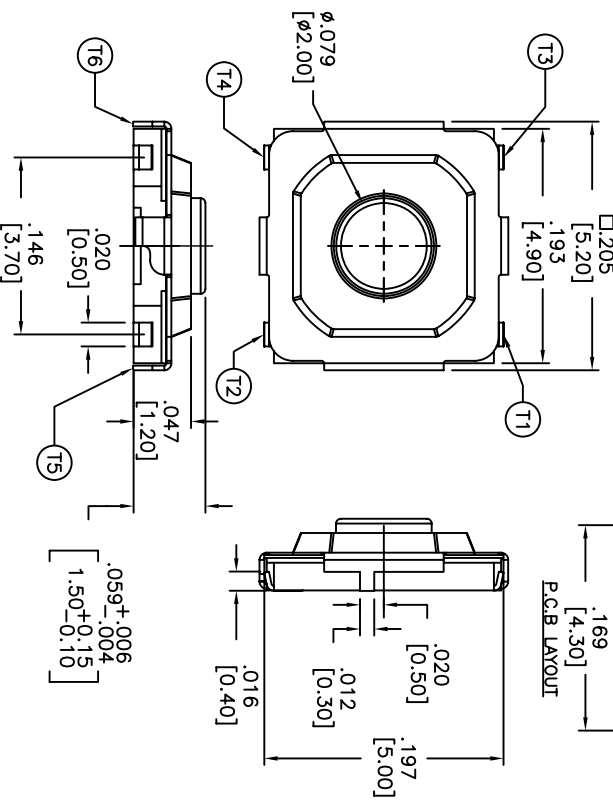
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CIRCUIT DIAGRAM



PCB LAYOUT



OPERATION FORCE: ATUG53\*\*V\* PACKAGE STYLE: T/R=TAPE AND REEL  
 3=160gf  
 4=260gf  
 LEAD FREE

DESCRIPTION: MINIATURE MECHANICAL CONTACT SWITCH WITH "S" TYPE SMT AND GROUNDING TERMINALS.

SPECIFICATIONS:

OPERATION TEMPERATURE RANGE: -25°C TO +70°C  
 STORAGE TEMPERATURE RANGE: -30°C TO +80°C  
 VIBRATION TEST: PASSES METHOD 201A  
 MIL-STD-202F.  
 SHOCK TEST: 50G PER METHOD 213B MIL-STD202F.  
 ELECTRICAL LIFE: 1,000,000 CYCLES MIN FOR 160gf.  
 200,000 CYCLES MIN FOR 260gf.

RATING: 50mA, 12VDC.  
 CONTACT RESISTANCE: 100mΩ MAX.  
 INSULATION RESISTANCE: 100MΩ MIN. AT 500VDC.  
 DIELECTRIC STRENGTH: 250VAC/1 MINUTE.  
 STROKE: 0.25 ±0.10mm  
 CONTACT ARRANGEMENT: 1POLE 1 THROW.

MATERIALS:

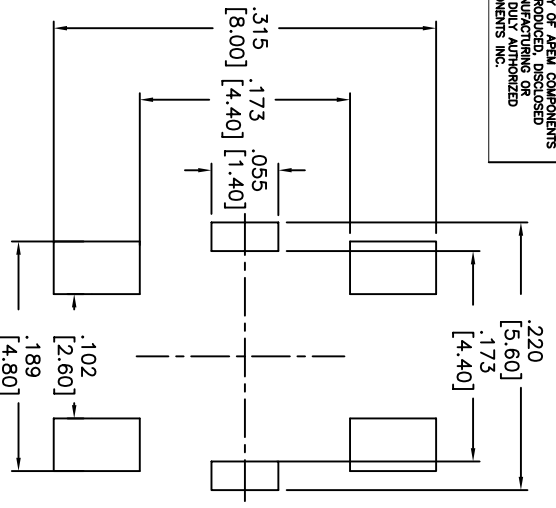
COVER: NICKEL SILVER.  
 BASE: HIGH-TEMP. THERMOPLASTIC.  
 COLOR: BLACK.  
 STEM: BRASS WITH NICKEL PLATING  
 CONTACT DISC: STAINLESS STEEL.  
 TERMINAL: BRASS WITH SILVER CLADDING.  
 TAPE: TEFLON

SOLDERING:  
 HAND SOLDERING: 30 WATT IRON AT 350°C FOR 5 SEC.  
 IR REFLOW: 225°C MAX.  
 LEAD FREE PROCESS COMPATIBLE  
 ROHS COMPLIANT

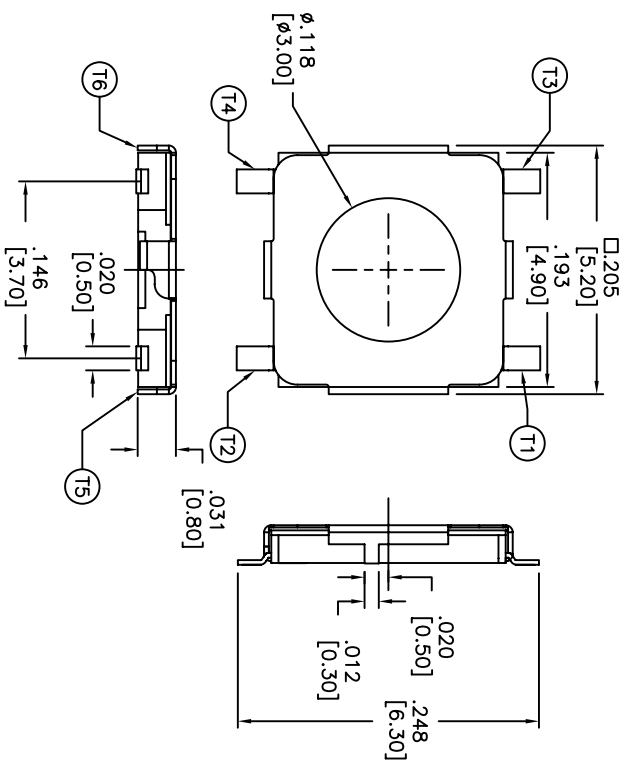
DATE	SYM	REVISION RECORD	DWN.	CK.

<b>Q.A. INSPECT:</b> 		<b>DESIGNER'S INITIAL:</b> DIMENSION		<b>DRN. CJD</b>	
<b>TOLERANCES (UNLESS OTHERWISE SPECIFIED)</b> .XX = ±0.005 .XXX = ±0.008 .XXXX = ±0.0008 ANGLE = 30.5°		<b>APM</b> 63 Neck Rd. Haverhill, MA 01830 Tel: 978-372-5554 Fax: 978-372-5554		<b>BR. BR.</b> <b>OK. PJD</b>	
<b>TITLE</b> MECHANICAL CONTACT SWITCH		<b>SHEET</b> 1 OF 1		<b>SCALE</b> 10:1	
<b>DATE</b> 8/11/05		<b>DRAWING NO.</b> ATUG53*V*		<b>REV</b> A	

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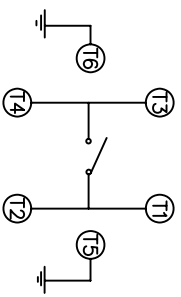
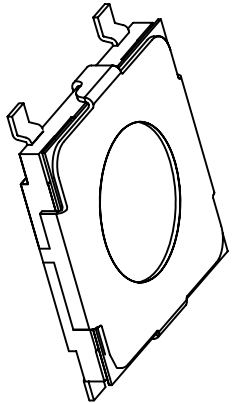


P.C.B. LAYOUT  
UNLESS OTHERWISE SPECIFIED  
ALL P.C. TOLERANCES ARE ±.002 [0.05]



OPERATION FORCE: ATMG52\*V\*  
2=100gf  
3=160gf  
4=260gf

PACKAGE STYLE:  
T/R=TAPE AND REEL  
LEAD FREE



CIRCUIT DIAGRAM

DESCRIPTION: MINIATURE MECHANICAL CONTACT SWITCH WITH SMT, AND GROUNDING TERMINALS.

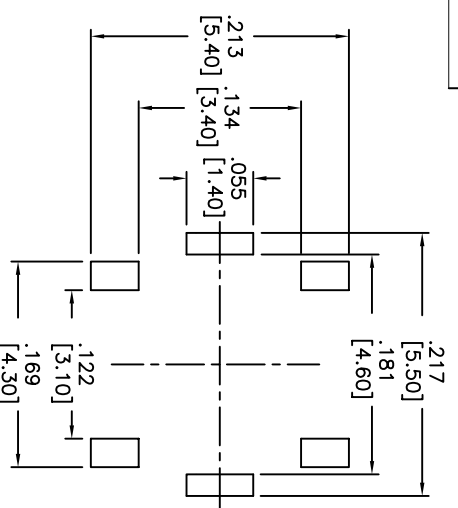
SPECIFICATIONS:  
OPERATION TEMPERATURE RANGE: -25°C TO +70°C  
STORAGE TEMPERATURE RANGE: -30°C TO +80°C  
VIBRATION TEST: PASSES METHOD 2014 MIL-STD-202F.  
STROKE: .010 ±.005 [0.25 ±.012]  
SHOCK TEST: 50G PER METHOD 213B MIL-STD202F.  
ELECTRICAL LIFE: 1,000,000 CYCLES MIN FOR 100gf AND 160gf.  
200,000 CYCLES MIN FOR 260gf.

RATING: 50mA, 12VDC.  
CONTACT RESISTANCE: 100mΩ MAX.  
INSULATION RESISTANCE: 100MΩ MIN. AT 500VDC.  
DIELECTRIC STRENGTH: 250VAC/1 MINUTE.  
CONTACT ARRANGEMENT: 1POLE 1 THROW.  
MATERIALS:  
COVER: NICKEL SILVER.  
BASE: HIGH-TEMP. THERMOPLASTIC.  
COLOR: BLACK.  
STEM: BRASS WITH NICKEL PLATING  
CONTACT DISC: STAINLESS STEEL WITH SILVER CLADDING.  
TERMINAL: BRASS WITH SILVER PLATING.  
TAPE: TEFLON  
SOLDERING:  
HAND SOLDERING: 30 WATT IRON AT 350°C FOR 5 SEC.  
IR REFLOW: 260°C MAX  
LEAD FREE PROCESS COMPATIBLE  
ROHS COMPLIANT

DATE	SYM	REVISION RECORD	DWN.	CK.

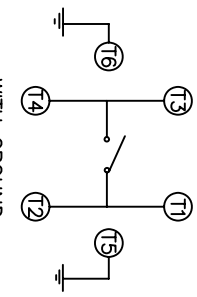
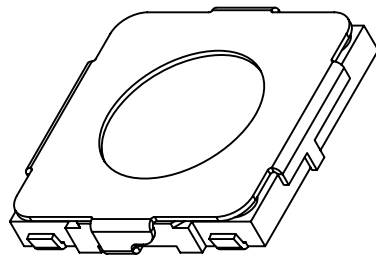
<b>Q.A. INSPECT:</b> 		<b>DESIGNATES CRITICAL DIMENSION</b>		<b>APM</b> <small>APM COMPONENTS INC.</small>		<b>63 NACK RD. 01835</b> <small>INDUSTRIAL PARK</small> <small>PO BOX 372-3554</small>		<b>PH. CJD</b> <small>BR. PJD</small>	
<b>TOLERANCES (UNLESS OTHERWISE SPECIFIED)</b> .XX = ±.02 [0.05] .XXX = ±.008 [0.20] .XXXX = ±.0008 [0.02]		<b>TITLE</b> MECHANICAL CONTACT SWITCH		<b>INCH</b> 1 OF 1		<b>SIZE</b> B		<b>SCALE</b> 10:1	
<b>ANGLE = 30.5°</b>		<b>DATE</b> 8/15/05		<b>DRAWING NO.</b> ATMG52*V*		<b>REV</b> A		<b>THIRD ANGLE PROJECTION</b>	

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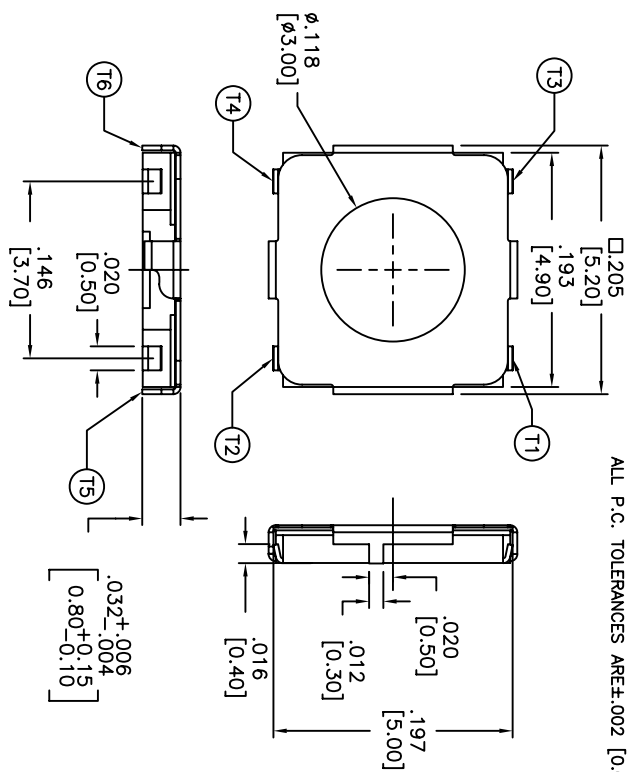


OPERATION FORCE: ATUG52\*\*V\*  
 2=100gf  
 3=160gf  
 4=260gf

PACKAGE STYLE:  
 T/R=TAPE AND REEL  
 LEAD FREE



WITH GROUND  
CIRCUIT DIAGRAM



P.C.B LAYOUT  
 UNLESS OTHERWISE SPECIFIED  
 ALL P.C. TOLERANCES ARE ±.002 [0.05]

DESCRIPTION: MINIATURE MECHANICAL CONTACT SWITCH WITH J TYPE SMT AND GROUNDING TERMINALS.

SPECIFICATIONS:  
 OPERATION TEMPERATURE RANGE: -25°C TO +70°C  
 STORAGE TEMPERATURE RANGE: -30°C TO +80°C  
 VIBRATION TEST: PASSES METHOD 201A MIL-STD-202F.  
 SHOCK TEST: 50G PER METHOD 213B MIL-STD202F.  
 ELECTRICAL LIFE: 1,000,000 CYCLES MIN FOR 100gf 160gf.  
 200,000 CYCLES MIN FOR 260gf.  
 RATING: 50mA, 12VDC.  
 CONTACT RESISTANCE: 100mΩ MAX.  
 INSULATION RESISTANCE: 100MΩ MIN. AT 500VDC.  
 DIELECTRIC STRENGTH: 250VAC/1 MINUTE.  
 STROKE: 0.25 ±0.08mm  
 CONTACT ARRANGEMENT: 1POLE 1 THROW.

MATERIALS:  
 COVER: NICKEL SILVER.  
 BASE: HIGH-TEMP. THERMOPLASTIC.  
 COLOR: BLACK.  
 STEM: BRASS WITH NICKEL PLATING  
 CONTACT DISC: STAINLESS STEEL WITH SILVER CLADDING.  
 TERMINAL: BRASS WITH SILVER PLATING.  
 TAPE: TEFLON

SOLDERING:  
 HAND SOLDERING: 30 WATT IRON AT 350°C FOR 5 SEC.  
 IR REFLOW: 260°C MAX.  
 LEAD FREE PROCESS COMPATIBLE  
 ROHS COMPLIANT

DATE	SYM	REVISION RECORD	DWN.	CK.

Q.A. INSPECT:		63 Nark. Rd. 01835		DRN.	CJD
DESIGNER'S INITIAL:		APEN		BR.	PJD
DIMENSION:		APEN CORPORATION, INC.		OR.	PJD
TOLERANCES (UNLESS OTHERWISE SPECIFIED):		FINDING: 372-3534		THIRD ANGLE PROJECTION	
.XX = ±.02 [0.05]		.XXX = ±.008 [0.20]			
.XXX = ±.008 [0.02]		.XXX = ±.008 [0.02]			
ANGLE = 30.5°					
DO NOT SCALE	DATE:	DRAWING NO.	REV		
	8/11/06	ATUG52**V*	A		



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

**Телефон:** 8 (812) 309 58 32 (многоканальный)

**Факс:** 8 (812) 320-02-42

**Электронная почта:** [org@eplast1.ru](mailto:org@eplast1.ru)

**Адрес:** 198099, г. Санкт-Петербург, ул. Калинина, дом 2, корпус 4, литера А.