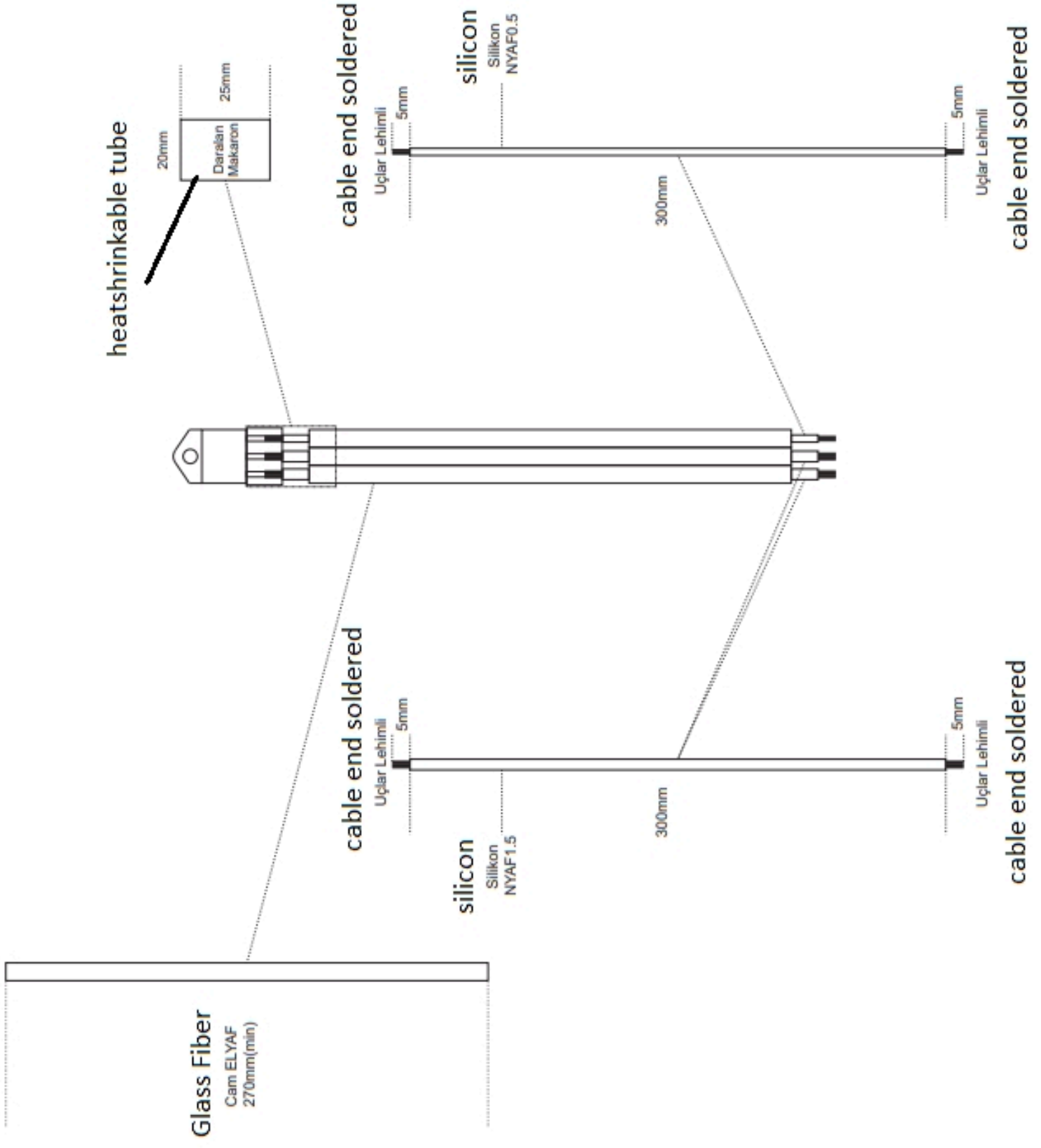
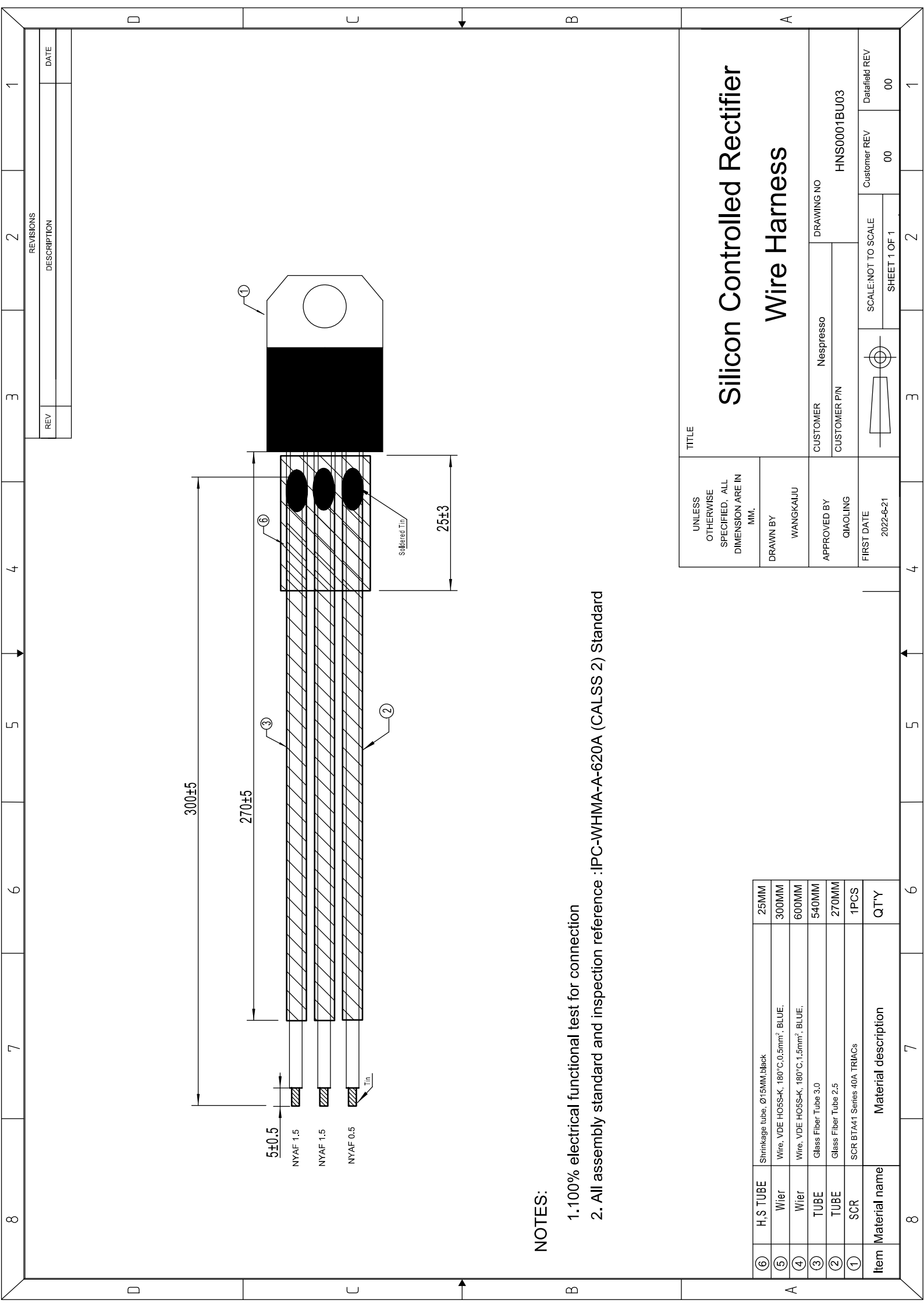


## Silicon Controlled Rectifie Wire Harness Spec

- 1 . Customer DWG ( 2 ) Page
- 2 . Vender DWG ( 3 ) Page
- 3 . SCR SPEC ( 4-7 ) Page
- 4 . Wire SPEC ( 8 ) Page
- 5 . Glass Fiber SPEC ( 9-13 ) Page 6
- . H.S TUBE SPEC ( 14-16 ) Page





**NOTES:**

- 1. 100% electrical functional test for connection
- 2. All assembly standard and inspection reference : IPC-WHMA-A-620A (CALSS 2) Standard

⑥	H, S TUBE	Shrinkage tube, Ø1.5MM,black	25MM
⑤	Wire	Wire, VDE HO5S-K, 180°C,0.5mm <sup>2</sup> , BLUE,	300MM
④	Wire	Wire, VDE HO5S-K, 180°C,1.5mm <sup>2</sup> , BLUE,	600MM
③	TUBE	Glass Fiber Tube 3,0	540MM
②	TUBE	Glass Fiber Tube 2,5	270MM
①	SCR	SCR BTA41 Series 40A TRIACs	1PCS
Item	Material name	Material description	QTY

UNLESS OTHERWISE SPECIFIED, ALL DIMENSION ARE IN MM.		TITLE	
DRAWN BY	WANGKALIU	Silicon Controlled Rectifier Wire Harness	
APPROVED BY	QIAOLING	CUSTOMER	Nespresso
FIRST DATE	2022-6-21	CUSTOMER P/N	HNS0001BU03
SCALE:NOT TO SCALE		DRAWING NO	
SHEET 1 OF 1		Customer REV	00
		Datafield REV	00

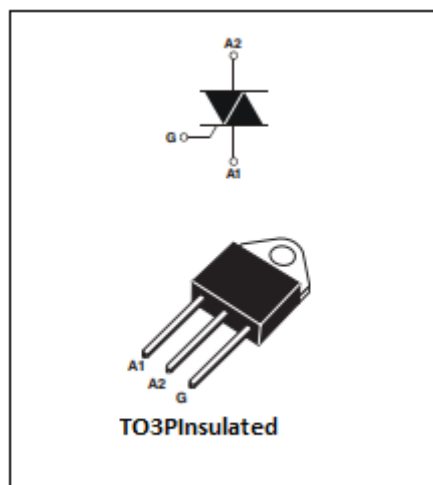
REVISIONS	
REV	DATE

**BTA41 Series 40A TRIACs**

Rev: 1.0

**DESCRIPTION:**

The BTA41 triac series is suitable to fit all models of control Found in applications such as motor control ,industrial and domestic lighting ,heating and static switching , motor speed controllers,...Thanks to their clip assembly technique, they provide a superior performance in surge current handling capabilities By using an internal ceramic pad, the BTA series provides voltage insulated tab (rated at 2500VRMS) complying with UL standards


**MAIN FEATURES**

Symbol	Value	Unit
$I_{T(RMS)}$	40	A
$V_{DRM}$ $V_{RRM}$	600/800	V
$V_{TM}$	1.55	V

**ABSOLUTE MAXIMUM RATINGS**

Parameter	Symbol	Value	Unit
Storage junction temperature range	$T_{stg}$	-40 ~150	°C
Operating junction temperature range	$T_j$	-40~125	°C
Repetitive peak off-state voltage (T =25°C)	$V_{DRM}$	600	V
Repetitive peak reverse voltage (T =25°C)	$V_{RRM}$	600	V
RMS on-state current	$I_{T(RMS)}$	40	A
Non repetitive surge peak on-state current (full cycle, F=50Hz)	$I_{TSM}$	400	A
$I^2t$ value for fusing (tp=10ms)	$I^2t$	880	A <sup>2</sup> S
Critical rate of rise of on-state current (I =2× $I_{GT}$ )	dI/dt	50	A/μS
Peak gate current	$I_{GM}$	8	A
Average gate power dissipation	$P_{G(AV)}$	1	W

**ELECTRICAL CHARACTERISTICS (T=25°C unless otherwise specified)**
**3 Quadrants**

Symbol	Test Condition	Quadrant		Value	Unit
$I_{GT}$	$V = 12V$ $R = 33\Omega$	I II III	MAX.	50	mA
$V_{GT}$		I II III	MAX.	1.3	V
$V_{GD}$	$V_D = V_{DRM}$ $T_j = 125^\circ C$ $R = 3.3K\Omega$	I II III	MIN.	0.2	V
$I_L$	$I_G = 1.2I_{GT}$	III III	MAX.	120	mA
$I_H$	$I_T = 100mA$		MAX.	60	mA
dV/dt	$V_D = 2/3V_{DRM}$ Gate Open $T_j = 125^\circ C$		MIN.	1000	V/ $\mu s$

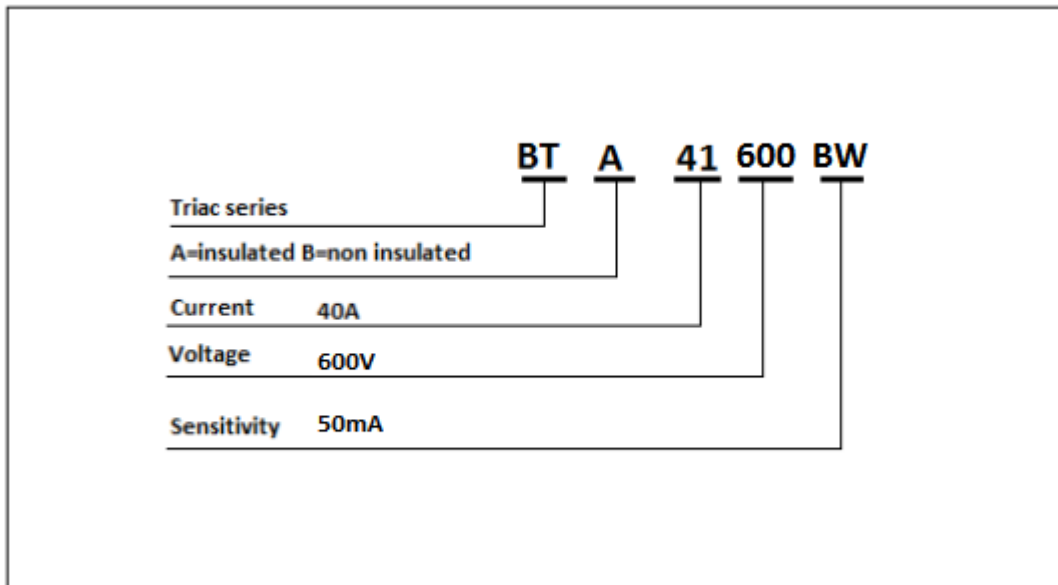
**STATIC CHARACTERISTICS**

Symbol	Parameter		Value(MAX.)	Unit
$V_{TM}$	$I_{TM} = 60A$ $t_p = 380\mu s$	$T_j = 25^\circ C$	1.55	V
$I_{DRM}$	$V_D = V_{DRM}$ $V_R = V_{RRM}$	$T_j = 25^\circ C$	10	$\mu A$
$I_{RRM}$		$T_j = 125^\circ C$	5	mA

**Thermal Resistances**

Symbol	Parameter	Value	Unit
Rth(j-a)	junction to ambient	50	$^\circ C/W$
Rth(j-c)	Junction to case	0.9	

**Ordering Information Scheme**



**TO-3P Package Mechanical Data**

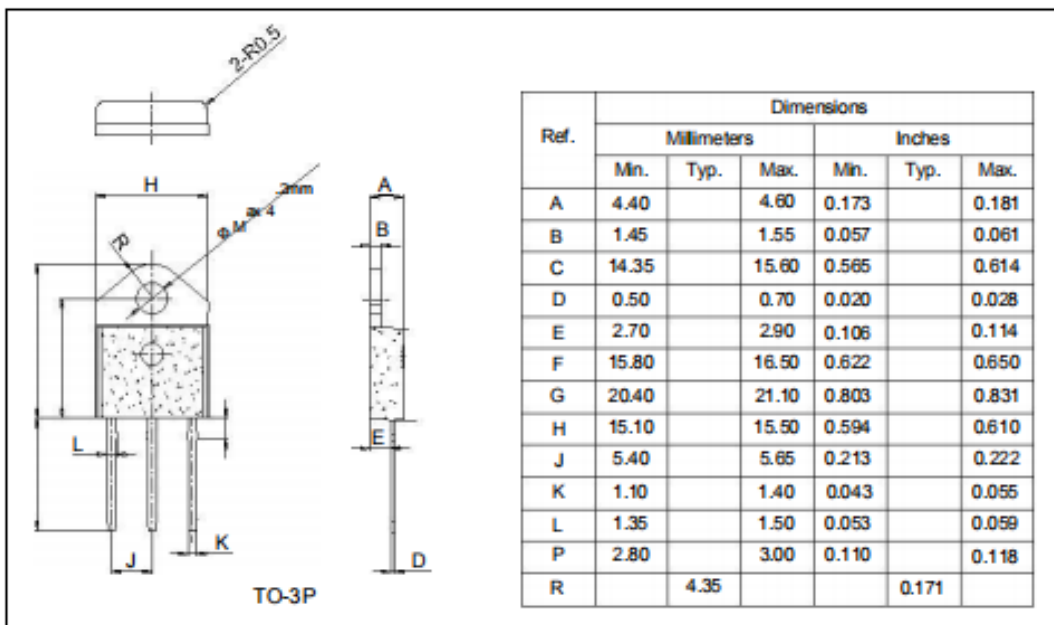


FIG.1 Maximum power dissipation versus RMS on-state current

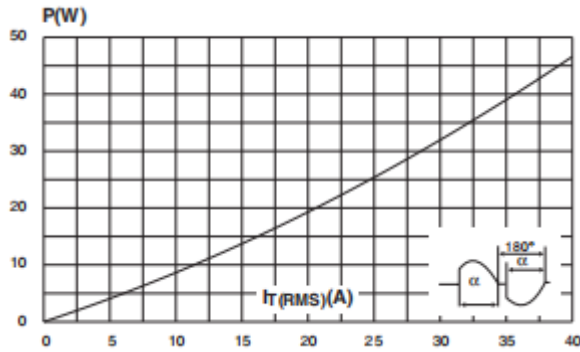


FIG.2: RMS on-state current versus case temperature

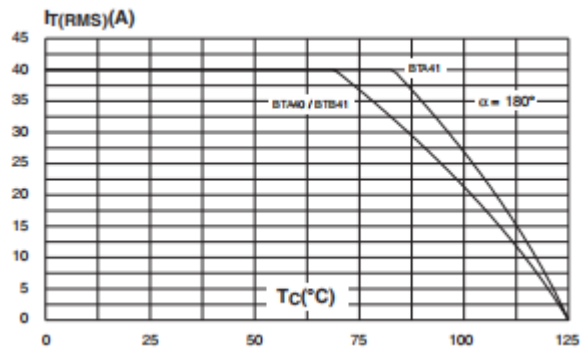


FIG.3: Surge peak on-state current versus number of cycles

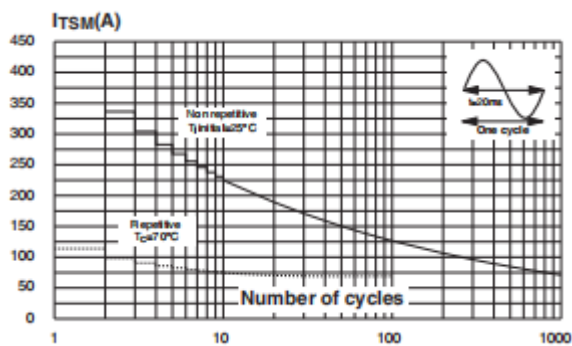


FIG.4: On-state characteristics (maximum values)

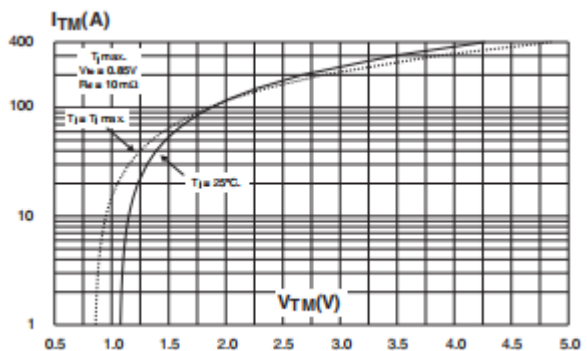


FIG.5: Non-repetitive surge peak on-state current for a sinusoidal pulse with width  $t_p < 20ms$ , and corresponding value of  $I^2 t$  ( $di/dt < 50A/\mu s$ )

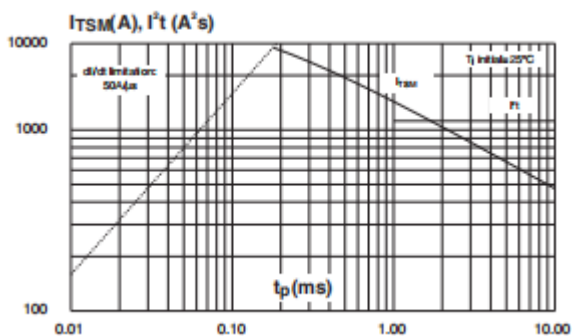
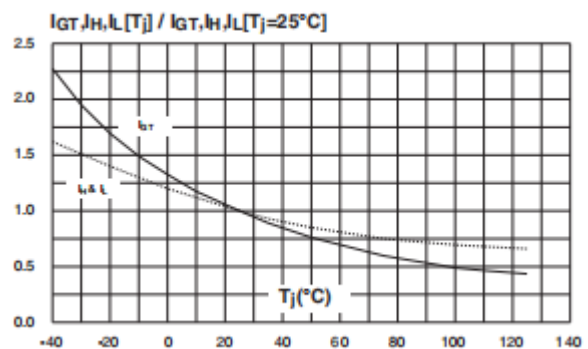
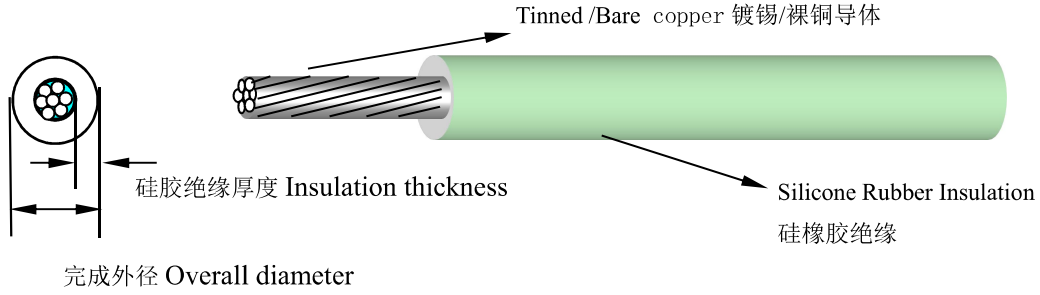


FIG.6: Relative variations of gate trigger current holding current and latching current versus junction temperature



# 硅橡胶高温电子线 H05S-K



## 1. 说明 Description:

额定温度 Rated temperature: 180°C

额定电压 Rated Voltage: 300/500V

绝缘体 Insulation: 硅橡胶绝缘 (Silicone Rubber Insulation)

导体 Conductor: 镀锡铜线 0.5~2.5mm<sup>2</sup> (Tinned/Bare copper 0.5~2.5mm<sup>2</sup>)

标准 Standard: VDE DIN0282-3

标志 Marking: <VDE >H05S-K 1\*0.5~2.5mm<sup>2</sup> 180°C 300V~500V SILICONE RUBBER Nr. 40044738 ZHONGSHAN DINGXIANG

## 2. 应用 Application:

一般商用电子、电子电器及设备仪器内部连接线、电机变压器和灯具引出线等环境温度不超过 180°C 场合。  
For general purchase internal wiring of appliances and electronic equipments lead wires of motors and lamps where exposed to temperatures not Exceeding 180°C.

## 3. 订货资料 Order Reference:

可选颜色: 黑、白、红、黄、绿、蓝、棕、黄/绿,特殊颜色可定制;

Colors available: Black、white、red、yellow、green、blue、yellow/green, special color can be order;

规格选择: 参照表格, 特殊规格可定制。Specification available: Reference to specification table, special Specification also can be ordered.

型号 Type	规格 Mm <sup>2</sup>	导体结构 Conductor size (No./mm) ±0.005mm	导体电阻 Conductor resistance 20°C (Ω /Km)	导体外径 Conductor Dia.(mm)	绝缘厚度 Insulation thickness (mm)	编织厚度	完成外径 Overall diameter (mm)		包装 m/roll
							Average	Tolerance	
H05S-K	0.50	20/0.18	40.10	0.93	0.60	/	2.15	±0.10	305
	0.50	0.813	4.10	0.93	0.60	/	2.15	±0.10	305
	0.75	30/0.18	26.70	1.14	0.60	/	2.30	±0.10	305
	1.00	40/0.18	20.00	1.30	0.60	/	2.60	±0.10	305
	1.25	50/0.18	14.60	1.47	0.60	/	2.70	±0.10	305
	1.50	30/0.25	13.70	1.60	0.60	/	2.80	±0.15	305
	2.00	41/0.254	8.96	1.90	0.60	/	3.10	±0.15	305
	2.50	50/0.25	8.21	2.00	0.60	/	3.60	±0.15	305



## 一、性能参数(Specification)

项目 Item	参数	检测方法
额定温度	200℃	UL1441
额定电压	600V	UL1441
热老化 AgingTest	265℃ ± 2℃, 168h ≥ 1/2 原电 压值 Original Voltage	UL1441
冷弯曲 ColdBend	-10℃ 1H 无裂纹	UL1441
燃烧等级	VW-1	UL1441
体积电阻率(Ω.cm) Volume Resistivity	≥ 10 <sup>11</sup>	UL1441
水解稳定性 Submerge Water Test	不发粘, 不变形, 不软化	UL1441

型号 Type	颜色 Colour	测试条件 Testing Condition	平均电 (伏) AverageVoltage(v)	个别值 (伏) Individual Value(V)	UL 认证号 UL Approval No.	等级
SGS-15	白色	UL1441	1500V	1000V	E233804	D
SRS-15	颜色	UL1441	1500V	1000V	E233803	D

电压测试方法:用一铁轴穿入纤维管中,纤维管表面覆盖导电锡箔纸,高压一端连接铁轴,一端连接锡箔纸,施加电压从 0 以 500V/S 速度直到击穿。Voltage test method: insert an steel stick into the fiberglass sleeving. The surface of the sleeving is covered with conductive tin foil. One end of the high voltage is connected with the stick and one end is connected with tin foil. Apply the voltage from 0 at the speed of 500V / s to breakdown.

## 二、成品尺寸规格 (Sleeving Standard Sizes)

规格 Size	内径公差 Tolerance	壁厚 ( T ) Wall thickness	包装长度 (米/盘)
		D 级 SGS-15/SRS-15	
2.5mm	+0.25mm-0.00mm	0.35±0.05mm	100
3.0mm	+0.25mm-0.00mm	0.35±0.05mm	100

内径测试工具:塞规(通止规), 壁厚测试工具:螺旋测微器(千分尺)  
ID Test Tool: Gauge (Go no go gauge), Wall Thickness Test Tool: Spiral Micrometer (Micrometer)

### 备注(Remark):

1、标准颜色为白色, 可接受其他颜色订货;

(Standard color is white, special colors are available on request)

2、可接受特殊规格产品订单;

(Other sizes are available upon special order)

3、颜色内外壁有色差, 不影响性能;

(There are some differences of colors inside of the sleeving, which has no affection to the performance.)

4、套管涂层是涂覆工艺, 壁厚允许超过上限, 不允许低于下限;

(The process of the sleeving is coating, upper limit wall thickness is permitted, lower limit wall thickness is NOT permitted)

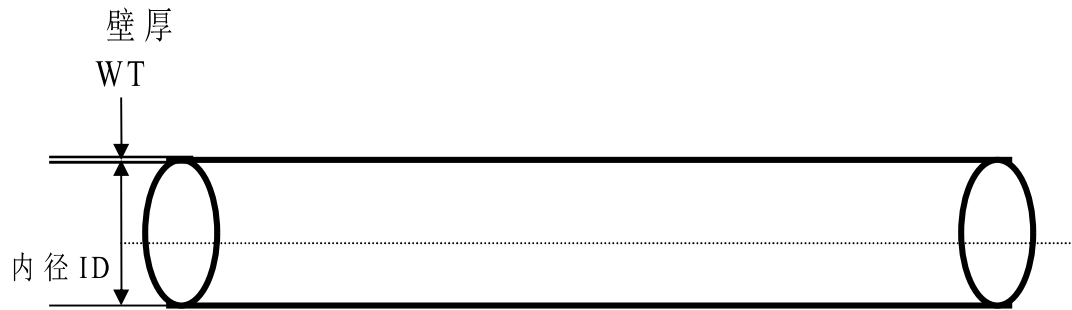
5、不同厂商的绝缘漆可能不兼容, 请注意测试后使用;

(The alcoholic varnish from different suppliers may not be same incompatible performance with sleeving., please use it before test.)

6、对抗张强度有特殊要求的应用, 推荐选用电机专用套管.

(For applications with special requirements on tensile strength, it is recommended to select Special Sleeving for Motor and Transformer.)

### 三、套管工程图 (Engineering Picture of Sleeving)



备注： (Remark)：

1、UL 认证号 (UL Approval No)

E233803/E233804

单位 (Unit)：  
毫米 (mm)

日期 (Date)：  
2022-06-21

名称 (Name)：  
硅树脂玻璃纤维套管

图号 (No.)：  
W2022062101

#### 四、材质说明(Material description)

硅树脂玻璃纤维套管，是由无碱玻璃纤维纱编织成管后，涂以硅树脂高温处理而成。具有良好的介电性、自熄性和柔软性,广泛应用于 H&N 级汽车造船、电机、家用电器、电热设备、特种灯具、电视及电子仪器的内部线集束等绝缘保护。

Silicone Fiberglass Sleeving is braided into tubes with non-alkali fiberglass, and then painted with silicone through high temperature. It has such features as excellent dielectric, self extinguish and flexibility. It is widely used in insulating protection of H&N Grade automobile, marine, electrical machinery, home appliance, electric & heat equipment, special lighting and internal wires bunching of TV and electronic equipment, etc.

原材料名称(Raw material)			使用目的 The purpose of use
中文	ENGLISH	分子式	
玻璃纤维纱	fiberglass	$\text{SiO}_2 + \text{Al}_2\text{O}_3 + \text{CaO}$	绝缘耐温 Insulation & resistance temperature
硅树脂	Silicone	$(\text{SiO}_2)_n$	绝缘耐压 Insulation & resistance voltage

## 五、外观检验标准 (Tests standard)

疵点名称 Flaw	检验标准 TestStandard	判定 determinant
异色/污渍 Heterochromatic	块状 Lump $\geq$ (长L*宽W*高H) 3mm*3mm*3mm/个 ea 记一处 count 1, 100m 允许 1 个 Permit one 100m each; <3mm*3mm*3mm 的尺寸不计入不良数。Dimensions less than 3mm * 3mm * 3mm are not counted in the number of defects.	合格 Qualified
气泡 Bubble	肉眼能看得出的气泡, 最大允许气泡 $\geq$ (长*宽*高) 3mm*3mm*3mm/个, 100m 允许 1 个; <3mm*3mm*3mm 的尺寸不计入不良数。For bubbles visible to the naked eye, the maximum allowable bubbles are $\geq$ (length * width * height) 3mm * 3mm * 3mm / ea, and 1 bubble is allowed for 100m; The size of 3mm * 3mm * 3mm is not counted in the number of defects.	合格 Qualified
漆块/杂质 Paint Piece	凸出漆管壁厚 (长*宽*高) 3mm*3mm*3mm/个, 100mm 允许 1 个; <3mm*3mm*3mm 的尺寸不计入不良数。The size of protruding coating (length * width * height) isn't bigger than 3mm * 3mm*3mm / piece, and 1 piece is allowed for 100mm. The size of 3mm * 3mm * 3mm is not counted in the number of defects.	合格 Qualified
毛刺 Burr	肉眼能看得出的毛刺, 最大允许毛刺 (长*宽*高) 3mm*3mm*3mm, 100mm 允许 1 个; <3mm*3mm*3mm 的尺寸不计入不良数。毛刺不影响电气性能。For the burr visible to the naked eye, the maximum allowable burr (length * width * height) is 3mm * 3mm * 3mm, and one burr is allowed for 100mm The size of 3mm * 3mm * 3mm is not included in the number of defects. Burrs do not affect electrical performance	合格 Qualified
长度 Length	1. 绕管长度 Roll Lenth: 100m+1m/-0m; 50m+0.5m/-0m, 30m+0.5m/-0m; 2. 短管 Cutting Length: 6mm-50mm $\pm$ 1.5mm; 51mm-100mm $\pm$ 2mm; 101mm-200mm $\pm$ 3mm; 201-250mm $\pm$ 4mm; 251-500mm $\pm$ 5mm ; 501-1000mm $\pm$ 8mm ; 1000-2000mm $\pm$ 20mm;	合格 Qualified

## 六. 接头个数见下表(Contact number as shown in the table below):

长度(Length)	拼接数不多于(Contact number not more than)
100M	5
50M	4
30M	3
25M	3

## W-1-H

### Zero halogen,flexible Heat shrink tubing

#### Features

- 1.Flexible
- 2.Zero halogen
- 3.Flame retardant
- 4.Low smoke generation if burning
- 5.Continuous Operating Temperature:-45°Cto125°C
- 6.Shrink Temperature:120°C
- 7.RoHS and Sony compliant



#### Dimensions

Size		As supplied	After Recovery(mm)		Standard Package
Inch	mm	Internal diameter(mm)	Internal diameter Max(mm)	Wall thickness Nom(mm)	Spool Length m/spool
3/64	0.8	1.1±0.2	0.50	0.22	200
1/16	1.0	1.5±0.2	0.65	0.28	200
	1.5	2.0±0.2	0.85	0.32	200
3/32	2.0	2.5±0.2	1.00	0.35	200
	2.5	3.0±0.2	1.30	0.38	200
1/8	3.0	3.5±0.2	1.50	0.40	200
	3.5	4.0±0.2	1.80	0.42	200
3/16	4.0	4.5±0.2	2.00	0.45	200
	4.5	5.0±0.2	2.30	0.50	200
1/4	5.0	5.5±0.2	2.5	0.55	100
	6.0	6.5±0.2	3.0	0.55	100
5/16	7.0	7.5±0.3	3.5	0.55	100
	8.0	8.5±0.3	4.0	0.60	100
3/8	9.0	9.5±0.3	4.5	0.60	100
	10.0	10.5±0.3	5.0	0.60	100
1/2	11.0	11.5±0.3	5.5	0.60	100
	12.0	12.5±0.3	6.0	0.60	100
	13.0	13.5±0.3	6.5	0.65	100
	14.0	14.5±0.3	7.0	0.65	100

5/8	15.0	15.5±0.4	7.5	0.70	100
	16.0	16.5±0.4	8.0	0.70	100
	17.0	17.5±0.4	8.5	0.70	100
3/4	18.0	19.0±0.5	9.0	0.80	100
	20.0	21.0±0.5	10.0	0.80	100
	22.0	23.0±0.5	11.0	0.80	100
1	25.0	26.0±0.5	12.5	0.90	50
	28.0	29.0±0.5	14.0	0.90	50
1-1/4	30.0	31.5±1.0	15.0	0.95	50
	35.0	36.5±1.0	17.5	1.00	50
1-1/2	40.0	41.5±1.0	20.0	1.00	50
	45.0	46.5±1.0	22.5	1.00	25
2	50.0	≥50	25.0	1.00	25
	60.0	≥60	31.0	1.30	25
	70.0	≥70	36.0	1.30	25
3	80.0	≥80	41.0	1.46	25
	90.0	≥90	46.0	1.46	25
4	100.0	≥100	51.0	1.46	25
5	120.0	≥120	61.0	1.56	25
6	150.0	≥150	76.0	1.56	25
7	180.0	≥180	91.0	1.56	25

#### Technical Data: Physical

Property	Test Method	Typical Performance
Tensile Strength(Mpa)	ASTM D2671	10.4MPa
Elongation(%)	ASTM D2671	200%
Tensile Strength after Heat aging	UL224 158°C X168hrs	≥7.3
Elongation after aging(%)	UL224 158°C X168hrs	≥100
Heat shock	UL224 225°C X4hrs	No dripping No cracking

#### Electrical

Property	Test Method	Typical Performance
Dielectric Strength	IEC 243	≥15kv/mm
Volume Resistivity	IEC 93	≥1×10 <sup>14</sup> Ω·cm

#### Chemical

Property	Test Method	Typical Performance
----------	-------------	---------------------

Corrosion Action	UL224 158°C X168hrs	PASS
Copper Compatibility	UL224 158°C X168hrs	PASS