



Key Parameters

| | |
|---------------------|----------|
| V_{DRM} / V_{RRM} | = 2400V |
| $I_{T(AV)}$ | = 775A |
| I_{TSM} | = 11.0kA |
| $V_{T(TO)}$ | = 0.97V |
| r_T | = 0.48mΩ |

Features

- Full blocking capability over wide temperature range
- High Surge current capability
- Hermetic metal case with ceramic insulator

Applications

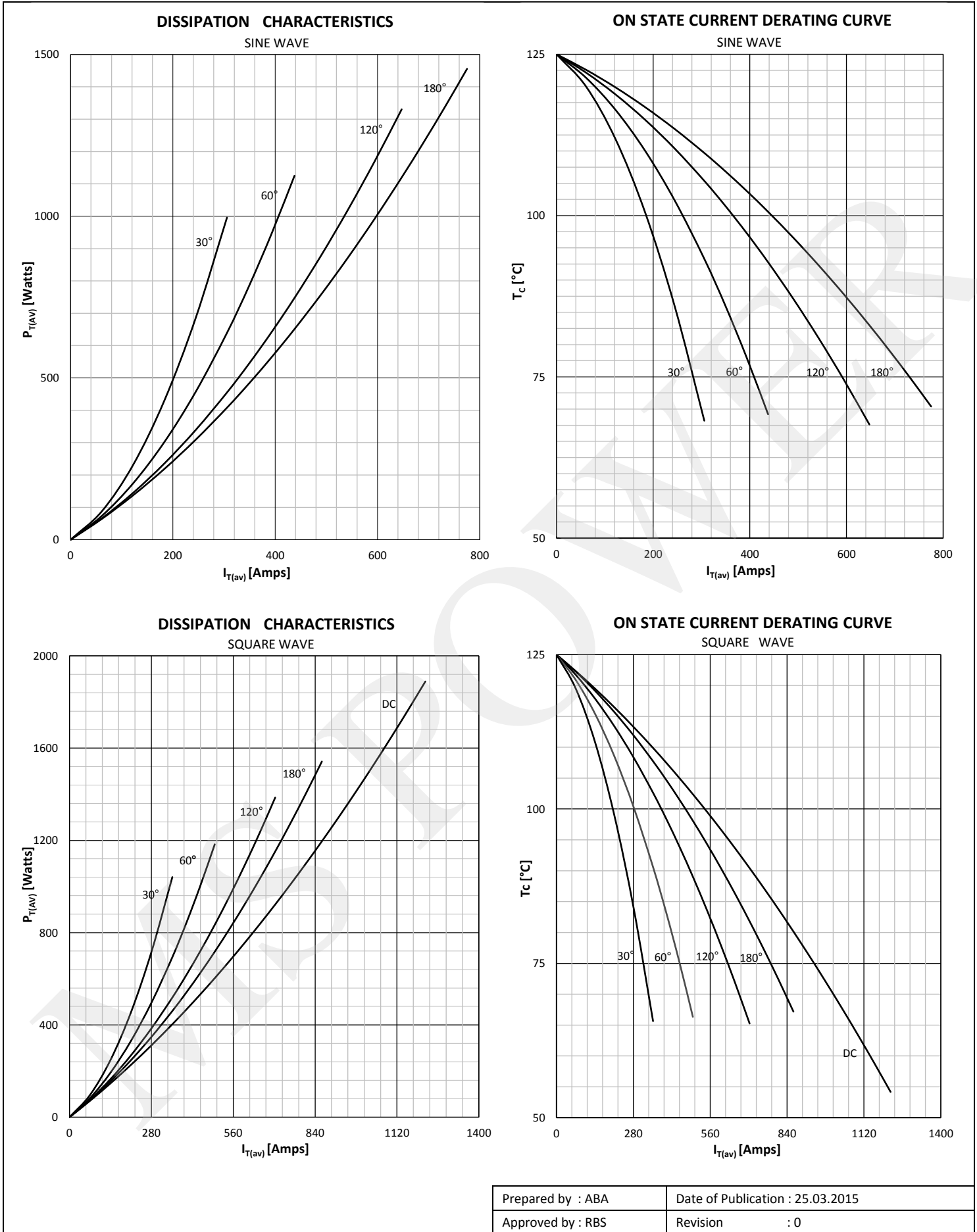
- Battery Chargers
- Medical Equipment
- UPS
- Power Supplies
- Motor control
- Controlled Rectifiers
- Transportation
- Induction Heating
- Welding

Ordering Information

| | | | |
|--|--------------|---|--|
| MS T | 775 | C | XX |
| Phase Control Thyristor | Current Code | C - Capsule package with Alloyed silicon technology | Voltage Code Code X 100 = V_{DRM}/V_{RRM} |
| Order Code MS T775C24 : 2400V V_{DRM}, V_{RRM} , 14mm clamp height capsule thyristor | | | |

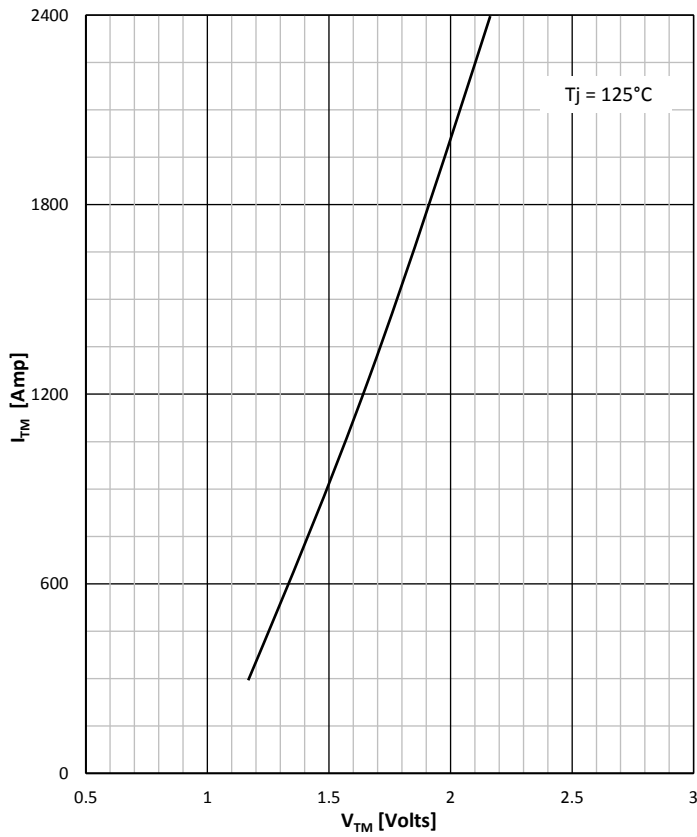
| | |
|-------------------|----------------------------------|
| Prepared by : ABA | Date of Publication : 25.03.2015 |
| Approved by : RBS | Revision : 0 |

| Symbol | Characteristic | Conditions | T _j [°C] | Value | Unit |
|----------------------|--|--|---------------------|----------------------------------|------------------|
| BLOCKING | | | | | |
| V _{RRM} | Repetitive peak reverse voltage | | 125 | 1800 - 2400 | V |
| V _{RSM} | Non-repetitive peak reverse voltage | | 125 | 1900 - 2500 | V |
| V _{DRM} | Repetitive peak off-state voltage | | 125 | 1800 - 2400 | V |
| I _{RRM} | Repetitive peak reverse current | V = V _{RRM} | 125 | 30 | mA |
| I _{DRM} | Repetitive peak off-state current | V = V _{DRM} | 125 | 30 | mA |
| CONDUCTING | | | | | |
| I _{T(AV)} | Mean on state current | 180° sin ,50 Hz, T _c =70°C, Double side cooled 180° sin ,50 Hz, T _c =73°C, Double side cooled | | 775 750 | A |
| I _{RMS} | RMS on-state current | T _c =70°C, Double side cooled | | 1217 | A |
| I _{TSM} | Surge on-state current | Sine wave, 10 ms Without reverse voltage | 25 | 11000 | A |
| | | | 125 | 9600 | A |
| I ² t | I ² t | Sine wave, 10 ms Without reverse voltage | 25 | 605 x 10 ³ | A ² s |
| | | | 125 | 461 x 10 ³ | A ² s |
| V _T | On-state voltage | On-state current = 625A | 125 | 1.35 | V |
| V _{T(TO)} | Threshold voltage | | 125 | 0.97 | V |
| r _T | On-state slope resistance | | 125 | 0.48 | mΩ |
| SWITCHING | | | | | |
| di/dt | Critical rate of rise of on-state current | | 125 | 150 | A/μs |
| dv/dt | Critical rate of rise of off-state voltage | V _{DR} = 67%V _{DRM} | 125 | 500 | V/μs |
| GATE | | | | | |
| I _{gt} | Gate trigger current | V _D =6V | 25 | 150 | mA |
| V _{gt} | Gate trigger voltage | V _D =6V | 25 | 3.0 | V |
| I _H | Holding current | V _D =6V, gate open circuit | 25 | 600 | mA |
| I _L | Latching current | V _D =6V | 25 | 1000 | mA |
| MOUNTING | | | | | |
| R _{th(j-c)} | Thermal impedance, sin 180° | Junction to case, Double side cooled | | 0.035 | °C/W |
| R _{th(j-c)} | Thermal impedance, rec120° | Junction to case, Double side cooled | | 0.040 | °C/W |
| R _{th(c-h)} | Thermal impedance | Case to heatsink, Double side cooled | | 0.02 | °C/W |
| T _j | Max. junction temperature | | | 125 | °C |
| T _{stg} | Storage temperature | | | -40 ... 125 | °C |
| M | Clamping Force | | | 8 - 12 | kN |
| W | Weight (Approx.) | | | 150 | gm |
| | | | Prepared by : ABA | Date of Publication : 25.03.2015 | |
| | | | Approved by : RBS | Revision : 0 | |

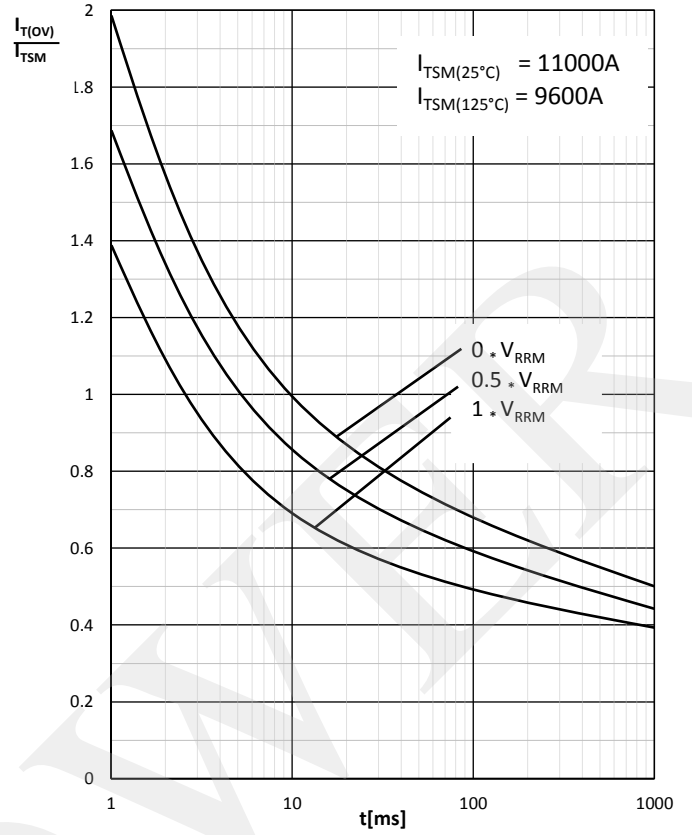


| | |
|-------------------|----------------------------------|
| Prepared by : ABA | Date of Publication : 25.03.2015 |
| Approved by : RBS | Revision : 0 |

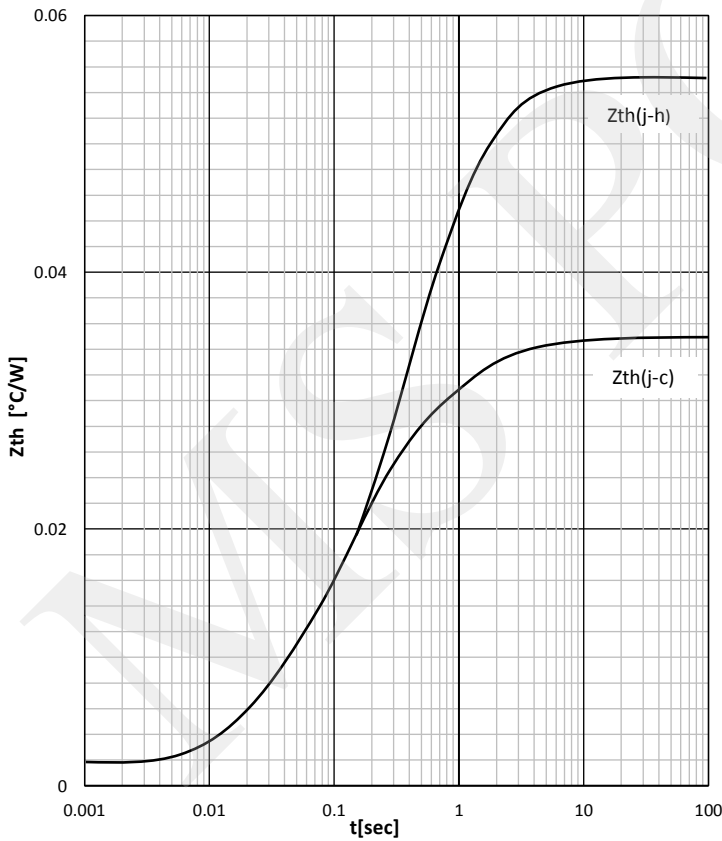
ON STATE CHARACTERISTIC



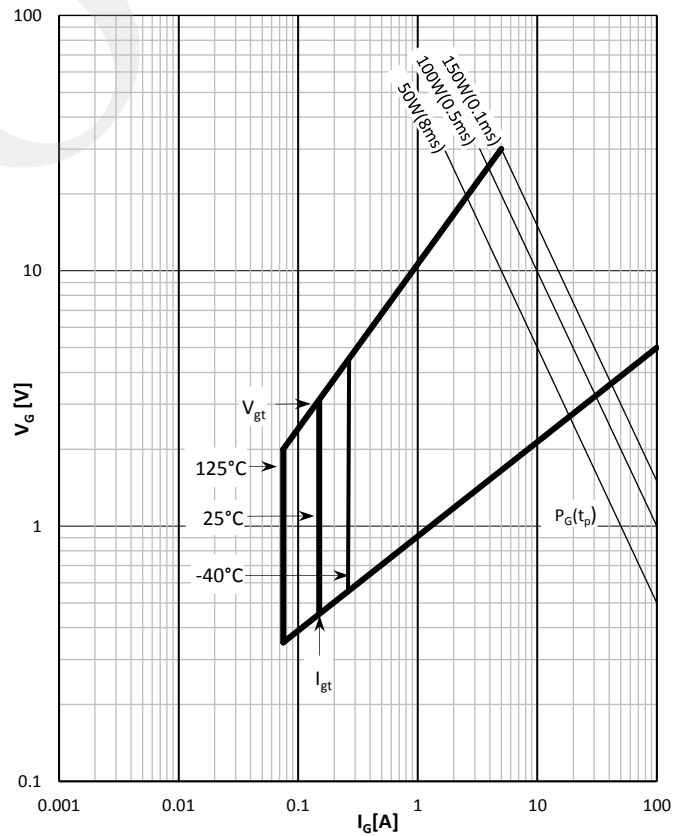
SURGE CHARACTERISTICS



TRANSIENT THERMAL IMPEDANCE



GATE TRIGGER CHARACTERISTICS



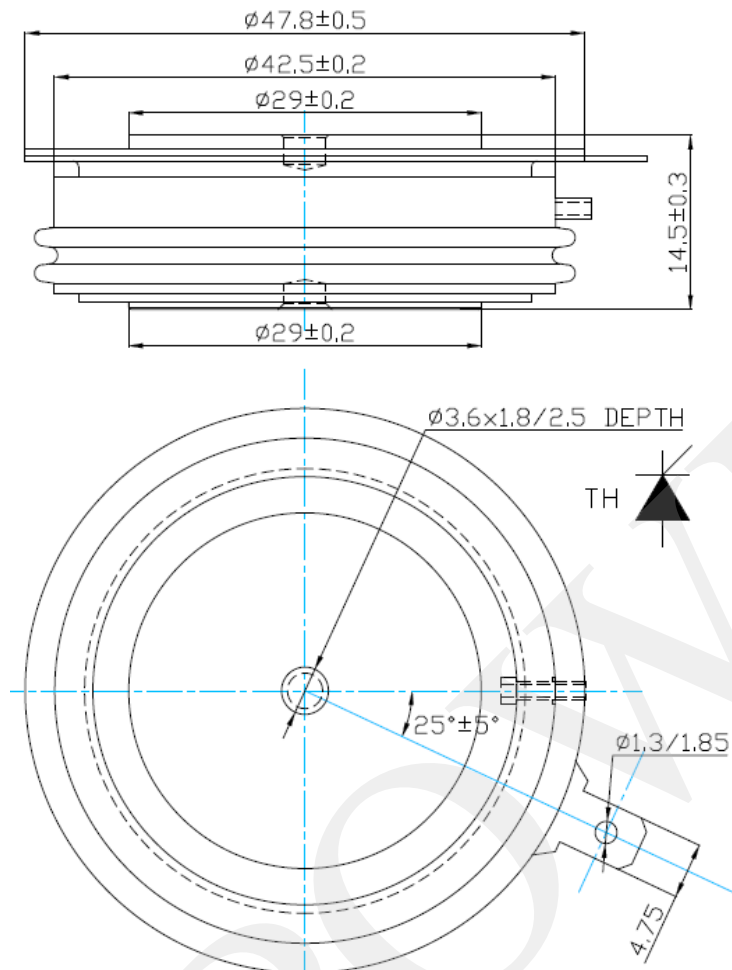
Prepared by : ABA

Date of Publication : 25.03.2015

Approved by : RBS

Revision : 0

Outline



MS Power GmbH

Mergenthalerallee 79-81
65760 Eschborn, Germany
Web: www.mspowergroup.com
Mail: info@mspowergroup.de

Sales & Enquiry:

sales@mspowergroup.de

Technical Support:

solution@mspowergroup.de

After sales Service:

service@mspowergroup.de

Phone: +49 (0) 6196/7768 666

Fax: +49 (0) 6196/7757 888



Prepared by : ABA

Date of Publication : 25.03.2015

Approved by : RBS

Revision : 0

Terms & Conditions of usage :

The data contained in this product datasheet is exclusively Intended for technically trained staff. You and your technical departments will have to evaluate the suitability of the product for the intended application and the completeness of the product data with respect to such application. This product datasheet is describing the characteristics of this product for which a warranty is granted. Any such warranty is granted exclusively pursuant the terms and conditions of the supply agreement. There will be no guarantee of any kind for the product and its characteristics. The information in the valid application-and assembly notes of the device must be considered.

Should you require product information in excess of the data given in this product datasheet or which concerns the specific application of our product, please contact the sales office, which is responsible for you (see www.mspowergroup.com). For those that are specifically interested we may provide application notes.

Due to technical requirements our product may contain dangerous substances. For information on the types in question please contact the sales office, which is responsible for you.

Should you intend to use the Product in aviation applications, in health or live endangering or life support applications, please notify. Please note, that for any such applications we urgently recommend

- to perform joint Risk and Quality Assessments;
- the conclusion of Quality Agreements;
- to establish joint measures of an ongoing product survey, and that we may make delivery depended on the realization of any such measures.

If and to the extent necessary, please forward equivalent notices to your customers.

Changes of this product datasheet are reserved.

| | |
|-------------------|----------------------------------|
| Prepared by : ABA | Date of Publication : 25.03.2015 |
| Approved by : RBS | Revision : 0 |