



E9\*10R06/02\*23877\*00

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Comunicación sobre/ *Communication concerning the:*

- homologación/ *approval granted*
- ~~extensión de una homologación/ *approval extended*~~
- ~~denegación de una homologación/ *approval refused*~~
- ~~retirada de una homologación/ *approval withdrawn*~~
- ~~cese definitivo de homologación/ *production definitely discontinued*~~

de un tipo de subconjunto ~~eléctrico/ electrónico~~ en aplicación del Reglamento nº 10/ *of a type of ~~electrical/ electronic sub-assembly with regard to ECE Regulation No. 10~~*

Nº de homologación/ *Type-approval N°:* E9\*10R06/02\*23877\*00

Nº de extensión/ *Extension No.:* --

#### SECCION I/ *SECTION I*

1. Marca (razón social)/ *Make (trade name of manufacturer):*  
BORY AUTO LIGHT
2. Tipo y denominación(es) comercial (es)/ *Type and general commercial description(s):*  
Tipo / *Type:* BR1003 Series  
Variantes / *Variants:* Ver documentación aportada/ *See technical documentation*  
Denominación comercial / *Commercial description:* LED interior light
3. Medio de identificación del tipo, si está marcado en el ~~vehículo~~, el componente o la ~~unidad técnica independiente~~  
*Means of identification of type, if marked on the ~~vehicle~~, component or ~~separate technical unit~~*: Ver documentación aportada/ *See technical documentation*
- 3.1. Emplazamiento de estas marcas/ *Location of that marking:* Ver documentación aportada/ *See technical documentation*
4. Categoría de vehículo/ *Category of vehicle:* --
5. Nombre y dirección del fabricante/ *Name and address of manufacturer:*  
Guangzhou Bory Auto Light Co., Ltd.  
4/F, Building 8, No.2 Ke'er Road (Self compiled), Dongyong Town, Nansha District, Guangzhou, Guangdong 511443, China.
6. Emplazamiento y forma de colocación de la marca de homologación CEE en componentes y unidades técnicas independientes/ *In the case of components and separate technical units, location and method of affixing of the approval mark:* Ver documentación aportada/ *See technical documentation*
7. Dirección(es) de la(s) planta(s) de montaje/ *Address(es) of assembly plant(s):*  
Guangzhou Bory Auto Light Co., Ltd.  
4/F, Building 8, No.2 Ke'er Road (Self compiled), Dongyong Town, Nansha District, Guangzhou, Guangdong 511443, China.



8. Información complementaria (si procede)/ *Additional information (where applicable)*: Véase el apéndice/ *See appendix*
9. Servicio técnico encargado de la realización de los ensayos/ *Technical service responsible for carrying out the tests*: IDIADA
10. Fecha del acta de ensayo/ *Date of test report*: 08/10/2023
11. Número del acta de ensayo/ *Number of test report*: CN23090746
12. Observaciones (si las hubiera) / *Remarks (if any)*: Véase el apéndice/ *See appendix*
13. Lugar/ *Place*: MADRID
14. Fecha/ *Date*: Ver firma electrónica/ *See electronic signature*
15. Firma/ *Signature*:  
  
SUBDIRECTOR GENERAL DE CALIDAD Y SEGURIDAD INDUSTRIAL  
Resolución P.D. del DIRECTOR GENERAL DE INDUSTRIA Y DE LA PYME de 25-10-2012
16. Se adjunta el índice del expediente de homologación en posesión de las autoridades competentes, la cual puede obtenerse a petición del interesado/ *The index to the information package lodged with the approval authority, which may be obtained on request is attached*
17. Motivos de extensión/ *Reasons for extension*: --



**Apéndice del certificado de homologación N° / *Appendix to Type-approval communication form No.***

**E9\*10R06/02\*23877\*00**

**relativo a la homologación de subconjuntos eléctricos o electrónicos en lo que se refiere al Reglamento N°10/  
*concerning the type-approval of an electrical/electronic sub-assembly under Regulation N° 10***

1. Información adicional/ *Additional information (where applicable):*
  - 1.1. Tensión nominal del sistema eléctrico/ *Electrical system rated voltage: Ver documentación aportada/ See technical documentation*
  - 1.2. Este SEE puede utilizarse en todos los vehículos con las siguientes restricciones/ *This ESA can be used on any vehicle type with the following restrictions: Ver documentación aportada/ See technical documentation*
    - 1.2.1. Condiciones de instalación, si las hubiera/ *Installation conditions, if any: Ver documentación aportada/ See technical documentation*
  - 1.3. Este SEE sólo puede utilizarse en los tipos de vehículo siguientes/ *This ESA can only be used on the following vehicle types: ---*
    - 1.3.1. Condiciones de instalación si las hubiera/ *Installation conditions, if any: ---*
  - 1.4. El método o métodos específicos de ensayo utilizados y los márgenes de frecuencias abarcados para determinar la inmunidad han sido/ *The specific test method(s) used and the frequency ranges covered to determine immunity were: 20-2000MHz*
  - 1.5. Laboratorio acreditado según ISO 17025 y reconocido por el organismo homologador responsable de realizar los ensayos/ *Laboratory accredited to ISO 17025 and recognized by the Approval Authority responsible for carrying out the tests: IDIADA or LGAI*
2. Observaciones/ *Remarks (if any): ---*

**INFORME/ REPORT N° CN23090746****REGLAMENTO UN N° 10R06/02 REFERENTE A LA COMPATIBILIDAD ELECTROMAGNÉTICA  
UN REGULATION No. 10R06/02 RELATING ELECTROMAGNETIC COMPATIBILITY****INFORMACIÓN GENERAL/  
GENERAL INFORMATION**

<b>Solicitante/ Applicant</b>	: Guangzhou Bory Auto Light Co., Ltd.
<b>Fabricante/ Manufacturer</b>	: Guangzhou Bory Auto Light Co., Ltd. 4/F, Building 8, No.2 Ke'er Road (Self compiled), Dongyong Town, Nansha District, Guangzhou, Guangdong 511443, China.
<b>Marca/ Make</b>	: BORY AUTO LIGHT
<b>Tipo/ Type</b>	: BR1003 Series
<b>Denominación comercial/ Commercial description</b>	: LED interior light
<b>Categoría/ Category</b>	: Sistemas y componentes/ Systems and components
<b>Lugar y fecha de emisión del informe/ Place and date of report issue</b>	: L'Albornar, Santa Oliva (Tarragona), 08/10/2023

**CONCLUSIONES:** Este a componente/~~unidad técnica independiente~~ **CUMPLE** con las prescripciones sobre compatibilidad electromagnética relativo al REGLAMENTO UN N° 10R06/02, como se detalla en el anexo a este informe.

**CONCLUSIONS:** This component/~~separate technical unit~~ **FULFILLS** the prescriptions about electromagnetic compatibility, in application to UN REGULATION 10R06/02, as detailed in the annex to this report.

Realizado / Performed by

V. B°./ Revised by:

\* LOS RESULTADOS PRESENTADOS SE REFIEREN ÚNICAMENTE A LA MUESTRA ENSAYADA.  
THE PRESENTED RESULTS REFER ONLY TO THE TESTED SAMPLE.

\* QUEDA TERMINANTEMENTE PROHIBIDA LA REPRODUCCIÓN PARCIAL DE ESTE INFORME SIN PERMISO EXPRESO DE IDIADA.  
THE PARTIAL REPRODUCTION OF THIS REPORT WITHOUT THE PERMISSION OF IDIADA IS COMPLETELY FORBIDDEN.

\* EL LABORATORIO HA CALCULADO LA INCERTIDUMBRE DE MEDIDA ASOCIADA A LOS RESULTADOS.  
MEASUREMENT UNCERTAINTY OF THE RESULTS HAS BEEN CALCULATED BY THE LABORATORY.



ANEXO AL INFORME

ANNEX TO THE REPORT

1. CARACTERISTICAS DEL SUBCONJUNTO ELECTRICO-ELECTRONICO/  
ELECTRICAL-ELECTRONIC SUB-ASSEMBLY CHARACTERISTICS

Marca/ *Make*<sup>(1)</sup> : BORY AUTO LIGHT  
 Tipo/ *Type*<sup>(1)</sup> : BR1003 Series  
 Variantes / *Variants*: : See technical documentation  
 Denominación comercial/  
*Commercial description*<sup>(1)</sup> : LED interior light  
 Categoría/ *Category* : Sistemas y componentes/ *Systems and components*  
 Muestra de ensayo/ *Test Sample* : BR10030301

<sup>(1)</sup> Información proporcionada por el cliente. El laboratorio no se hace responsable de dicha información /  
*Information provided by the client. The laboratory is not responsible for such information*

Sample	Reference	Description	Sample Id. No.
#1	12V/24V	BR10030301	Q2309075-002

Equipo auxiliar/ *Auxiliary equipment* :

Sample	Reference	Description	Sample Id. No.
#1	NA	NA	NA

Fecha de recepción de la muestra/  
*Test sample reception date* : 20/09/2023

Fecha inicial de los ensayos/  
*Test initial date* : 28/09/2023

Fecha final de los ensayos/  
*Test final date* : 28/09/2023

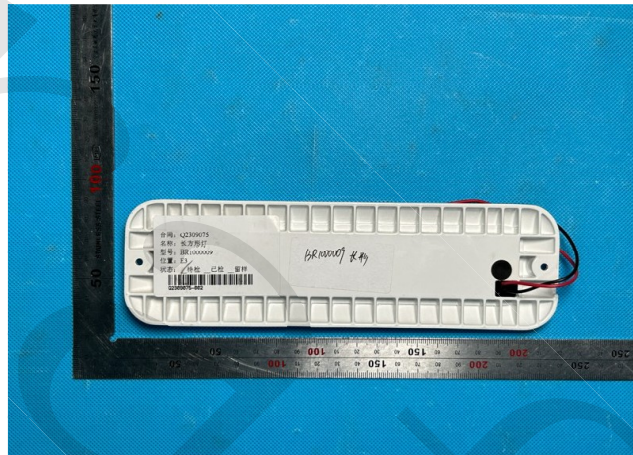
Lugar de los ensayos/ *Test site*: : SQT, Guanzhou(China)

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 \* LA REGLA DE DECISIÓN UTILIZADA, SEGÚN LA NORMA ILAC-G8, HA SIDO LA DECLARACIÓN BINARIA DE ACEPTACIÓN SIMPLE  
*THE DECISION RULE USED, ACCORDING TO THE ILAC-G8 STANDARD, WAS THE BINARY STATEMENT FOR SIMPLE ACCEPTANCE*

Fotos/ Photos:



(Foto de la muestra/ Sample photo)



(Foto de la etiqueta de identificación/ Label identification photo)

Alimentación/ Power supply : DC 12V/24V

Relacionado con funciones de inmunidad/  
Related to immunity functions : Si-~~No~~/ Yes-~~No~~

Modos de funcionamiento/ Operation modes :

Operation Mode	Description
OM#1	Normal operation

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2. ENSAYOS EN CONFIGURACIONES DISTINTAS DE LA DE «MODO DE CARGA DEL REESS ACOPLADO A LA RED ELÉCTRICA»/ TESTS IN CONFIGURATIONS OTHER THAN “REESS CHARGING MODE COUPLED TO THE POWER GRID”

2.1. EMISIONES RADIADAS/ RADIATED EMISSIONS

Método de ensayo/ Test method :

Test	Regulation	Annex
Broadband radiated emissions (BB)	UN REGULATION No. 10R06/02	7
Narrowband radiated emissions (NB)	UN REGULATION No. 10R06/02	8

Muestra de ensayo/ Test Sample :

Sample	Reference	Description	Sample Id. No.
#1	12V/24V	BR10030301	Q2309075-002

Equipo auxiliar/ Auxiliary equipment :

Sample	Reference	Description	Sample Id. No.
#1	NA	NA	NA

Condiciones ambientales/ Environmental conditions :

Temperature (°C)	Humidity (%)	Atm. Pressure (mbar)
23.8	56.2	--

Límites/ Limits :

Bandwidth	Broadband radiated emissions (BB)		
	Limit L (dBuV/m) in function of the frequency f (MHz)		
	Detector type: Peak		
	Frequency range		
120 kHz	30-75 MHz L=62-25.13log(f/30)	75-400 MHz L=52+15.13log(f/75)	400 MHz – 1 GHz L=63

Si se utilizan detectores de picos, se aplica un factor de corrección de 20 dB tal como se define en CISPR 12./ If peak detectors are used a correction factor of 20 dB as defined in CISPR 12 is applied.

Narrowband radiated emissions (NB) Limit (dBuV/m)		
30-75 MHz	75-400 MHz	400 MHz – 1 GHz
L=52-25.13log(f/30)	L=42+15.13log(f/75)	L=53

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Resultados de ensayo/ *Test results* :

Sample	Operation Mode	Frequency range	Polarization	Result
#1	OM#1	30 MHz – 300 MHz	Horizontal	PASS/ <del>FAIL</del>
			Vertical	PASS/ <del>FAIL</del>
		300 MHz – 1 GHz	Horizontal	PASS/ <del>FAIL</del>
			Vertical	PASS/ <del>FAIL</del>

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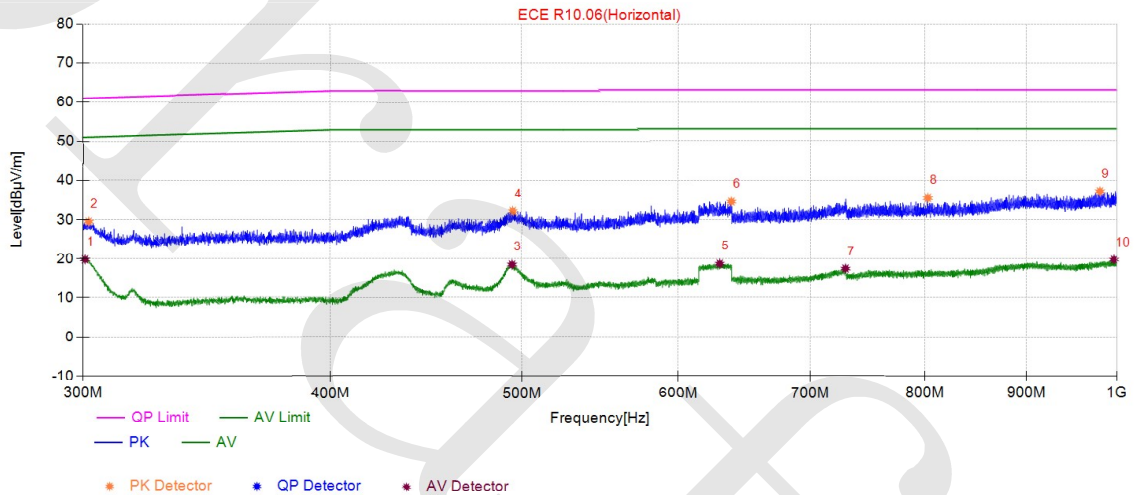
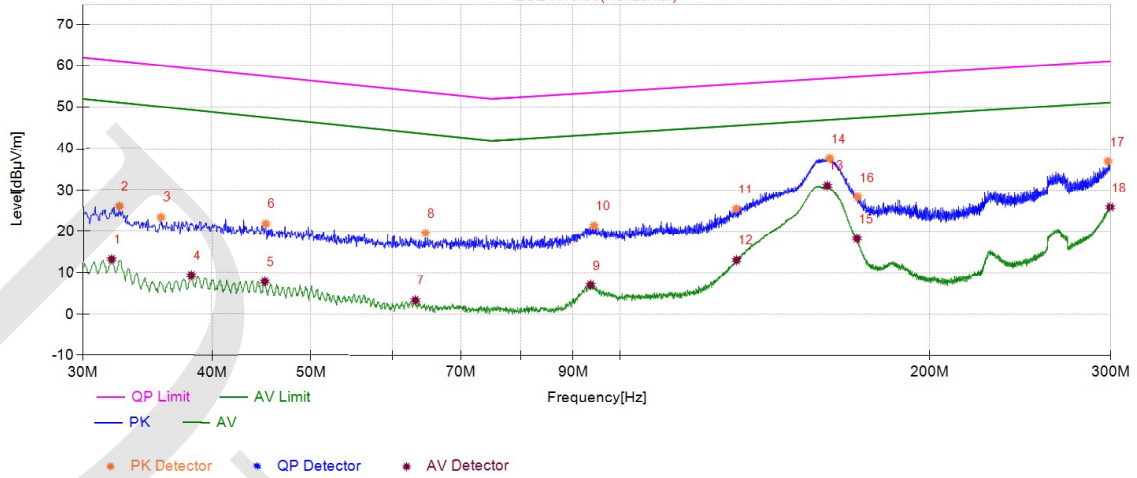
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Gráficos/ Graphs

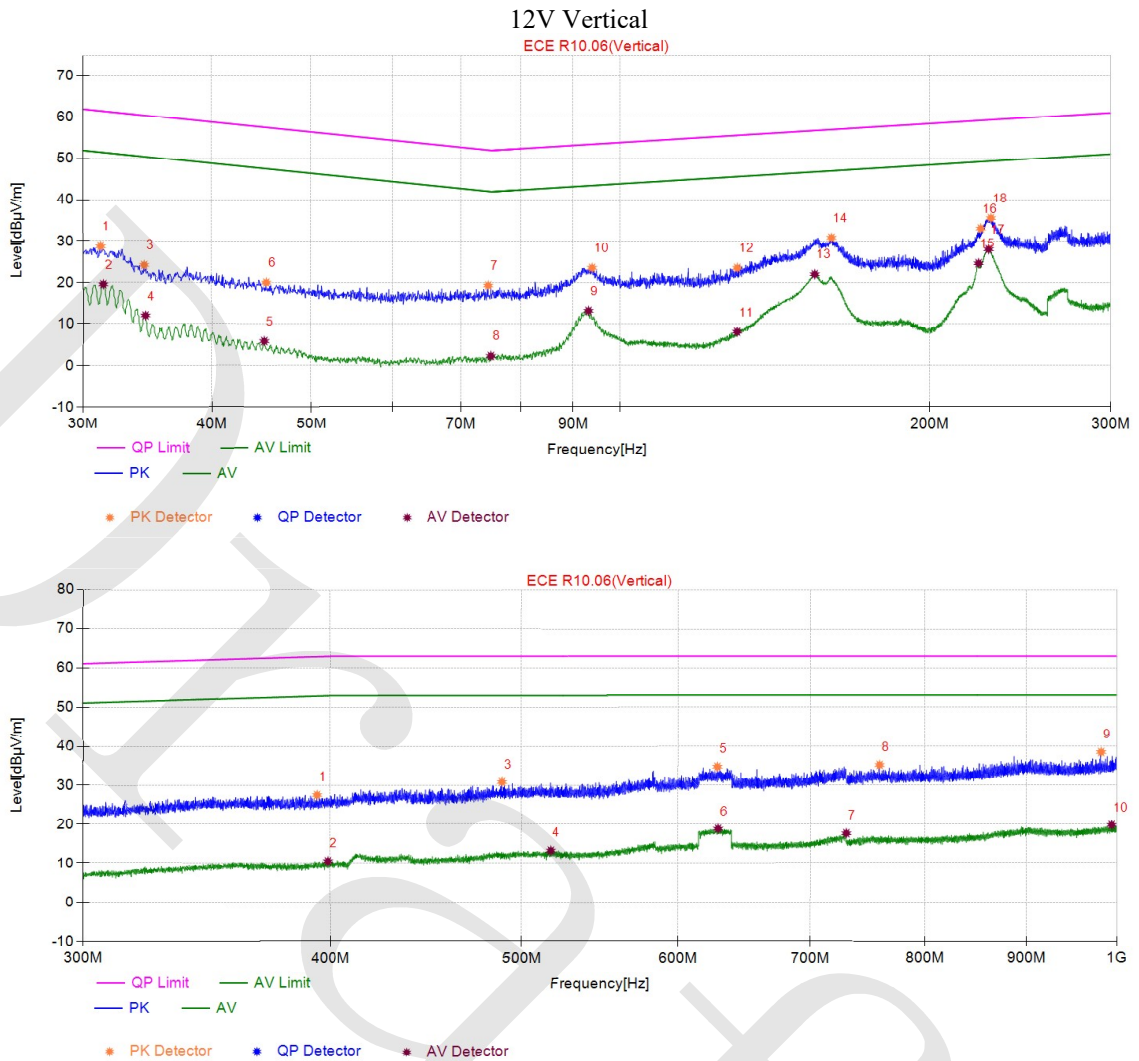
12V Horizontal

ECE R10.06(Horizontal)



Above results show peak data and average data below the limit. The ESA is deemed to conform to the requirements in respect of this frequency band according to 6.6.2.2. of Regulation 10.06/ECE.

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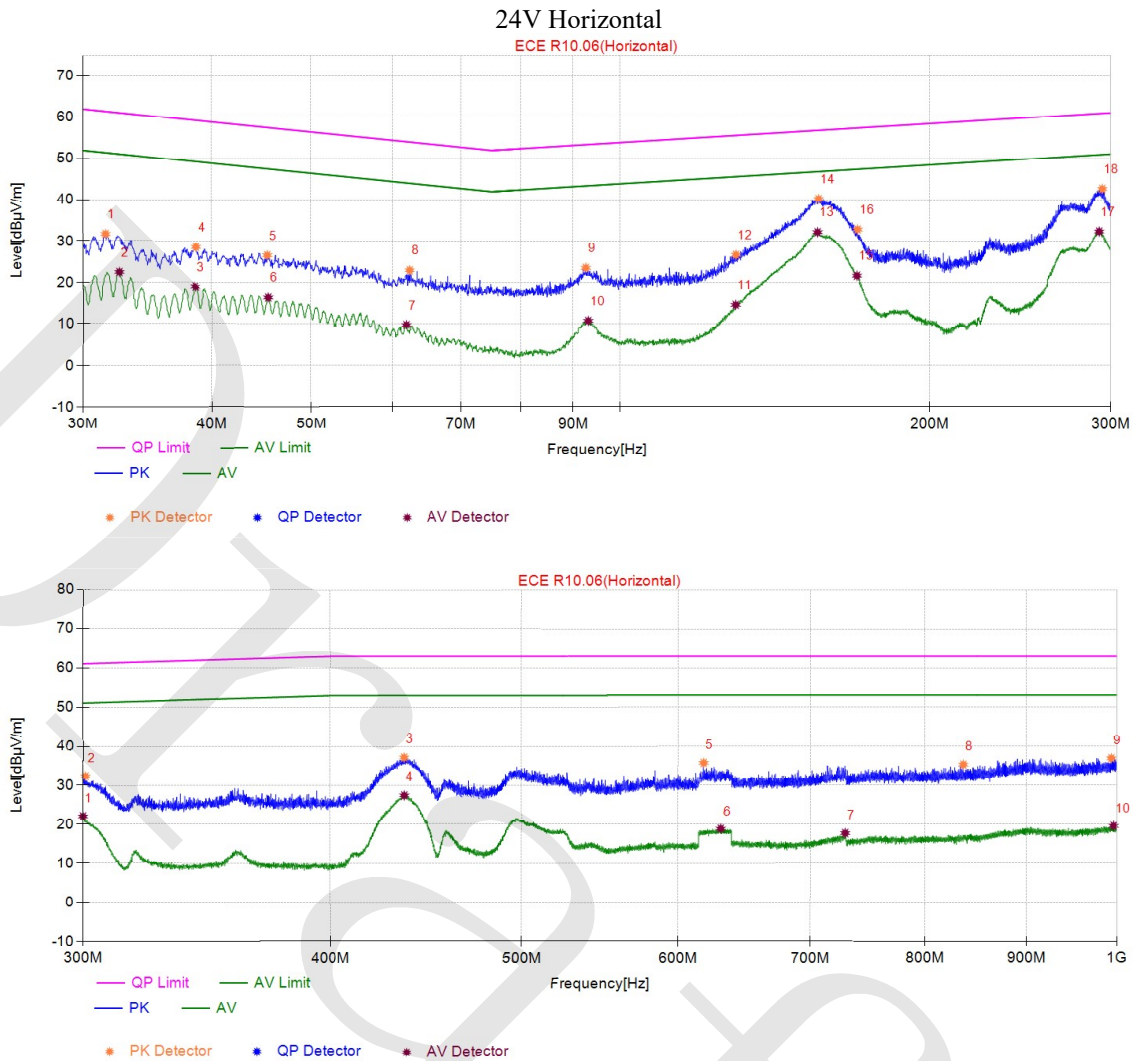
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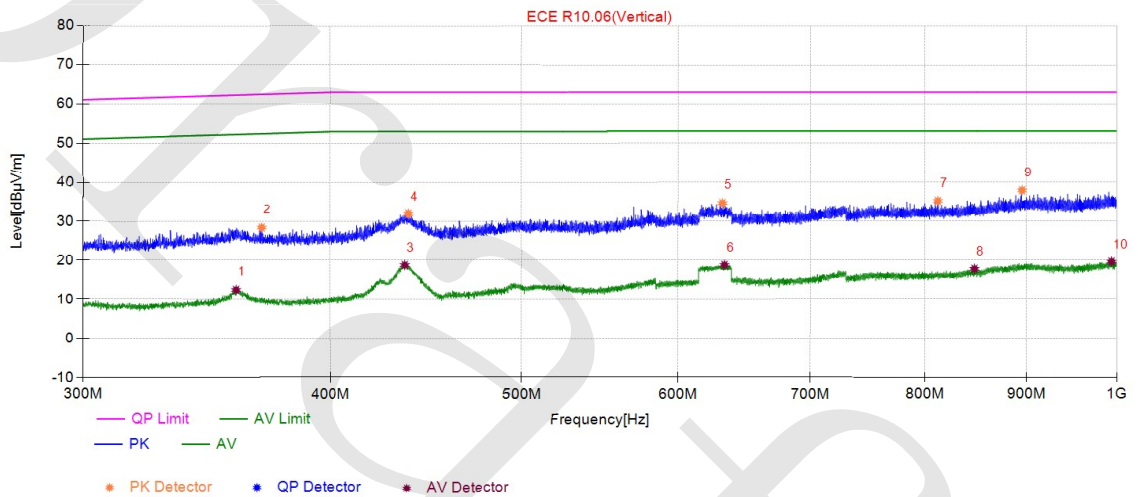
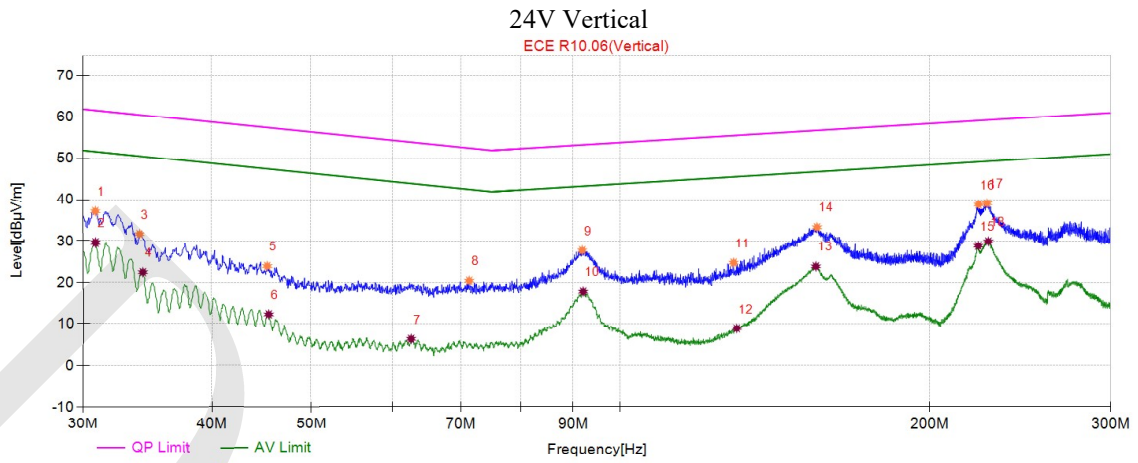
Above results show peak data and average data below the limit. The ESA is deemed to conform to the requirements in respect of this frequency band according to 6.6.2.2. of Regulation 10.06/ECE.

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2.2. INMUNIDAD RADIADA/  
RADIATED IMMUNITY

 Método de ensayo/ *Test method* :

Test	Regulation	Annex
Radiated Immunity (RI)	UN REGULATION No. 10R06/02	9

 Muestra de ensayo/ *Test Sample* :

Sample	Reference	Description	Sample Id. No.
#1	12V/24V	BR10030301	Q2309075-002

 Equipo auxiliar/ *Auxiliary equipment* :

Sample	Reference	Description	Sample Id. No.
#1	NA	NA	NA

 Condiciones ambientales/  
*Environmental conditions* :

Temperature (°C)	Humidity (%)	Atm. Pressure (mbar)
23.8	56.2	--

 Criterio de aceptación/  
*Acceptance criteria* :

Sample	Operation Mode	Requirement	Comments
#1	OM#1	No degradation of performance of "immunity related functions".	Correct

 Resultados de ensayo/ *Test results* :

Sample	Operation Mode	Method	Frequency	Severity	Modulation	Pol. / Pos.	Result
#1	OM#1	BCI	20 MHz-400 MHz	60 mA	AM 1kHz 80%	150 mm	<del>PASS/FAIL</del>
			400 MHz – 800 MHz		AM 1kHz 80%		<del>PASS/FAIL</del>
		ALSE	800 MHz – 1 GHz	30 V/m	PM 217Hz 577µs	Vertical (Front Harness)	<del>PASS/FAIL</del>
			1 GHz – 2 GHz		PM 217Hz 577µs	Vertical (Front EUT)	<del>PASS/FAIL</del>

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2.3. EMISION DE PERTURBACIONES TRANSITORIAS CONDUCCIDAS/  
EMISSION OF TRANSIENT CONDUCTED DISTURBANCES

 Método de ensayo/ *Test method* :

Test	Regulation	Annex
Emission of transient conducted disturbances	UN REGULATION No. 10R06/02	10

 Muestra de ensayo/ *Test Sample* :

Sample	Reference	Description	Sample Id. No.
#1	12V/24V	BR10030301	Q2309075-002

 Equipo auxiliar/ *Auxiliary equipment* :

Sample	Reference	Description	Sample Id. No.
#1	NA	NA	NA

 Condiciones ambientales/  
*Environmental conditions* :

Temperature (°C)	Humidity (%)	Atm. Pressure (mbar)
23.8	56.2	--

 Condiciones de ensayo/  
*Test conditions:*

Test Voltage	12V system (V)	24V system (V)
Ua	13,5 ±0,5	27 ±1
Ub	12 ±0,2	24 ±0,4

 Criterio de aceptación/  
*Acceptance criteria* :

Polarity of the pulse amplitude	Vehicles with 12 V systems	Vehicles with 24 V systems
Positive	+75 V	+150 V
Negative	-100 V	- 450 V

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Resultados de ensayo/ Test results :

Sample	Operation Mode	Switch Configuration	Connection Disconnection Permanent	Vmax  (V)	Vmin  (V)	Maximum allowed pulse amplitude	Result
#1	OM#1	Slow	Switch on	21.0	0.0	+75 V -100 V	PASS/FAIL
			Switch off	13.5	1.0		PASS/FAIL
			Permanent	--	--		--
		Fast	Switch on	16.5	0.0	+75 V -100 V	PASS/FAIL
			Switch off	13.0	1.0		PASS/FAIL
			Permanent	--	--		--
		Slow	Switch on	41.0	0.0	+150 V -450 V	PASS/FAIL
			Switch off	27.0	0.0		PASS/FAIL
			Permanent	--	--		--
		Fast	Switch on	37.0	0.0	+150 V -450 V	PASS/FAIL
			Switch off	27.0	0.0		PASS/FAIL
			Permanent	--	--		--

\* LOS RESULTADOS PRESENTADOS SE REFIEREN ÚNICAMENTE A LA MUESTRA ENSAYADA.  
THE PRESENTED RESULTS REFER ONLY TO THE TESTED SAMPLE.

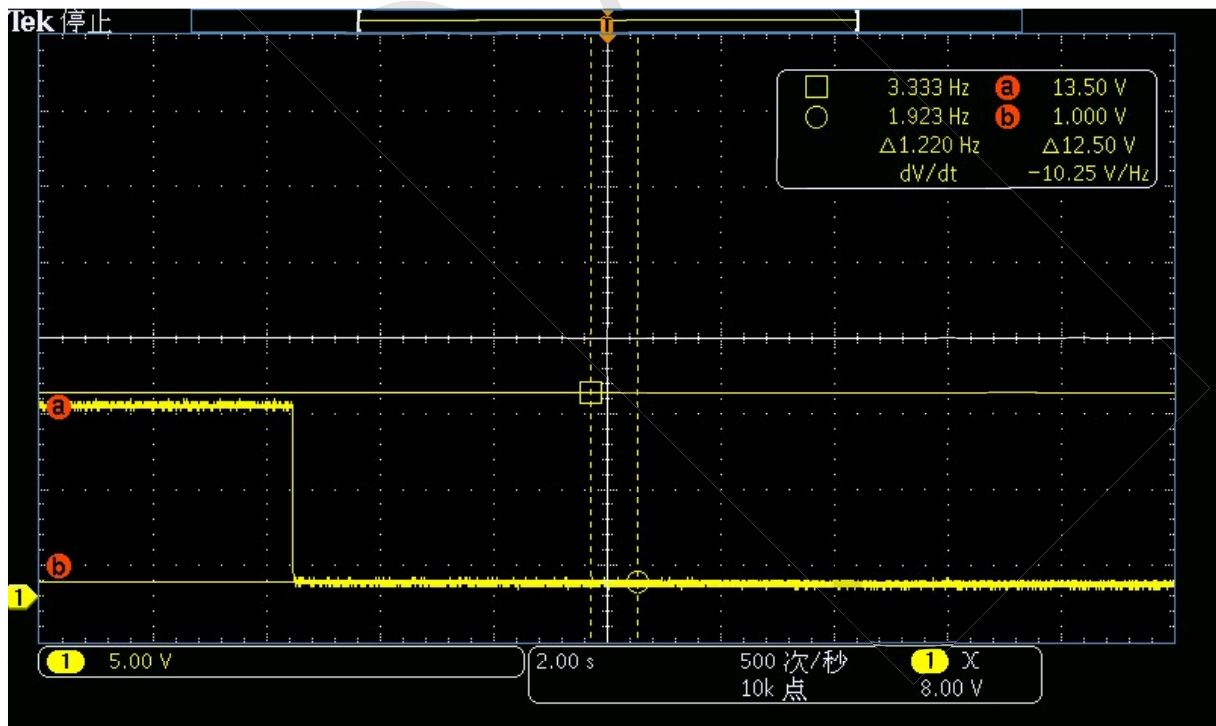
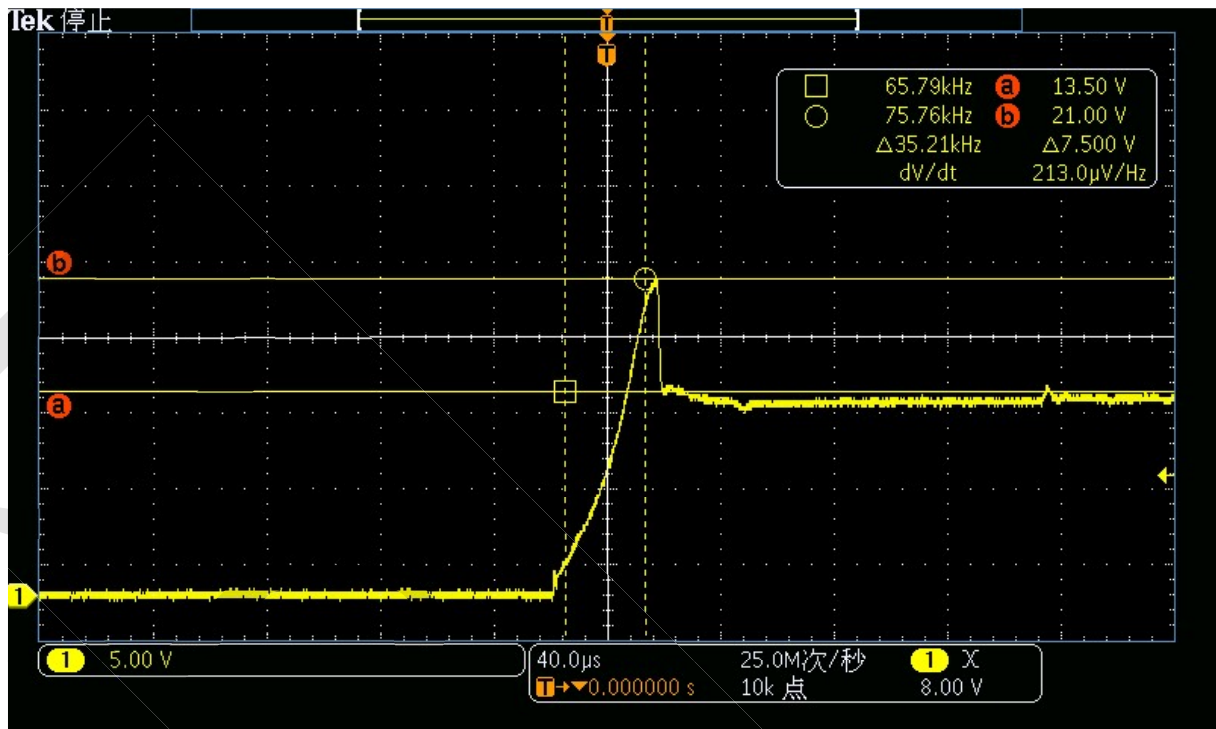
\* QUEDA TERMINANTEMENTE PROHIBIDA LA REPRODUCCIÓN PARCIAL DE ESTE INFORME SIN PERMISO EXPRESO DE IDIADA.  
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THE DECISION RULE USED, ACCORDING TO THE ILAC-G8 STANDARD, WAS THE BINARY STATEMENT FOR SIMPLE ACCEPTANCE

Gráficos/ Graphs :

12V Slow



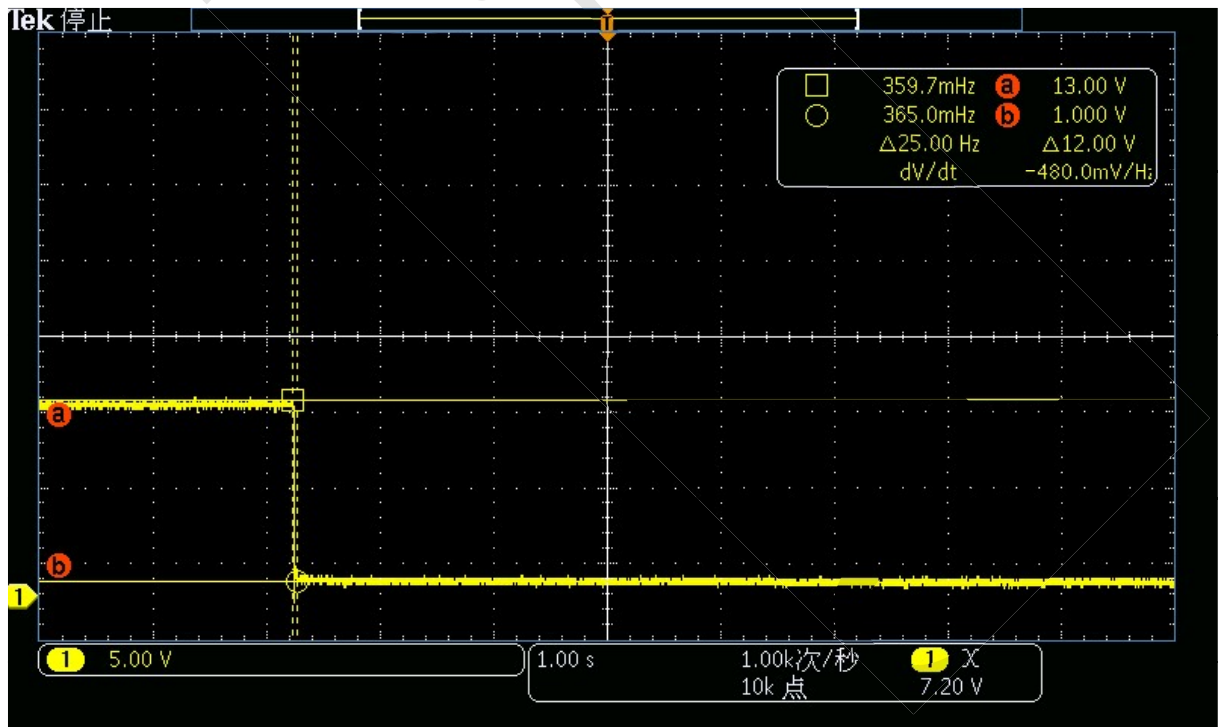
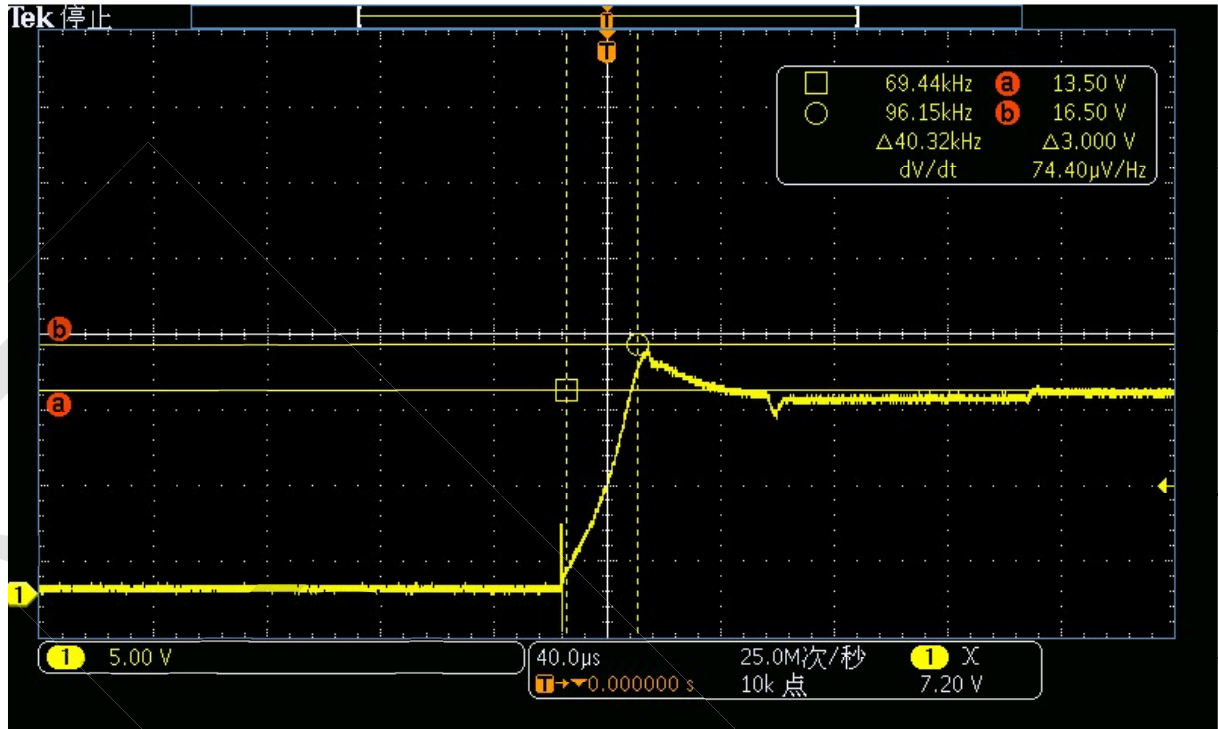
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## 12V Fast



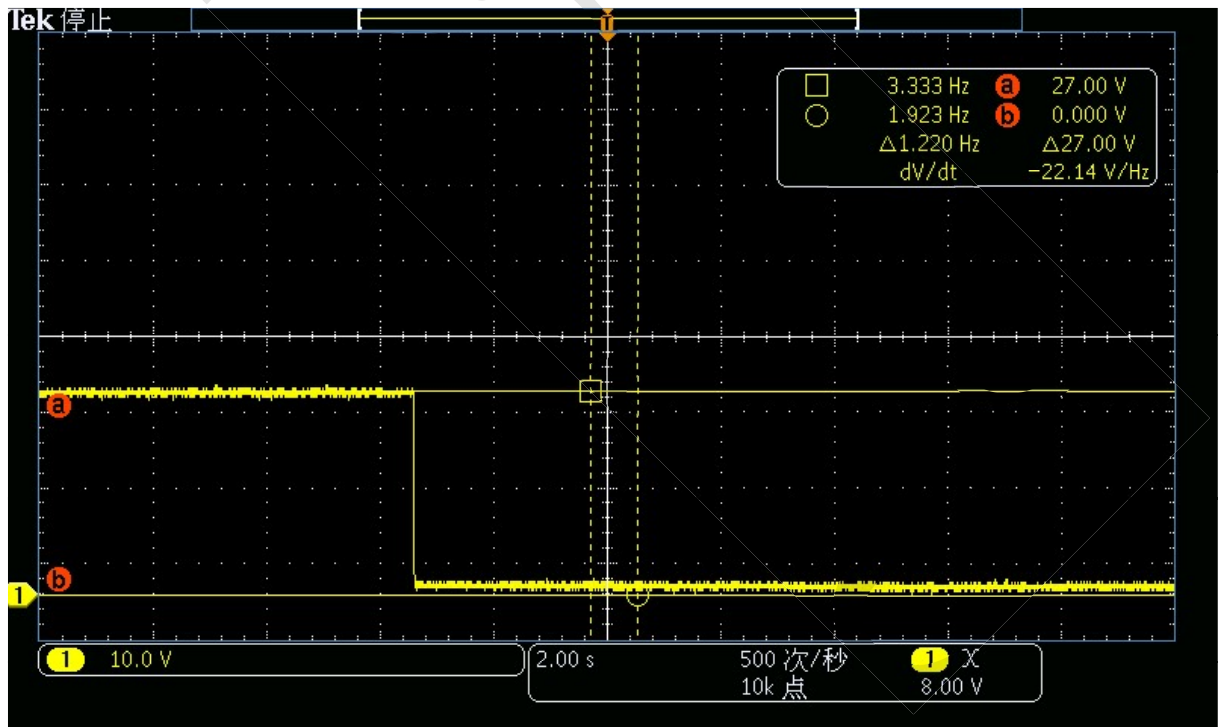
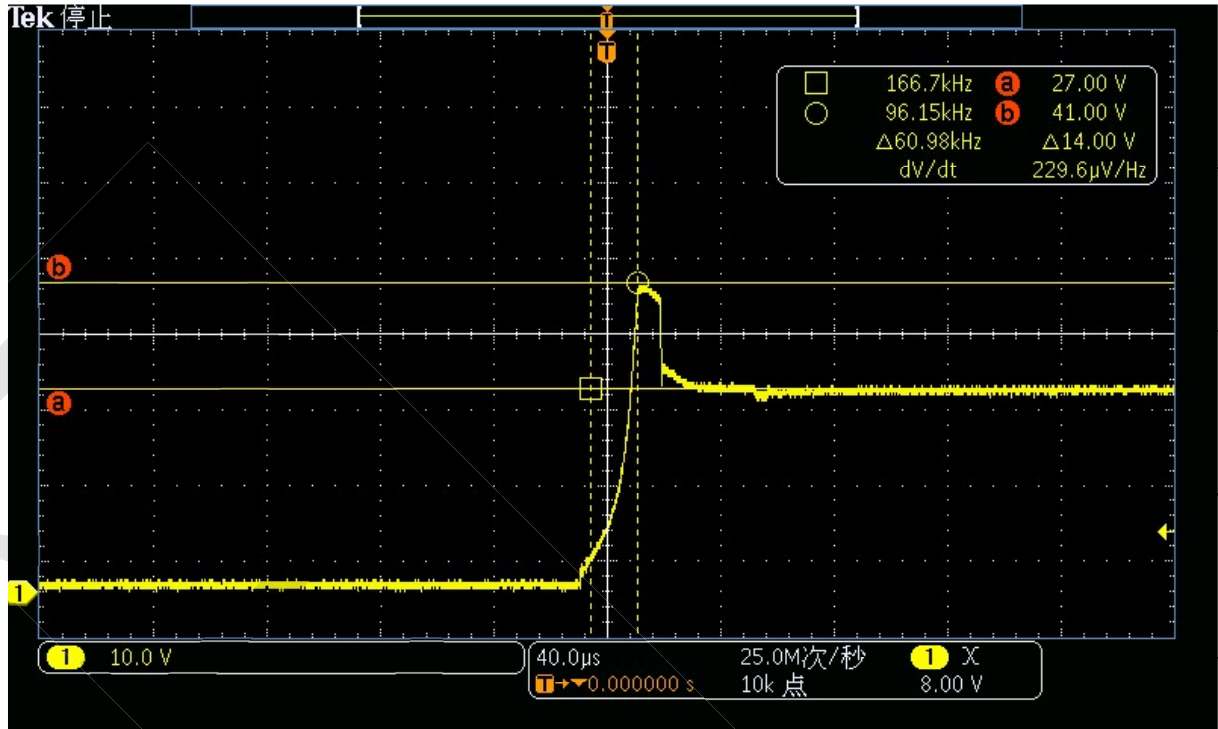
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## 24V Slow



\* LOS RESULTADOS PRESENTADOS SE REFIEREN ÚNICAMENTE A LA MUESTRA ENSAYADA.  
 THE PRESENTED RESULTS REFER ONLY TO THE TESTED SAMPLE.

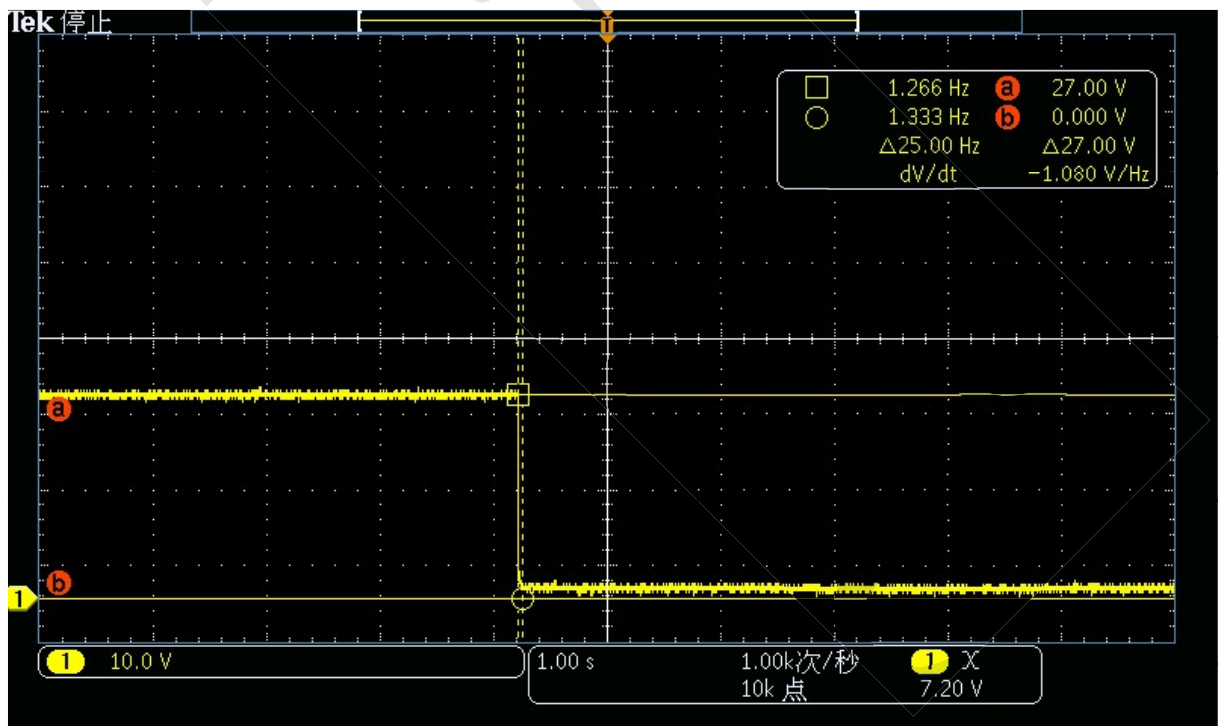
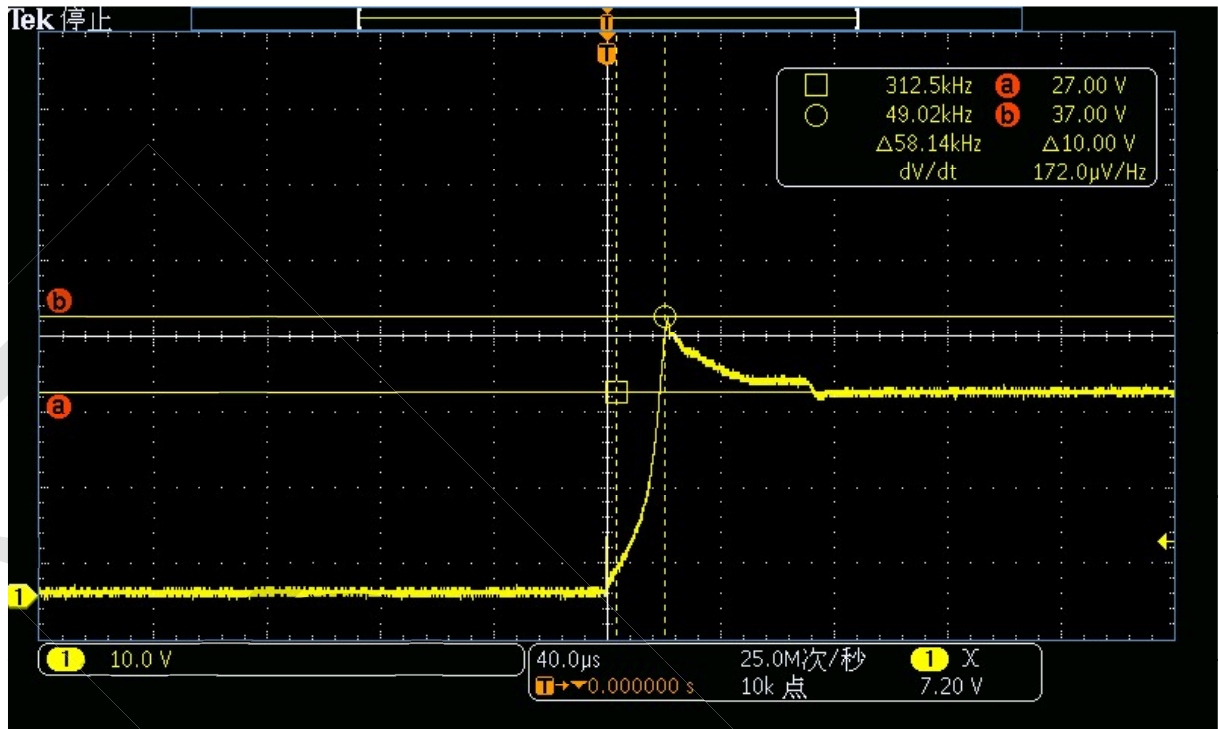
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## 24V Fast



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2.4. INMUNIDAD A LAS PERTURBACIONES TRANSITORIAS CONDUCTIDAS/  
IMMUNITY TO TRANSIENT CONDUCTED DISTURBANCES

 Método de ensayo/ *Test method* :

Test	Regulation	Annex
Emission of transient conducted disturbances	UN REGULATION No. 10R06/02	10

 Muestra de ensayo/ *Test Sample* :

Sample	Reference	Description	Sample Id. No.
#1	12V/24V	BR10030301	Q2309075-002

 Equipo auxiliar/ *Auxiliary equipment* :

Sample	Reference	Description	Sample Id. No.
#1	NA	NA	NA

 Condiciones ambientales/  
*Environmental conditions* :

Temperature (°C)	Humidity (%)	Atm. Pressure (mbar)
23.8	56.2	--

 Condiciones de ensayo/  
*Test conditions:*

Test Voltage	12V system (V)	24V system (V)
U <sub>a</sub>	13,5 ±0,5	27 ±1
U <sub>b</sub>	12 ±0,2	24 ±0,4

 Criterio de aceptación/  
*Acceptance criteria* :

Test pulse	Immunity level	Functional status for systems	
		Related to immunity functions	Not related to immunity functions
1	III	C	D
2a	III	B	D
2b	III	C	D
3a/3b	III	A	D
4	III	B (for ESA which must be operational during engine start phases) C (for other ESA)	D

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Resultados de ensayo / Test results :

Sample	Operation Mode	Test pulse	Immunity level	Acceptance criteria	Result
#1	OM#1 12V	1	III	C	C
		2a	III	B	A
		2b	III	C	C
		3a/3b	III	A	A
		3b	III	A	A
		4	III	B (for ESA which must be operational during engine start phases) C (for other ESA)	C
	OM#1 24V	1	III	C	C
		2a	III	B	A
		2b	III	C	C
		3a/3b	III	A	A
		3b	III	A	A
		4	III	B (for ESA which must be operational during engine start phases) C (for other ESA)	A

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*THE DECISION RULE USED, ACCORDING TO THE ILAC-G8 STANDARD, WAS THE BINARY STATEMENT FOR SIMPLE ACCEPTANCE*

### 3. ENSAYOS EN LA CONFIGURACIÓN DE «MODO DE CARGA DEL REESS ACOPLADO A LA RED ELÉCTRICA»/ TESTS IN THE CONFIGURATION “REESS CHARGING MODE COUPLED TO THE POWER GRID”

#### 3.1. EMISIONES RADIADAS EN MODO REES/ RADIATED EMISSIONS REES MODE

Método de ensayo/ Test method :

Test	Regulation	Annex
Broadband radiated emissions (BB)	UN REGULATION No. 10R06/02	7
Narrowband radiated emissions (NB)	UN REGULATION No. 10R06/02	8

Muestra de ensayo/ Test Sample :

Sample	Reference	Description	Sample Id. No.
NA	NA	NA	NA

Equipo auxiliar/ Auxiliary equipment :

Sample	Reference	Description	Sample Id. No.
NA	NA	NA	NA

Condiciones ambientales/  
Environmental conditions :

Temperature (°C)	Humidity (%)	Atm. Pressure (mbar)
NA	NA	NA

Límites/ Limits :

Bandwidth	Broadband radiated emissions (BB)		
	Limit L (dBuV/m) in function of the frequency f (MHz)		
	Detector type: Peak		
	Frequency range		
120 kHz	30-75 MHz L=62-25.13log(f/30)	75-400 MHz L=52+15.13log(f/75)	400 MHz – 1 GHz L=63

Si se utilizan detectores de picos, se aplica un factor de corrección de 20 dB tal como se define en CISPR 12./  
If peak detectors are used a correction factor of 20 dB as defined in CISPR 12 is applied.

Narrowband radiated emissions (NB) Limit (dBuV/m)		
30-75 MHz	75-400 MHz	400 MHz – 1 GHz
L=52-25.13log(f/30)	L=42+15.13log(f/75)	L=53

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Configuración de la ESA/  
ESA set up

: Añadido

ESA configuration during test		
System / function	State	Comment
Charging	ON	NA
SOC	BETWEEN 20% AND 80% CHARGING CURRENT > 80% NOMINAL CURRENT	NA

Resultados de ensayo/ Test results :

Sample	Operation Mode	Frequency range	Polarization	Result
#1	OM#1	30 MHz – 200 MHz	Horizontal	<del>PASS/FAIL</del>
			Vertical	<del>PASS/FAIL</del>
		200 MHz – 1 GHz	Horizontal	<del>PASS/FAIL</del>
			Vertical	<del>PASS/FAIL</del>

Gráficos/ Graphs :

NA

---

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3.2. INMUNIDAD RADIADA EN MODO REES/  
RADIATED IMMUNITY REES MODE

 Método de ensayo/ *Test method* :

Test	Regulation	Annex
Radiated Immunity (RI)	UN REGULATION No. 10R06/02	9

 Muestra de ensayo/ *Test Sample* :

Sample	Reference	Description	Sample Id. No.
NA	NA	NA	NA

 Equipo auxiliar/ *Auxiliary equipment* :

Sample	Reference	Description	Sample Id. No.
NA	NA	NA	NA

 Condiciones ambientales/  
*Environmental conditions* :

Temperature (°C)	Humidity (%)	Atm. Pressure (mbar)
NA	NA	NA

 Configuración de la ESA/  
*ESA set up* : Añadido

ESA configuration during test		
System / function	State	Comment
Charging	ON	NA
SOC	BETWEEN 20% AND 80% CHARGING CURRENT > 80% NOMINAL CURRENT	NA

 Criterio de aceptación/  
*Acceptance criteria* : añadido

Sample	Operation Mode	Requirement	Comments
#1	OM#1	No se ven alteradas las «funciones relacionadas con la inmunidad»./ <i>No degradation of performance of "immunity related functions".</i>	NA

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Resultados de ensayo/ Test results :

Sample	Operation Mode	Method	Frequency	Severity	Modulation	Pol. / Pos.	Result
#1	OM#1	BCI	20 MHz-200 MHz	60 mA	AM 1kHz 80%	150 mm	<del>PASS/FAIL</del>
		ALSE	200 MHz – 800 MHz	30 V/m	AM 1kHz 80%	Vertical (Front Harness)	<del>PASS/FAIL</del>
			800 MHz – 1 GHz		PM 217Hz 577µs		<del>PASS/FAIL</del>
			1 GHz – 2 GHz		PM 217Hz 577µs	Vertical (Front EUT)	<del>PASS/FAIL</del>

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3.3. EMISIONES DE HARMONICOS GENERADOS EN LINEAS AC /  
EMISSION OF HARMONICS GENERATED ON AC POWER LINES

 Método de ensayo/ *Test method* :

Test	Regulation	Annex
emission of harmonics generated on AC power lines from an ESA	UN REGULATION No. 10R06/02	17

 Muestra de ensayo/ *Test Sample* :

Sample	Reference	Description	Sample Id. No.
NA	NA	NA	NA

 Equipo auxiliar/ *Auxiliary equipment* :

Sample	Reference	Description	Sample Id. No.
NA	NA	NA	NA

 Condiciones ambientales/  
*Environmental conditions* :

Temperature (°C)	Humidity (%)	Atm. Pressure (mbar)
NA	NA	NA

 Límites/ *Limits* :

**Maximum allowed harmonics (input current  $\leq 16$  A per phase)**

<i>Harmonic number</i> <i>n</i>	<i>Maximum authorized harmonic current</i> <i>A</i>
<b>Odd harmonics</b>	
3	2.3
5	1.14
7	0.77
9	0.40
11	0.33
13	0.21
$15 \leq n \leq 39$	$0.15 \times 15/n$
<b>Even harmonics</b>	
2	1.08
4	0.43
6	0.30
$8 \leq n \leq 40$	$0.23 \times 8/n$

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**Maximum allowed harmonics (input current > 16 A and ≤ 75 A per phase) for single phase or other than balanced three-phase equipment**

Minimum $R_{scce}$	Acceptable individual harmonic current $I_n/I_1$ %						Maximum current harmonic ratio %	
	$I_3$	$I_5$	$I_7$	$I_9$	$I_{11}$	$I_{13}$	THD	PWHD
33	21.6	10.7	7.2	3.8	3.1	2	23	23
66	24	13	8	5	4	3	26	26
120	27	15	10	6	5	4	30	30
250	35	20	13	9	8	6	40	40
≥ 350	41	24	15	12	10	8	47	47

**Maximum allowed harmonics (input current > 16 A and ≤ 75 A per phase) for balanced three-phase equipment**

Minimum $R_{scce}$	Acceptable individual harmonic current $I_n/I_1$ %				Maximum current harmonic ratio %	
	$I_5$	$I_7$	$I_{11}$	$I_{13}$	THD	PWHD
33	10.7	7.2	3.1	2	13	22
66	14	9	5	3	16	25
120	19	12	7	4	22	28
250	31	20	12	7	37	38
≥ 350	40	25	15	10	48	46

Configuración de la ESA/  
ESA configuration

:

ESA CONFIGURATION DURING TEST		
SYSTEM / FUNCTION	STATE	COMMENT
Charging	ON	NA
SOC	BETWEEN 20% AND 80% CHARGING CURRENT > 80% NOMINAL CURRENT	NA

Resultados de ensayo / Test results :

Sample	Charging mode	Input current	Phase	Battery charge level [%]	Results
#1	(1-Phase)	≤16 A	Live	NA	<del>PASS/FAIL</del>
#1	(1-Phase)	≤16 A or 16 A ≤ I ≤ 75 A	Live	NA	<del>PASS/FAIL</del> <del>PASS/FAIL</del>
#1	(3-Phases)	16 A ≤ I ≤ 75 A	Live 1	NA	<del>PASS/FAIL</del>
			Live 2	NA	<del>PASS/FAIL</del>
			Live 3	NA	<del>PASS/FAIL</del>

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3.4. EMISIONES DE CAMBIOS EN EL VOLTAGE, FLUCTUACIONES DE VOLTAGE Y PARPADEOS GENERADOS EN LINEAS AC / EMISSION OF VOLTAGE CHANGES, VOLTAGE FLUCTUATIONS AND FLICKER ON AC POWER LINES

Método de ensayo/ *Test method* :

Test	Regulation	Annex
emission of voltage changes, voltage fluctuations and flicker on AC power lines from an ESA	UN REGULATION No. 10R06/02	18

Muestra de ensayo/ *Test Sample* :

Sample	Reference	Description	Sample Id. No.
NA	NA	NA	NA

Equipo auxiliar/ *Auxiliary equipment* :

Sample	Reference	Description	Sample Id. No.
NA	NA	NA	NA

Condiciones ambientales/  
*Environmental conditions* :

Temperature (°C)	Humidity (%)	Atm. Pressure (mbar)

Límites/ *Limits* :

Corriente nominal $\leq 16$ A / <i>Rated current <math>\leq 16</math> A per</i>	
Criterio/Criteria	Check
El valor de Pst(short-term flicker) no deberá ser superior a 1,0 / <i>The value of Pst(short-term flicker) shall not be greater than 1.0</i>	OK/NOK
El valor de Plt(long-term flicker) no deberá ser superior a 0,65 / <i>The value of Plt (long-term flicker) shall not be greater than 0.65</i>	OK/NOK
El valor de d(t)(tiempo acumulado) durante un cambio de tensión no deberá exceder el 3,3 % durante más de 500 ms / <i>The value of d(t)(accumulated time) during a voltage change shall not exceed 3.3 per cent for more than 500 ms</i>	OK/NOK
El cambio relativo de voltaje en estado estable, dc, no debe exceder el 3,3 por ciento / <i>The relative steady state voltage change, dc, shall not exceed 3.3 per cent</i>	OK/NOK
El cambio de voltaje relativo máximo dmax, no debe exceder el 6 por ciento / <i>The maximum relative voltage change dmax, shall not exceed 6 per cent</i>	OK/NOK

\* LOS RESULTADOS PRESENTADOS SE REFIEREN ÚNICAMENTE A LA MUESTRA ENSAYADA.  
*THE PRESENTED RESULTS REFER ONLY TO THE TESTED SAMPLE.*

\* QUEDA TERMINANTEMENTE PROHIBIDA LA REPRODUCCIÓN PARCIAL DE ESTE INFORME SIN PERMISO EXPRESO DE IDIADA.  
*THE PARTIAL REPRODUCTION OF THIS REPORT WITHOUT THE PERMISSION OF IDIADA IS COMPLETELY FORBIDDEN.*

\* EL LABORATORIO HA CALCULADO LA INCERTIDUMBRE DE MEDIDA ASOCIADA A LOS RESULTADOS.  
*MEASUREMENT UNCERTAINTY OF THE RESULTS HAS BEEN CALCULATED BY THE LABORATORY.*

\* LA REGLA DE DECISIÓN UTILIZADA, SEGÚN LA NORMA IEC-60364-4-41, HA SIDO LA DECLARACIÓN BINARIA DE ACEPTACIÓN SIMPLE  
*THE DECISION RULE USED, ACCORDING TO THE IEC-60364-4-41 STANDARD, WAS THE BINARY STATEMENT FOR SIMPLE ACCEPTANCE*



<b>Corriente nominal &gt; 16 A y <math>\leq</math> 75 A por fase / Rated current &gt; 16 A and <math>\leq</math> 75 A per phase</b>	
<b>Criterio/Criteria</b>	<b>Check</b>
El valor de Pst(short-term flicker) no deberá ser superior a 1,0 / <i>The value of Pst(short-term flicker) shall not be greater than 1.0</i>	<del>OK/NOK</del>
El valor de Plt(long-term flicker) no deberá ser superior a 0,65 / <i>The value of Plt (long-term flicker) shall not be greater than 0.65</i>	<del>OK/NOK</del>
El valor de d(t)(tiempo acumululado) durante un cambio de tensión no deberá exceder el 3,3 % durante más de 500 ms / <i>The value of d(t)(accumulated time) during a voltage change shall not exceed 3.3 per cent for more than 500 ms</i>	<del>OK/NOK</del>
El cambio relativo de voltaje en estado estable, dc, no debe exceder el 3,3 por ciento / <i>The relative steady state voltage change, dc, shall not exceed 3.3 per cent</i>	<del>OK/NOK</del>
El cambio de voltaje relativo máximo dmax, no debe exceder: 1) 4 % sin condiciones adicionales; 2) 6 % para equipos que: – se activen manualmente, o – se activen automáticamente más de dos veces por día y que tengan un reinicio retardado no menor a unas décimas de segundo, o reinicio manual después de una interrupción de la fuente de alimentación  <i>/ The maximum relative voltage change dmax, shall not exceed:</i>  1) 4 % without additional conditions; 2) 6 % for equipment which is – switched manually, or – switched automatically more than twice per day and having a delayed restart (the delay being not less than a few tens of seconds), or manual restart after a power supply interruption;	<del>OK/NOK</del>

Configuración de la ESA/  
ESA configuration

:

<b>ESA CONFIGURATION DURING TEST</b>		
<b>SYSTEM / FUNCTION</b>	<b>STATE</b>	<b>COMMENT</b>
Charging	ON	NA
SOC	BETWEEN 20% AND 80% CHARGING CURRENT > 80% NOMINAL CURRENT	NA

\* LOS RESULTADOS PRESENTADOS SE REFIEREN ÚNICAMENTE A LA MUESTRA ENSAYADA.  
*THE PRESENTED RESULTS REFER ONLY TO THE TESTED SAMPLE.*

\* QUEDA TERMINANTEMENTE PROHIBIDA LA REPRODUCCIÓN PARCIAL DE ESTE INFORME SIN PERMISO EXPRESO DE IDIADA.  
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*MEASUREMENT UNCERTAINTY OF THE RESULTS HAS BEEN CALCULATED BY THE LABORATORY.*

\* LA REGLA DE DECISIÓN UTILIZADA, SEGÚN LA NORMA IEC-60384-1, HA SIDO LA DECLARACIÓN BINARIA DE ACEPTACIÓN SIMPLE  
*THE DECISION RULE USED, ACCORDING TO THE IEC-60384-1 STANDARD, WAS THE BINARY STATEMENT FOR SIMPLE ACCEPTANCE*

Resultados de ensayo / Test results :

Sample	Charging mode	Input current	Phase	Battery charge level [%]	Results
#1	(1-Phase)	$\leq 16$ A	Live	NA	<del>PASS/FAIL</del>
#1	(1-Phase)	$\leq 16$ A or $16 \text{ A} \leq I \leq 75 \text{ A}$	Live	NA	<del>PASS/FAIL</del>
					<del>PASS/FAIL</del>
#1	(3-Phases)	$16 \text{ A} \leq I \leq 75 \text{ A}$	Live 1	NA	<del>PASS/FAIL</del>
			Live 2	NA	<del>PASS/FAIL</del>
			Live 3	NA	<del>PASS/FAIL</del>

\* LOS RESULTADOS PRESENTADOS SE REFIEREN ÚNICAMENTE A LA MUESTRA ENSAYADA.  
THE PRESENTED RESULTS REFER ONLY TO THE TESTED SAMPLE.

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\* LA REGLA DE DECISIÓN UTILIZADA, SEGÚN LA NORMA ILAC-G8, HA SIDO LA DECLARACIÓN BINARIA DE ACEPTACIÓN SIMPLE  
THE DECISION RULE USED, ACCORDING TO THE ILAC-G8 STANDARD, WAS THE BINARY STATEMENT FOR SIMPLE ACCEPTANCE

3.5. EMISIONES DE RADIOFRECUENCIAS CONDUCCIDAS EN LINEAS AC O DC /  
EMISSION OF RADIOFREQUENCY CONDUCTED DISTURBANCES ON AC OR DC  
POWERLINES

Método de ensayo/ *Test method* :

Test	Regulation	Annex
emission of radiofrequency conducted disturbances on AC or DC power lines	UN REGULATION No. 10R06/02	19

Muestra de ensayo/ *Test Sample* :

Sample	Reference	Description	Sample Id. No.
NA	NA	NA	NA

Equipo auxiliar/ *Auxiliary equipment* :

Sample	Reference	Description	Sample Id. No.
NA	NA	NA	NA

Condiciones ambientales/  
*Environmental conditions* :

Temperature (°C)	Humidity (%)	Atm. Pressure (mbar)
NA	NA	NA

Límites/ *Limits* :

**Maximum allowed radiofrequency conducted disturbances on AC power lines**

Frequency (MHz)	Limits and detector
0.15 to 0.5	66 to 56 dB $\mu$ V (quasi-peak) 56 to 46 dB $\mu$ V (average) (linearly decreasing with logarithm of frequency)
0.5 to 5	56 dB $\mu$ V (quasi-peak) 46 dB $\mu$ V (average)
5 to 30	60 dB $\mu$ V (quasi-peak) 50 dB $\mu$ V (average)

**Maximum allowed radiofrequency conducted disturbances on DC power lines**

Frequency (MHz)	Limits and detector
0.15 to 0.5	79 dB $\mu$ V (quasi-peak) 66 dB $\mu$ V (average)
0.5 to 30	73 dB $\mu$ V (quasi-peak) 60 dB $\mu$ V (average)

\* LOS RESULTADOS PRESENTADOS SE REFIEREN ÚNICAMENTE A LA MUESTRA ENSAYADA.  
 THE PRESENTED RESULTS REFER ONLY TO THE TESTED SAMPLE.

\* QUEDA TERMINANTEMENTE PROHIBIDA LA REPRODUCCIÓN PARCIAL DE ESTE INFORME SIN PERMISO EXPRESO DE IDIADA.  
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 MEASUREMENT UNCERTAINTY OF THE RESULTS HAS BEEN CALCULATED BY THE LABORATORY.

\* LA REGLA DE DECISIÓN UTILIZADA, SEGÚN LA NORMA ILAC-G8, HA SIDO LA DECLARACIÓN BINARIA DE ACEPTACIÓN SIMPLE  
 THE DECISION RULE USED, ACCORDING TO THE ILAC-G8 STANDARD, WAS THE BINARY STATEMENT FOR SIMPLE ACCEPTANCE

Configuración de la ESA/  
ESA configuration

:

ESA CONFIGURATION DURING TEST		
SYSTEM / FUNCTION	STATE	COMMENT
Charging	ON	NA
SOC	BETWEEN 20% AND 80% CHARGING CURRENT > 80% NOMINAL CURRENT	NA

Resultados de ensayo / Test results :

Sample	Charging mode	Input current	Phase	Battery charge level [%]	Results
#1	(1-Phase)	$\leq 16$ A	Live	NA	<del>PASS/FAIL</del>
#1	(1-Phase)	$\leq 16$ A or $16$ A $\leq I \leq 75$ A	Live	NA	<del>PASS/FAIL</del>
					<del>PASS/FAIL</del>
#1	(3-Phases)	$16$ A $\leq I \leq 75$ A	Live 1	NA	<del>PASS/FAIL</del>
			Live 2	NA	<del>PASS/FAIL</del>
			Live 3	NA	<del>PASS/FAIL</del>

\* LOS RESULTADOS PRESENTADOS SE REFIEREN ÚNICAMENTE A LA MUESTRA ENSAYADA.  
THE PRESENTED RESULTS REFER ONLY TO THE TESTED SAMPLE.

\* QUEDA TERMINANTEMENTE PROHIBIDA LA REPRODUCCIÓN PARCIAL DE ESTE INFORME SIN PERMISO EXPRESO DE IDIADA.  
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MEASUREMENT UNCERTAINTY OF THE RESULTS HAS BEEN CALCULATED BY THE LABORATORY.

\* LA REGLA DE DECISIÓN UTILIZADA, SEGÚN LA NORMA ILAC-G8, HA SIDO LA DECLARACIÓN BINARIA DE ACEPTACIÓN SIMPLE  
THE DECISION RULE USED, ACCORDING TO THE ILAC-G8 STANDARD, WAS THE BINARY STATEMENT FOR SIMPLE ACCEPTANCE

3.6. EMISIONES DE RADIOFRECUENCIAS DE PERTURBACIONES CONDUCCIDAS EN PUERTOS DE REDES CABLEADAS / EMISSION OF RADIOFREQUENCY CONDUCTED DISTURBANCES ON WIRED NETWORK PORT

Método de ensayo/ *Test method* :

Test	Regulation	Annex
Emission of radiofrequency conducted disturbances on wired network port	UN REGULATION No. 10R06/02	20

Muestra de ensayo/ *Test Sample* :

Sample	Reference	Description	Sample Id. No.
NA	NA	NA	NA

Equipo auxiliar/ *Auxiliary equipment* :

Sample	Reference	Description	Sample Id. No.
NA	NA	NA	NA

Condiciones ambientales/  
*Environmental conditions* :

Temperature (°C)	Humidity (%)	Atm. Pressure (mbar)
NA	NA	NA

Límites/ *Limits* :

**Maximum allowed radiofrequency conducted disturbances on wired network port**

Frequency (MHz)	Voltage limits (detector)	Current limits (detector)
0.15 to 0.5	84 to 74 dB $\mu$ V (quasi-peak) 74 to 64 dB $\mu$ V (average) (linearly decreasing with logarithm of frequency)	40 to 30 dB $\mu$ A (quasi-peak) 30 to 20 dB $\mu$ A (average) (linearly decreasing with logarithm of frequency)
0.5 to 30	74 dB $\mu$ V (quasi-peak) 64 dB $\mu$ V (average)	30 dB $\mu$ A (quasi-peak) 20 dB $\mu$ A (average)

Configuración de la ESA/  
*ESA configuration* :

ESA CONFIGURATION DURING TEST		
SYSTEM / FUNCTION	STATE	COMMENT
Charging	ON	NA
SOC	BETWEEN 20% AND 80% CHARGING CURRENT > 80% NOMINAL CURRENT	NA

- \* LOS RESULTADOS PRESENTADOS SE REFIEREN ÚNICAMENTE A LA MUESTRA ENSAYADA.  
*THE PRESENTED RESULTS REFER ONLY TO THE TESTED SAMPLE.*
- \* QUEDA TERMINANTEMENTE PROHIBIDA LA REPRODUCCIÓN PARCIAL DE ESTE INFORME SIN PERMISO EXPRESO DE IDIADA.  
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- \* EL LABORATORIO HA CALCULADO LA INCERTIDUMBRE DE MEDIDA ASOCIADA A LOS RESULTADOS.  
*MEASUREMENT UNCERTAINTY OF THE RESULTS HAS BEEN CALCULATED BY THE LABORATORY.*
- \* LA REGLA DE DECISIÓN UTILIZADA, SEGÚN LA NORMA ILAC-G8, HA SIDO LA DECLARACIÓN BINARIA DE ACEPTACIÓN SIMPLE  
*THE DECISION RULE USED, ACCORDING TO THE ILAC-G8 STANDARD, WAS THE BINARY STATEMENT FOR SIMPLE ACCEPTANCE*

Resultados de ensayo / Test results :

Sample	Charging mode	Input current	Phase	Battery charge level [%]	Results
#1	(1-Phase)	$\leq 16$ A	Live	NA	<del>PASS/FAIL</del>
#1	(1-Phase)	$\leq 16$ A or $16 \text{ A} \leq I \leq 75 \text{ A}$	Live	NA	<del>PASS/FAIL</del>
					<del>PASS/FAIL</del>
#1	(3-Phases)	$16 \text{ A} \leq I \leq 75 \text{ A}$	Live 1	NA	<del>PASS/FAIL</del>
			Live 2	NA	<del>PASS/FAIL</del>
			Live 3	NA	<del>PASS/FAIL</del>

\* LOS RESULTADOS PRESENTADOS SE REFIEREN ÚNICAMENTE A LA MUESTRA ENSAYADA.

*THE PRESENTED RESULTS REFER ONLY TO THE TESTED SAMPLE.*

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*THE DECISION RULE USED, ACCORDING TO THE ILAC-G8 STANDARD, WAS THE BINARY STATEMENT FOR SIMPLE ACCEPTANCE*

3.7. IMMUNIDAD A LAS PERTURBACIONES ELÉCTRICAS RÁPIDAS TRANSITORIAS O RÁFAGAS CONDUCIDAS POR LAS LÍNEAS DE ALIMENTACIÓN DE CORRIENTE ALTERNA O CORRIENTE CONTÍNUA / IMMUNITY TO ELECTRICAL FAST TRANSIENT/BURST DISTURBANCES CONDUCTED ALONG AC AND DC POWER LINES

Método de ensayo/ *Test method* :

Test	Regulation	Annex
Immunity to electrical fast transient/burst disturbances conducted along AC and DC power lines	UN REGULATION No. 10R06/02	21

Muestra de ensayo/ *Test Sample* :

Sample	Reference	Description	Sample Id. No.
NA	NA	NA	NA

Equipo auxiliar/ *Auxiliary equipment* :

Sample	Reference	Description	Sample Id. No.
NA	NA	NA	NA

Condiciones ambientales/  
*Environmental conditions* :

Temperature (°C)	Humidity (%)	Atm. Pressure (mbar)
NA	NA	NA

Configuración de la ESA/  
*ESA configuration* :

ESA CONFIGURATION DURING TEST		
SYSTEM / FUNCTION	STATE	COMMENT
Charging	ON	NA
SOC	BETWEEN 20% AND 80% CHARGING CURRENT > 80% NOMINAL CURRENT	NA

Criterio de fallo/  
*Failure criterion* :

- Condición incorrecta en la carga (ej. Sobre-corriente, sobrevoltaje) / *Incorrect charging condition (e.g. over-current, overvoltage)*

\* LOS RESULTADOS PRESENTADOS SE REFIEREN ÚNICAMENTE A LA MUESTRA ENSAYADA.  
*THE PRESENTED RESULTS REFER ONLY TO THE TESTED SAMPLE.*

\* QUEDA TERMINANTEMENTE PROHIBIDA LA REPRODUCCIÓN PARCIAL DE ESTE INFORME SIN PERMISO EXPRESO DE IDIADA.  
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*THE DECISION RULE USED, ACCORDING TO THE ILAC-G8 STANDARD, WAS THE BINARY STATEMENT FOR SIMPLE ACCEPTANCE*

Resultados de ensayo / Test results :

Sample	Charging mode	Input current	Phase	Battery charge level [%]	Results
#1	(1-Phase)	$\leq 16$ A	Live	NA	<del>PASS/FAIL</del>
#1	(1-Phase)	$\leq 16$ A or $16 \text{ A} \leq I \leq 75 \text{ A}$	Live	NA	<del>PASS/FAIL</del>
					<del>PASS/FAIL</del>
#1	(3-Phases)	$16 \text{ A} \leq I \leq 75 \text{ A}$	Live 1	NA	<del>PASS/FAIL</del>
			Live 2	NA	<del>PASS/FAIL</del>
			Live 3	NA	<del>PASS/FAIL</del>

\* LOS RESULTADOS PRESENTADOS SE REFIEREN ÚNICAMENTE A LA MUESTRA ENSAYADA.  
THE PRESENTED RESULTS REFER ONLY TO THE TESTED SAMPLE.

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THE DECISION RULE USED, ACCORDING TO THE ILAC-G8 STANDARD, WAS THE BINARY STATEMENT FOR SIMPLE ACCEPTANCE



3.8. IMMUNIDAD A LAS SOBRETENSIONES ELÉCTRICAS CONDUCCIDAS POR LAS LÍNEAS DE ALIMENTACIÓN DE CORRIENTE ALTERNA O CORRIENTE CONTÍNUA / IMMUNITY TO SURGES CONDUCTED ALONG AC AND DC POWER LINES

Método de ensayo/ *Test method* :

Test	Regulation	Annex
Immunity to surges conducted along AC and DC power lines	UN REGULATION No. 10R06/02	22

Muestra de ensayo/ *Test Sample* :

Sample	Reference	Description	Sample Id. No.
NA	NA	NA	NA

Equipo auxiliar/ *Auxiliary equipment* :

Sample	Reference	Description	Sample Id. No.
NA	NA	NA	NA

Condiciones ambientales/  
*Environmental conditions* :

Temperature (°C)	Humidity (%)	Atm. Pressure (mbar)
NA	NA	NA

Configuración de la ESA/  
*ESA configuration* :

ESA CONFIGURATION DURING TEST		
SYSTEM / FUNCTION	STATE	COMMENT
Charging	ON	NA
SOC	BETWEEN 20% AND 80% CHARGING CURRENT > 80% NOMINAL CURRENT	NA

\* LOS RESULTADOS PRESENTADOS SE REFIEREN ÚNICAMENTE A LA MUESTRA ENSAYADA.  
*THE PRESENTED RESULTS REFER ONLY TO THE TESTED SAMPLE.*

\* QUEDA TERMINANTEMENTE PROHIBIDA LA REPRODUCCIÓN PARCIAL DE ESTE INFORME SIN PERMISO EXPRESO DE IDIADA.  
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*THE DECISION RULE USED, ACCORDING TO THE ILAC-G8 STANDARD, WAS THE BINARY STATEMENT FOR SIMPLE ACCEPTANCE*

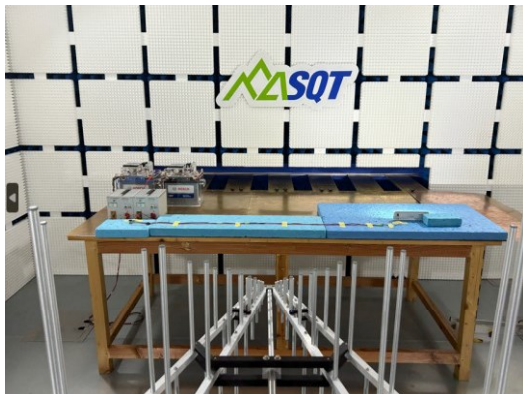
Criterio de fallo/  
Failure criterion:

- Condición incorrecta en la carga (ej. Sobre-corriente, sobrevoltaje) / *Incorrect charging condition (e.g. over-current, overvoltage)*

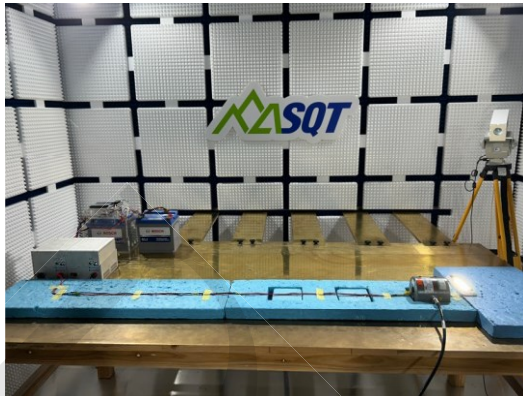
Resultados de ensayo / Test results :

Sample	Charging mode	Input current	Phase	Battery charge level [%]	Results
#1	(1-Phase)	$\leq 16 \text{ A}$	Live	NA	<del>PASS/FAIL</del>
#1	(1-Phase)	$\leq 16 \text{ A}$ or $16 \text{ A} \leq I \leq 75 \text{ A}$	Live	NA	<del>PASS/FAIL</del>
					<del>PASS/FAIL</del>
#1	(3-Phases)	$16 \text{ A} \leq I \leq 75 \text{ A}$	Live 1	NA	<del>PASS/FAIL</del>
			Live 2	NA	<del>PASS/FAIL</del>
			Live 3	NA	<del>PASS/FAIL</del>

4. FOTOGRAFÍAS/  
PICTURES



- \* LOS RESULTADOS PRESENTADOS SE REFIEREN ÚNICAMENTE A LA MUESTRA ENSAYADA.  
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*THE DECISION RULE USED, ACCORDING TO THE ILAC-G8 STANDARD, WAS THE BINARY STATEMENT FOR SIMPLE ACCEPTANCE*



Lugar de ensayo/ *Test place* : SQT, Guangzhou(China)  
Fecha de ensayo/ *Test date* : 28/09/2023

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**Information document no. BR1003 Series-00 relating to type-approval of an  
electronic subassembly with respect to electromagnetic compatibility (ECE  
Regulation 10.06 to Supplement 2)**

Type : BR1003 Series

Date : 2023/09/20

Total pages : 12

Information folder No. : BR1003 Series-00  
Manufacturer : Guangzhou Bory Auto Light Co., Ltd.  
Regulation : R10.06 to Supplement 2

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- 3 General
- 5 Drawings of the ESA
- 11 Electronic block diagram
- 12 List of components constituting the ESA

Information folder No. : BR1003 Series-00  
Manufacturer : Guangzhou Bory Auto Light Co., Ltd.  
Regulation : R10.06 to Supplement 2

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## GENERAL

1. Make (trade name of manufacturer):  
**BORY AUTO LIGHT**

2. Type: **BR1003 Series**  
Variants: **BR10020101, BR10020201, BR10020301, BR10020102, BR10020202, BR10020302, BR10030101, BR10030201, BR10030301, BR10030102, BR10030202, BR10030302, BR10040101, BR10040201, BR10040301, BR10040102, BR10040202, BR10040302, BR10050101, BR10050201, BR10050301, BR10050102, BR10050202, BR10050302**

**Above variants have the same electronic circuit design and the same component list for each PCB, the differences among them are model name, appearance and light color.**

General commercial description(s):  
**LED interior light**

3. Means of identification of type, if marked on the component/separate technical unit <sup>(1)</sup>:  
**Approval mark**

3.1 Location of that marking:  
**Stuck on the enclosure, See Drawings of the ESA**

4. Name and address of manufacturer:  
**Guangzhou Bory Auto Light Co., Ltd.  
4/F, Building 8, No.2 Ke'er Road (Self compiled), Dongyong Town, Nansha District, Guangzhou, Guangdong 511443, China.**

Name and address of authorised representative, if any:**N/A**

5. In the case of components and separate technical units, location and method of affixing of the approval mark:  
**Stuck on the enclosure, See Drawings of the ESA.**

6. Address(es) of assembly plant(s):  
**Guangzhou Bory Auto Light Co., Ltd.  
4/F, Building 8, No.2 Ke'er Road (Self compiled), Dongyong Town, Nansha District, Guangzhou, Guangdong 511443, China.**

7. This ESA shall be approved as a component/STU<sup>2</sup>.

8. Any restrictions of use and conditions for fitting:  
**N/A**

9. Electrical system rated voltage:  
**DC 12V/24V, positive/negative<sup>2</sup> ground.**

Appendix 1: Description of the ESA chosen to represent the type (electronic block diagram and list of main component constituting the ESA (e.g. make and type of microprocessor, crystal, etc.).

**See electronic block diagram and list of main component constituting the ESA for details.**

Appendix 2: Relevant test report(s) supplied by the manufacturer from a test laboratory accredited to ISO 17025 and recognized by the Type Approval Authority for the purpose of drawing up the type approval certificate.

**N/A**

Only applicable for charging systems: **N/A**

10. Charger:  
**N/A**

11. Charging current:  
**N/A**

12. Maximal nominal current (in each mode if necessary) :  
**N/A**

13. Nominal charging voltage:  
**N/A**

14. Basic ESA interface functions:  
**N/A**

15. Minimum  $R_{sce}$  value (see paragraph 7.11. of this Regulation):  
**N/A**

1. If the means of identification of type contains characters not relevant to describe the component or separate technical unit types covered by this information document, such characters shall be represented in the documentation by the symbol "?" (e.g. ABC??123??).

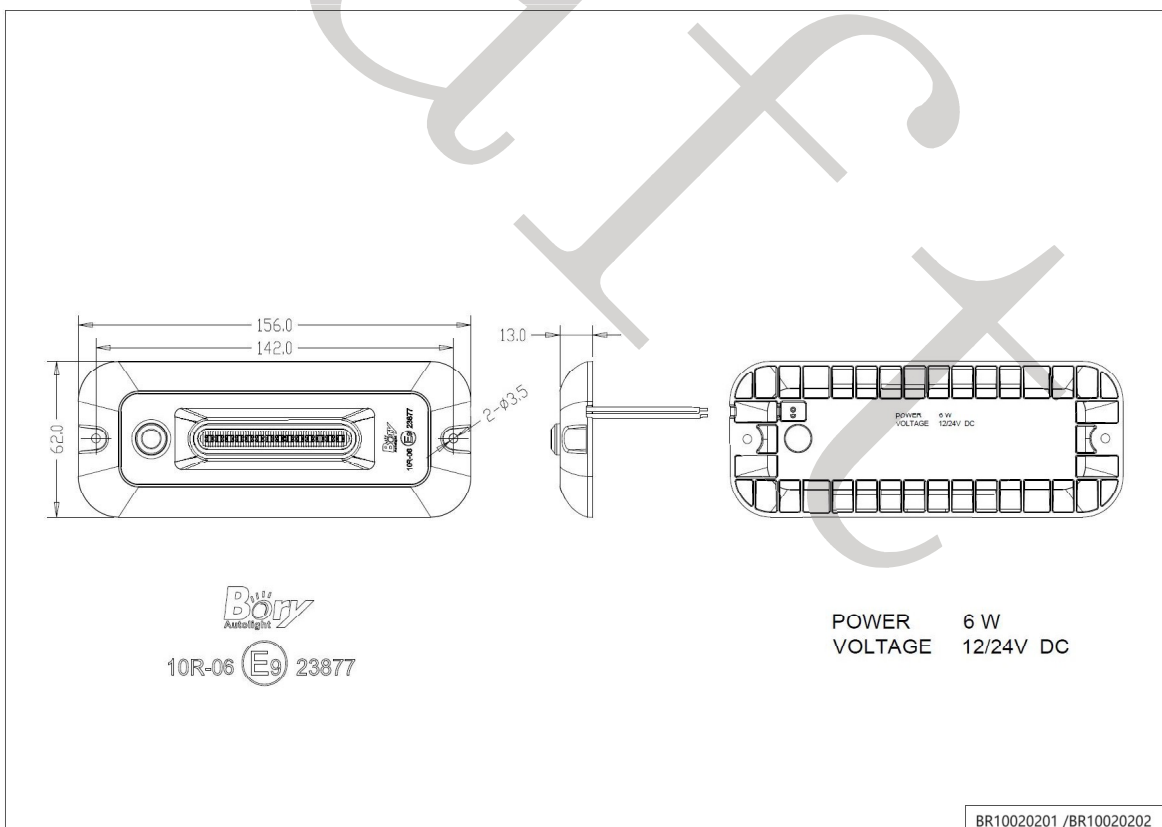
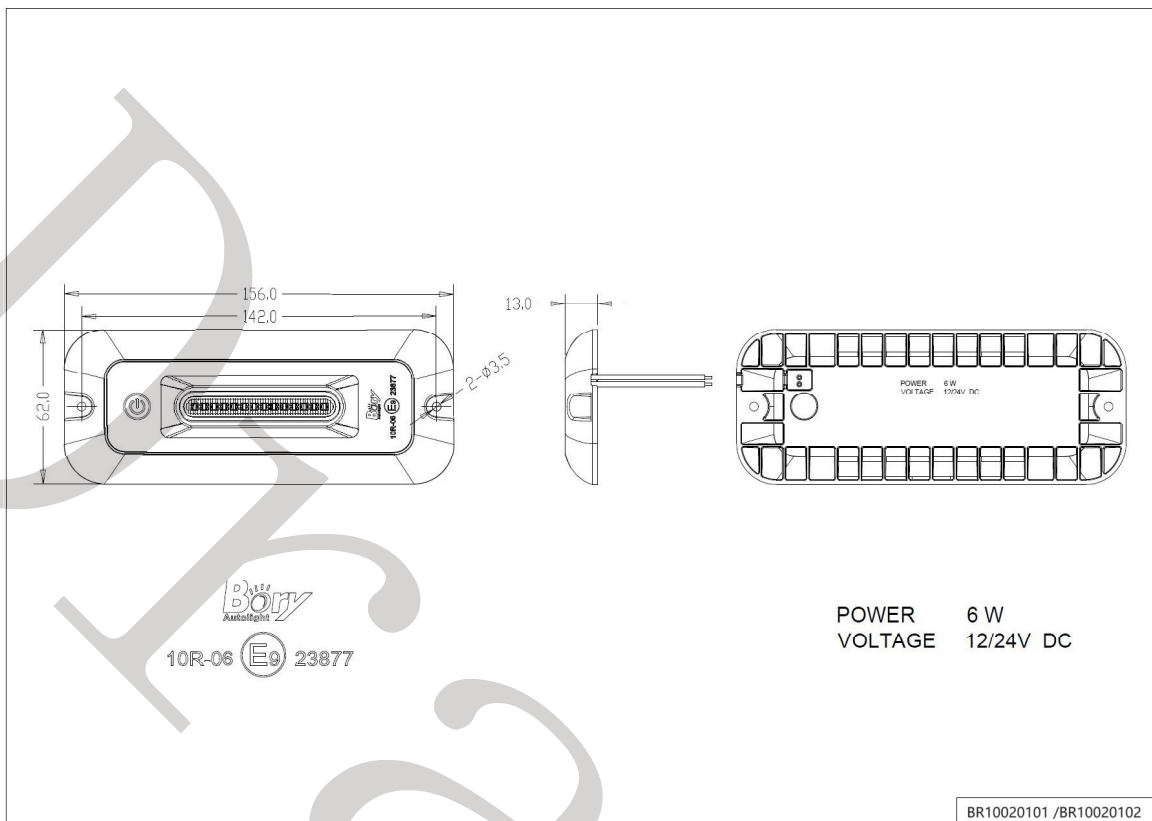
2. Delete where not applicable.



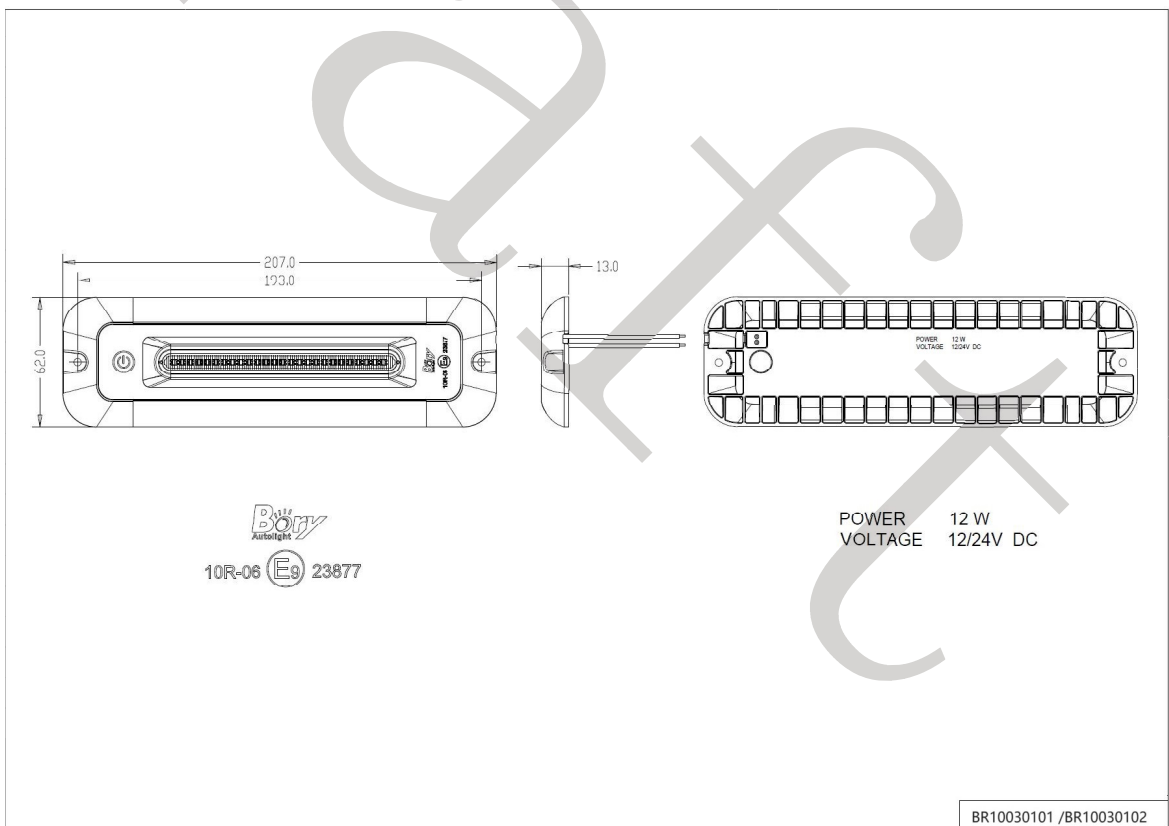
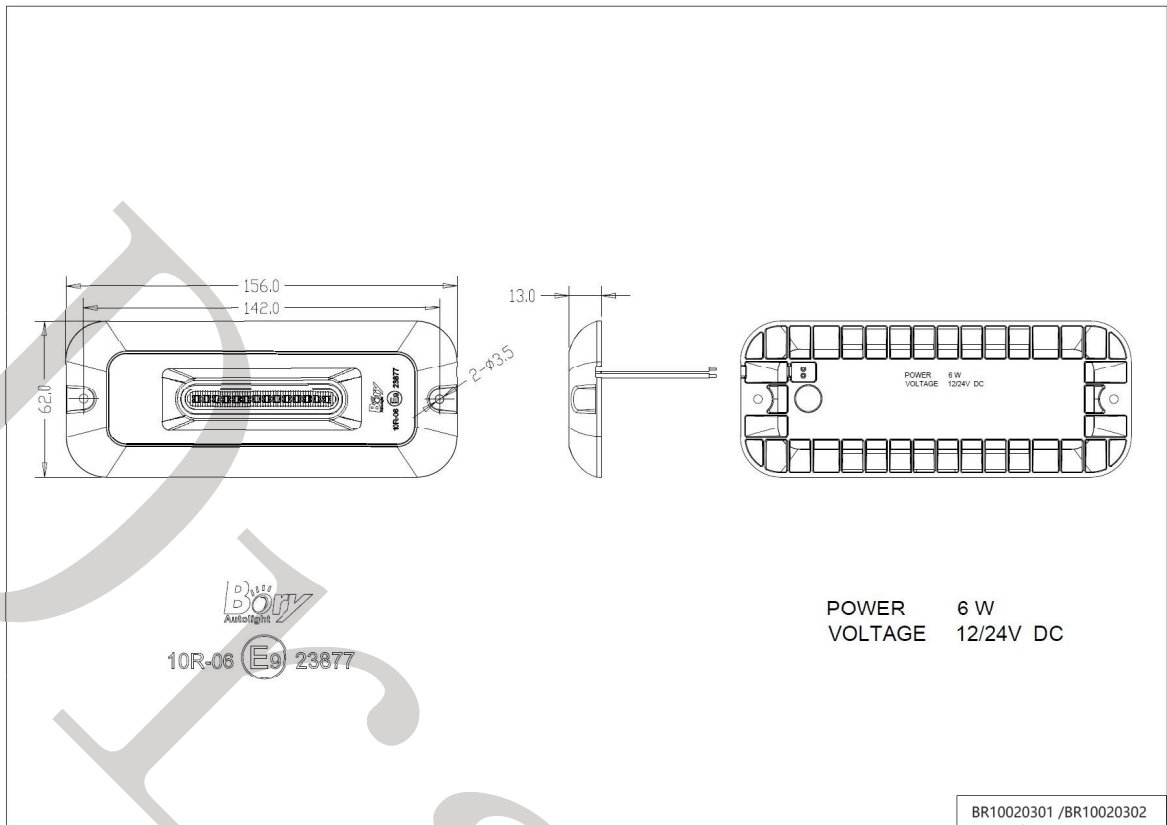
Information folder No. : BR1003 Series-00  
 Manufacturer : Guangzhou Bory Auto Light Co., Ltd.  
 Regulation : R10.06 to Supplement 2

## Drawings of the ESA

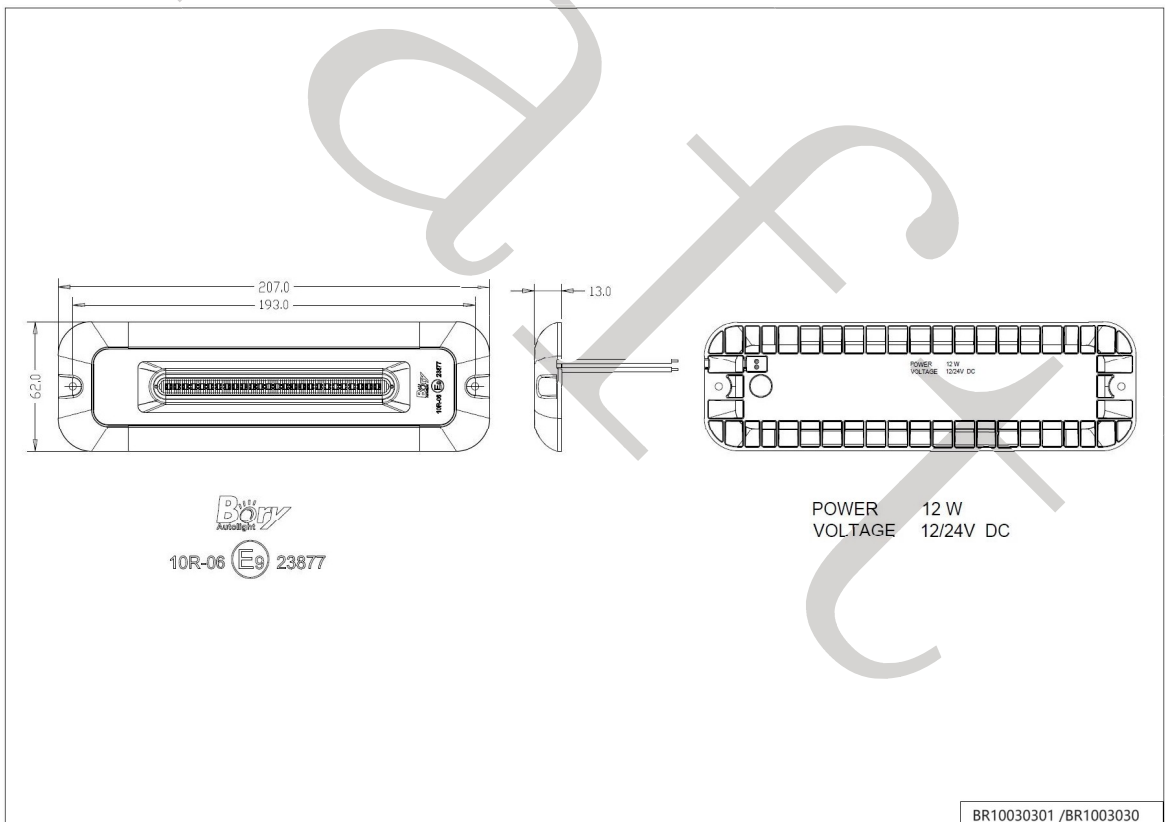
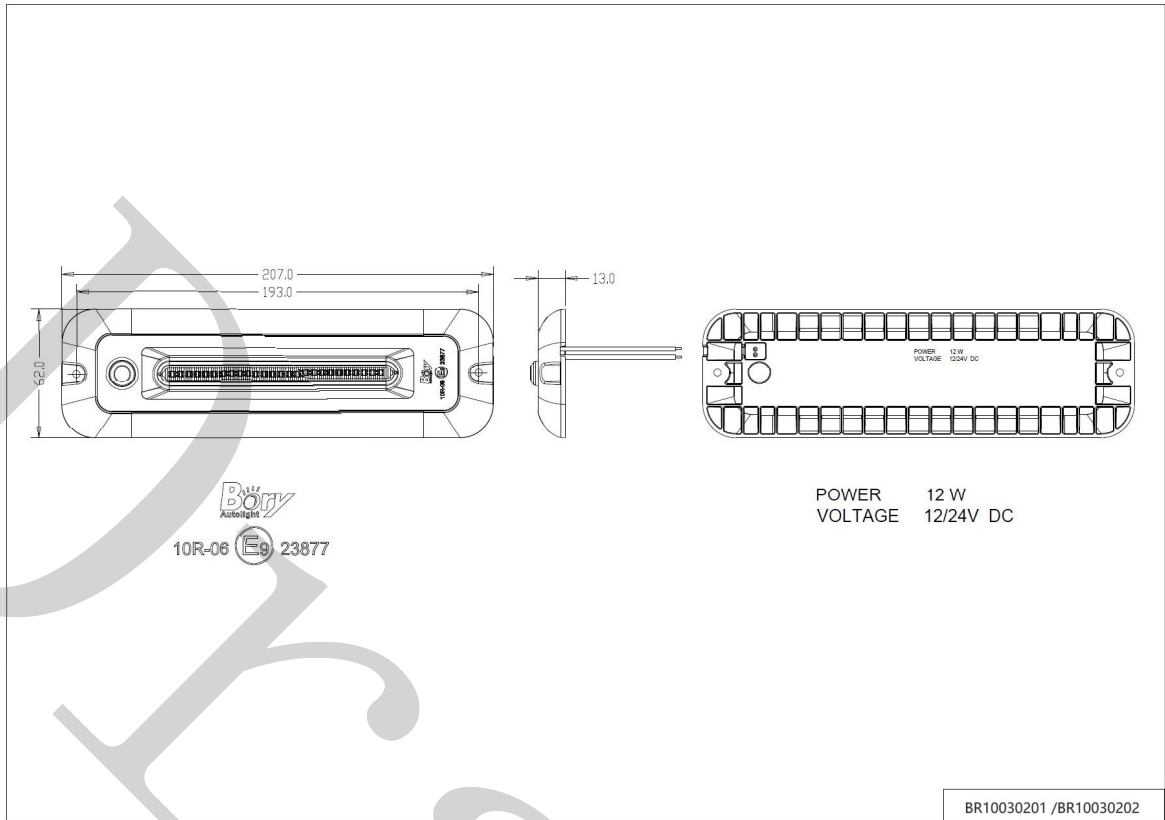
### Location of the ECE approval mark



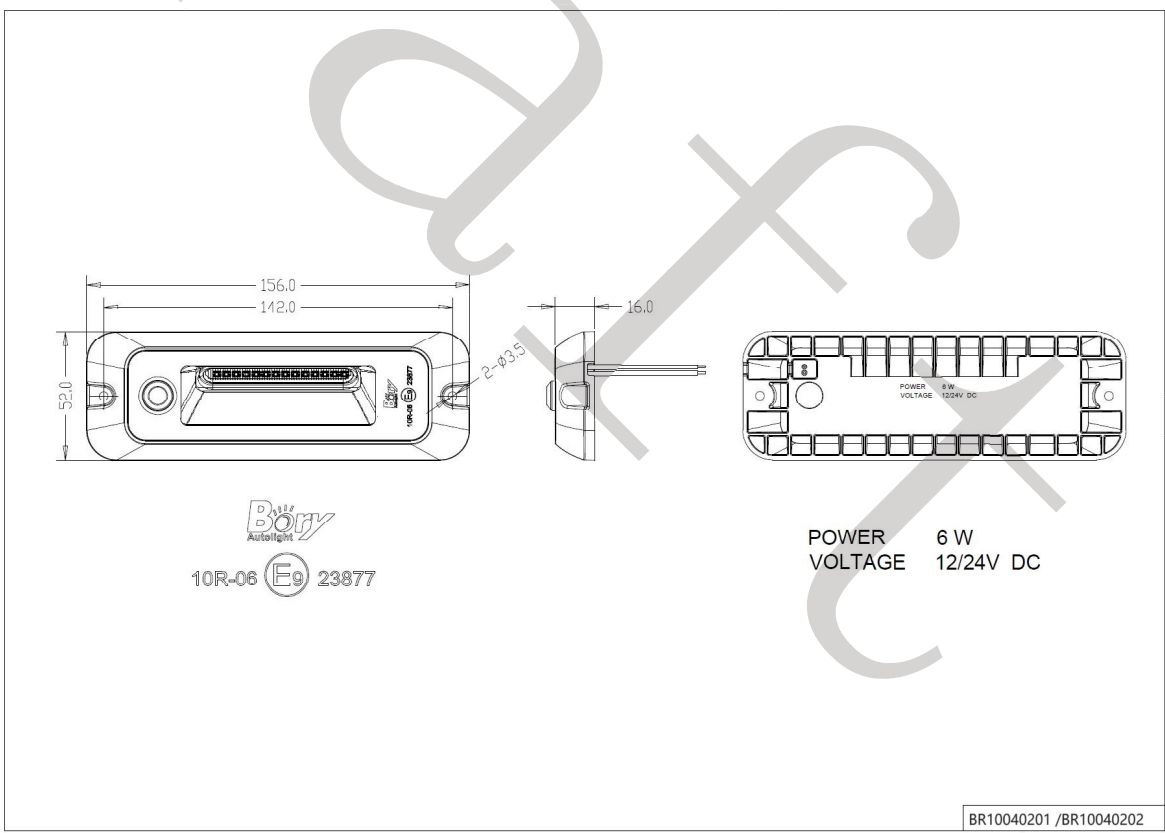
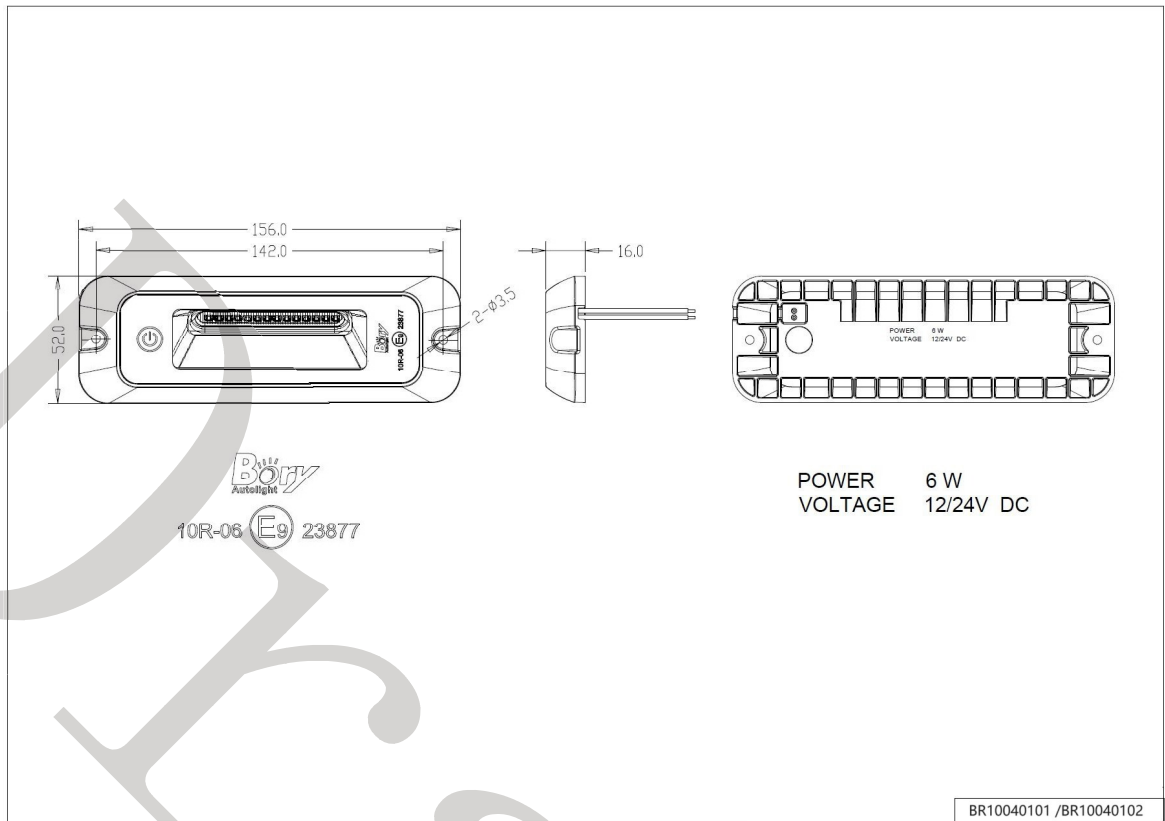
Information folder No. : BR1003 Series-00  
 Manufacturer : Guangzhou Bory Auto Light Co., Ltd.  
 Regulation : R10.06 to Supplement 2



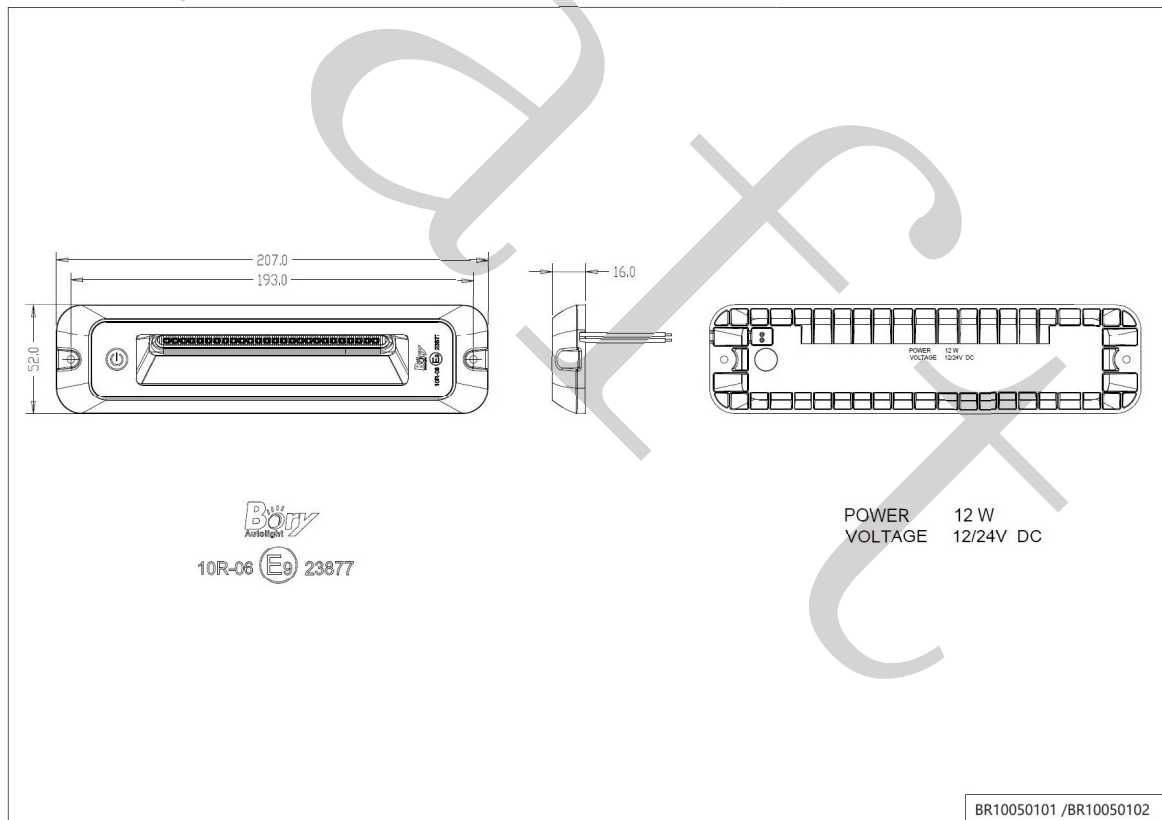
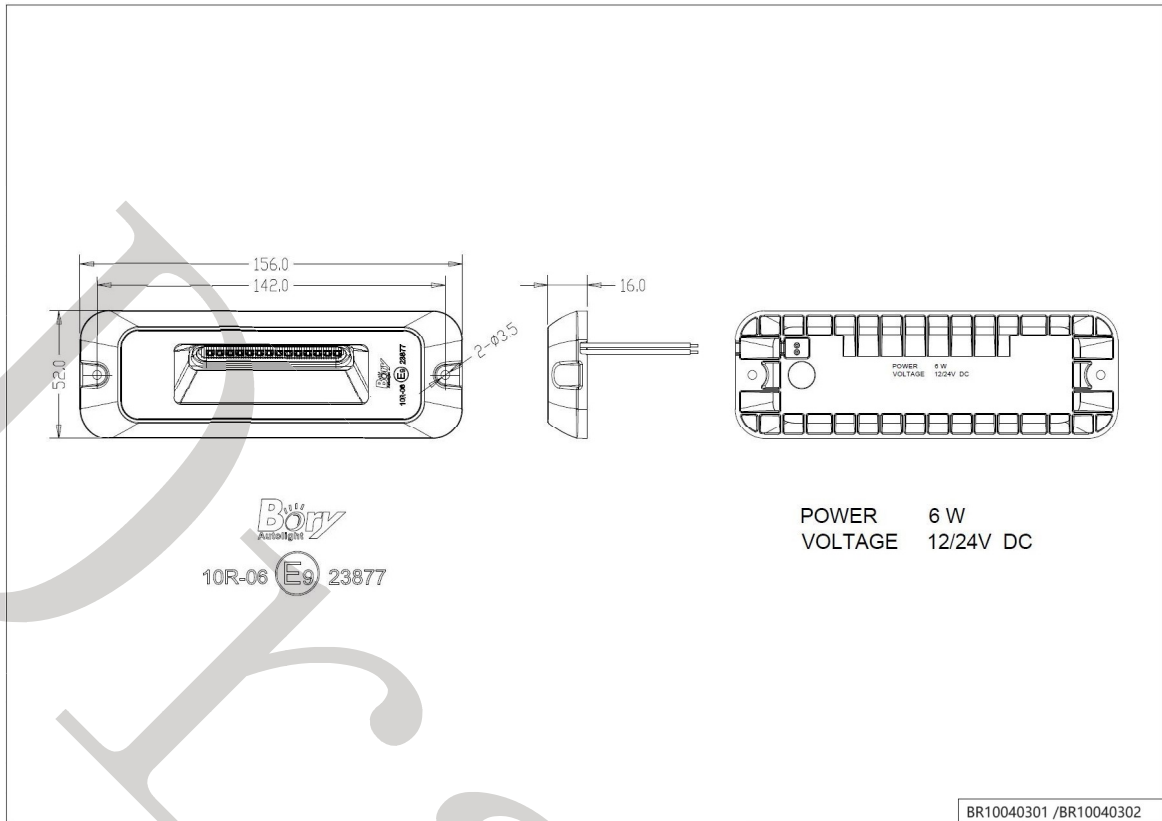
Information folder No. : BR1003 Series-00  
Manufacturer : Guangzhou Bory Auto Light Co., Ltd.  
Regulation : R10.06 to Supplement 2



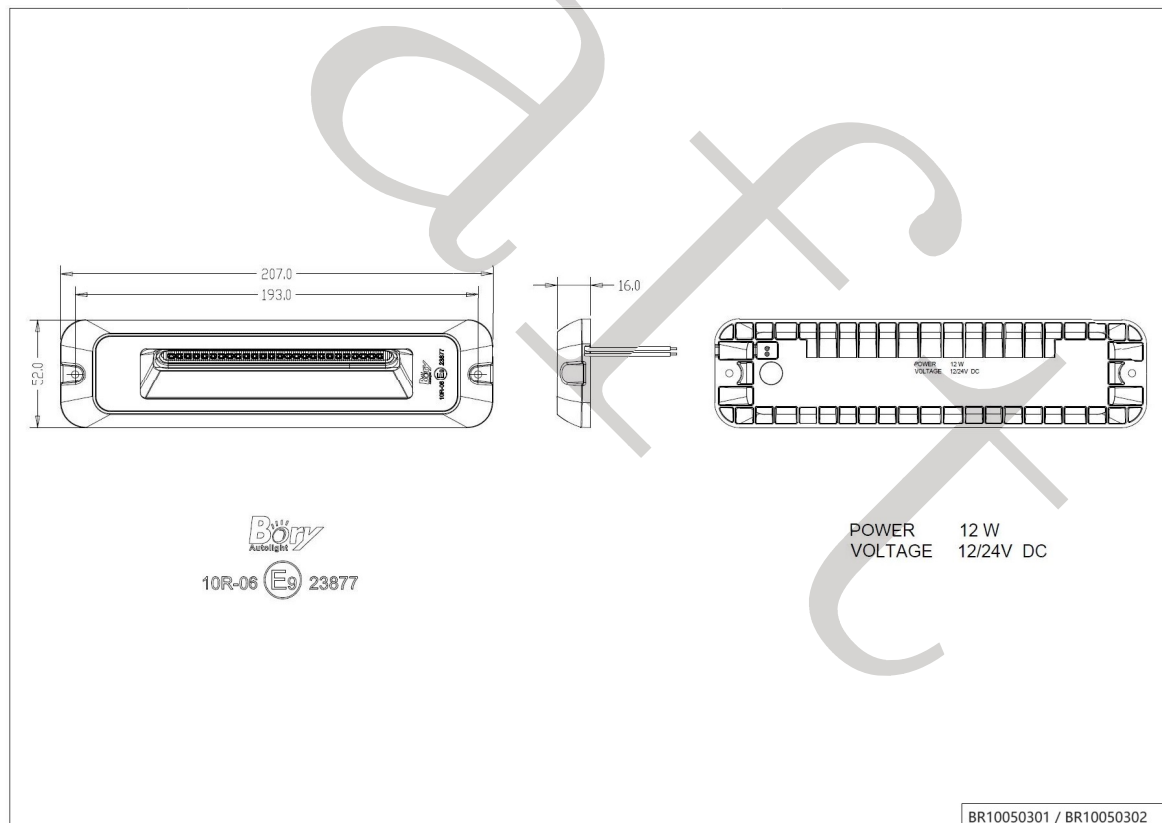
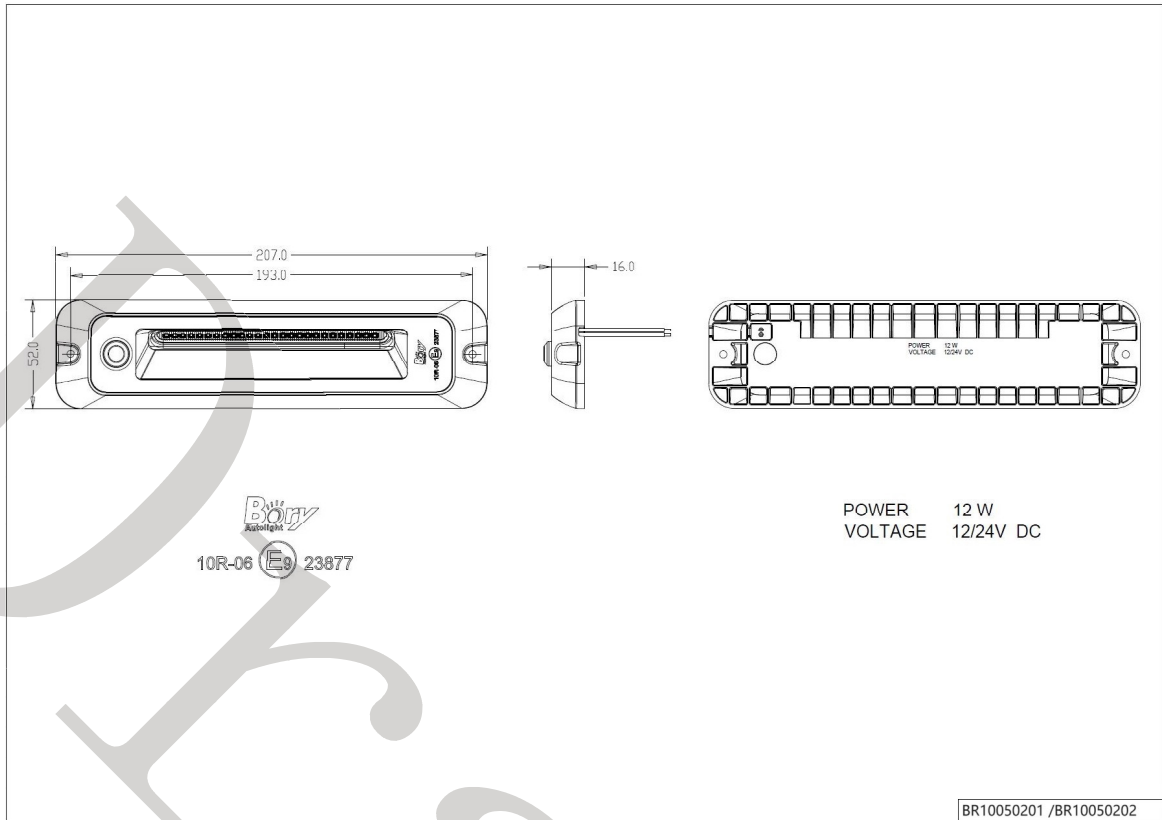
Information folder No. : BR1003 Series-00  
Manufacturer : Guangzhou Bory Auto Light Co., Ltd.  
Regulation : R10.06 to Supplement 2



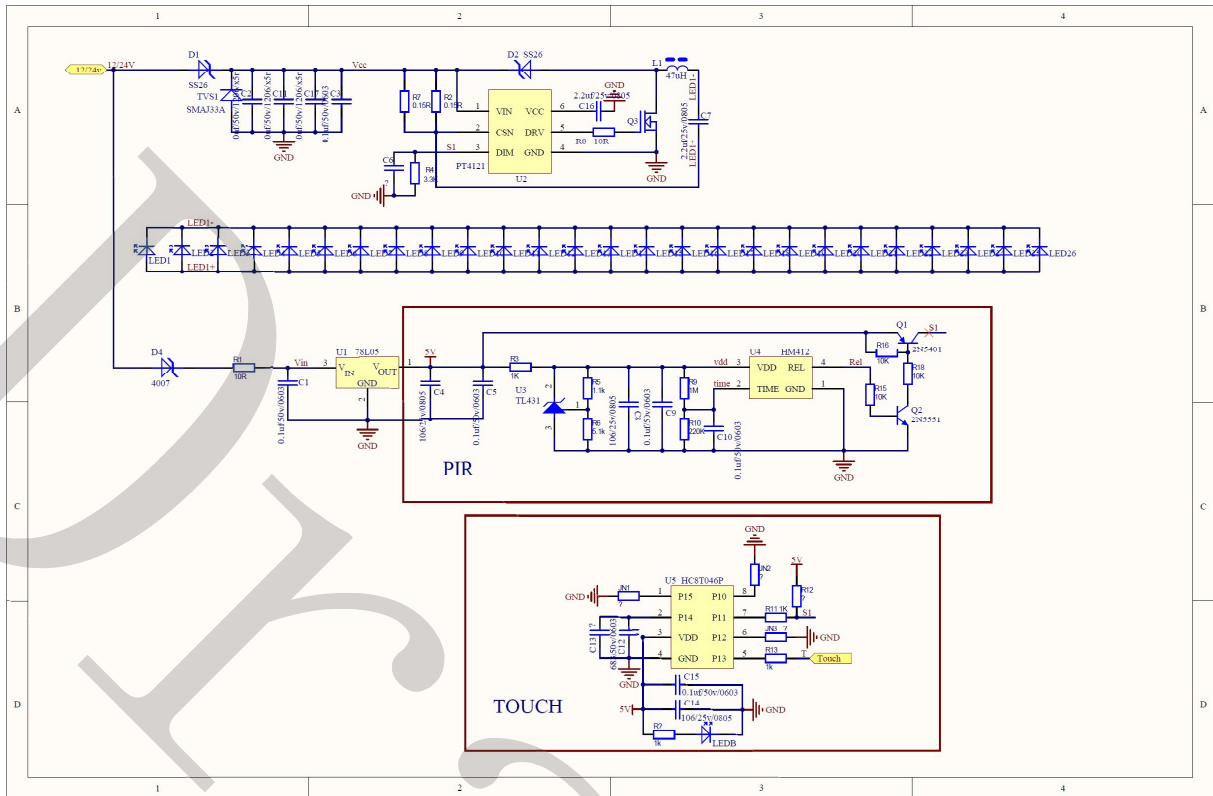
Information folder No. : BR1003 Series-00  
Manufacturer : Guangzhou Bory Auto Light Co., Ltd.  
Regulation : R10.06 to Supplement 2



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### Electronic Block Diagram





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Manufacturer : Guangzhou Bory Auto Light Co., Ltd.  
Regulation : R10.06 to Supplement 2

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### List of main component constituting the ESA

No	Component	Specification	Quantity
1	LED	1W,2835,9V	/
2	IC	PT4121,SOT23-6	1
3	Diode	LCEAJCMA, DO-214AC	1
4	Diode	LCE36, DO-214AC	/
5	Capacitor	10uF, 50v, 1206	3
6	Capacitor	2.2uF, 25v, 0805	2
7	Inductance	47uh, LCEYT6050-470M	1