

UNITS: INCHES

ROTATION FROM NDE

CCW
  CW

NOTES:

1. MAIN CONDUIT BOX MAY BE ROTATED IN 90° INCREMENTS
2. STANDARD PRODUCT USES BI-DIRECTIONAL FAN. OPPOSITE ROTATION AVAILABLE ONLY BY CONNECTION CHANGE.
3. KEY DIMENSIONS EQUAL 0.500"x 0.500"x 3.25" (MOTOR SUPPLIED WITH KEY)

TOSHIBA RESERVES THE RIGHT TO MAKE CHANGES OF TECHNICAL IMPROVEMENT AND THE DATA MAY CHANGE WITHOUT NOTICE  PRELIMINARY

DO NOT USE FOR CONSTRUCTION, INSTALLATION, OR APPLICATION PURPOSES UNLESS THE DRAWING IS MARKED AS CERTIFIED  CERTIFIED

**TOSHIBA**  
www.toshiba.com/tic  
TOSHIBA INTERNATIONAL CORPORATION

SEVERE DUTY  
**EQP** **SD**

TOTALLY ENCLOSED FAN COOLED  
FOOTED C-FACED  
3 PHASE INDUCTION MOTOR  
284TC-286TC F1 ASSEMBLY

DRAWING #: MDSL005-05  
REV. DATE: 07/05/18 REV. #: 0 PER.: M. O'DOWD  
REV. DESCRIP.:



|             |            |            |  |
|-------------|------------|------------|--|
| Issued Date | 12/18/2019 | Transmit # |  |
| Issued By   | dschoeck   | Issued Rev |  |

### TYPICAL MOTOR PERFORMANCE DATA

Model: 0254SDSR42A-P

| HP        | kW   | Pole       | FL RPM | Frame | Voltage        | Hz          | Phase    | FL Amps      |
|-----------|------|------------|--------|-------|----------------|-------------|----------|--------------|
| 25        | 18.5 | 4          | 1770   | 284TC | 230/460        | 60          | 3        | 62/31        |
| Enclosure | IP   | Ins. Class | S.F.   | Duty  | NEMA Nom. Eff. | NEMA Design | kVA Code | Ambient (°C) |
| TEFC      | 55   | F          | 1.15   | CONT  | 93.6           | B           | G        | 40 C         |

| Load         | HP    | kW   | Amperes | Efficiency (%) | Power Factor (%) |
|--------------|-------|------|---------|----------------|------------------|
| Full Load    | 25    | 18.6 | 31.0    | 93.8           | 83.5             |
| ¾ Load       | 18.75 | 14.0 | 23.8    | 93.1           | 80.5             |
| ½ Load       | 12.50 | 9.3  | 18.3    | 91.4           | 73.0             |
| ¼ Load       | 6.25  | 4.7  | 14.1    | 84.0           | 49.3             |
| No Load      |       |      | 11.0    |                | 5.6              |
| Locked Rotor |       |      | 182     |                | 34.3             |

| Torque               |                         |                    |                       | Rotor wk <sup>2</sup><br>Inertia<br>(lb-ft <sup>2</sup> ) |
|----------------------|-------------------------|--------------------|-----------------------|---|
| Full Load<br>(lb-ft) | Locked Rotor<br>(% FLT) | Pull Up<br>(% FLT) | Break Down<br>(% FLT) |   |
| 74.2                 | 190                     | 165                | 295                   | 5.23  |

| Safe Stall Time(s) |     | Sound Pressure<br>dB(A) @ 1M | Bearings* |         | Approx. Motor Weight<br>(lbs) |
|--------------------|-----|------------------------------|-----------|---------|-------------------------------|
| Cold               | Hot |                              | DE        | NDE     |                               |
| 35                 | 15  | -                            | 6310ZC3   | 6310ZC3 | 511                           |

\*Bearings are the only recommended spare part(s).

**Motor Options:**  
 Product Family:EQP Global SD CFace Footed  
 Mounting:C-Face Footed,Shaft:T Shaft

|             |  |
|-------------|--|
| Customer    |  |
| Customer PO |  |
| Sales Order |  |
| Project #   |  |

Tag:

All characteristics are average expected values.

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|             |           |                  |             |             |               |
|-------------|-----------|------------------|-------------|-------------|---------------|
| Engineering | jhock     | Doc. Written By  | D. Suarez   | Doc.# / Rev | MPCF-1119 / 1 |
| Engr. Date  | 3/13/2014 | Doc. Approved By | M. Campbell | Doc. Issued | 9/20/2019     |



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### TYPICAL MOTOR PERFORMANCE DATA

Model: 0254SDSR42A-P

|           |      |            |        |       |                |             |          |              |
|-----------|------|------------|--------|-------|----------------|-------------|----------|--------------|
| HP        | kW   | Pole       | FL RPM | Frame | Voltage        | Hz          | Phase    | FL Amps      |
| 25        | 18.5 | 4          | 1460   | 284TC | 190/380        | 50          | 3        | 72/36        |
| Enclosure | IP   | Ins. Class | S.F.   | Duty  | NEMA Nom. Eff. | NEMA Design | kVA Code | Ambient (°C) |
| TEFC      | 55   | F          | 1.0    | CONT  | 91.7           | B           | G        | 40 C         |

|              |       |      |         |                |                  |
|--------------|-------|------|---------|----------------|------------------|
| Load         | HP    | kW   | Amperes | Efficiency (%) | Power Factor (%) |
| Full Load    | 25    | 18.6 | 36.0    | 93.8           | 83.8             |
| ¾ Load       | 18.75 | 14.0 | 27.7    | 94.4           | 80.9             |
| ½ Load       | 12.50 | 9.3  | 20.0    | 94.2           | 73.4             |
| ¼ Load       | 6.25  | 4.7  | 13.7    | 85.3           | 60.5             |
| No Load      |       |      | 10.8    |                | 5.1              |
| Locked Rotor |       |      | 215     |                | 35.0             |

|                   |                      |                 |                    |   |
|-------------------|----------------------|-----------------|--------------------|---|
| Torque            |                      |                 |                    | Rotor wk <sup>2</sup> Inertia (lb-ft <sup>2</sup> ) |
| Full Load (lb-ft) | Locked Rotor (% FLT) | Pull Up (% FLT) | Break Down (% FLT) |   |
| 89.9              | 150                  | 135             | 230                | 5.23  |

|                    |     |                           |           |         |                            |
|--------------------|-----|---------------------------|-----------|---------|----------------------------|
| Safe Stall Time(s) |     | Sound Pressure dB(A) @ 1M | Bearings* |         | Approx. Motor Weight (lbs) |
| Cold               | Hot |                           | DE        | NDE     |                            |
| 26                 | 13  | -                         | 6310ZC3   | 6310ZC3 | 511                        |

\*Bearings are the only recommended spare part(s).

**Motor Options:**

Product Family:EQP Global SD CFace Footed  
Mounting:C-Face Footed,Shaft:T Shaft

|             |  |
|-------------|--|
| Customer    |  |
| Customer PO |  |
| Sales Order |  |
| Project #   |  |

Tag:

All characteristics are average expected values.

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| Engr. Date  | 3/25/2014 | Doc. Approved By | M. Campbell | Doc. Issued | 9/20/2019     |



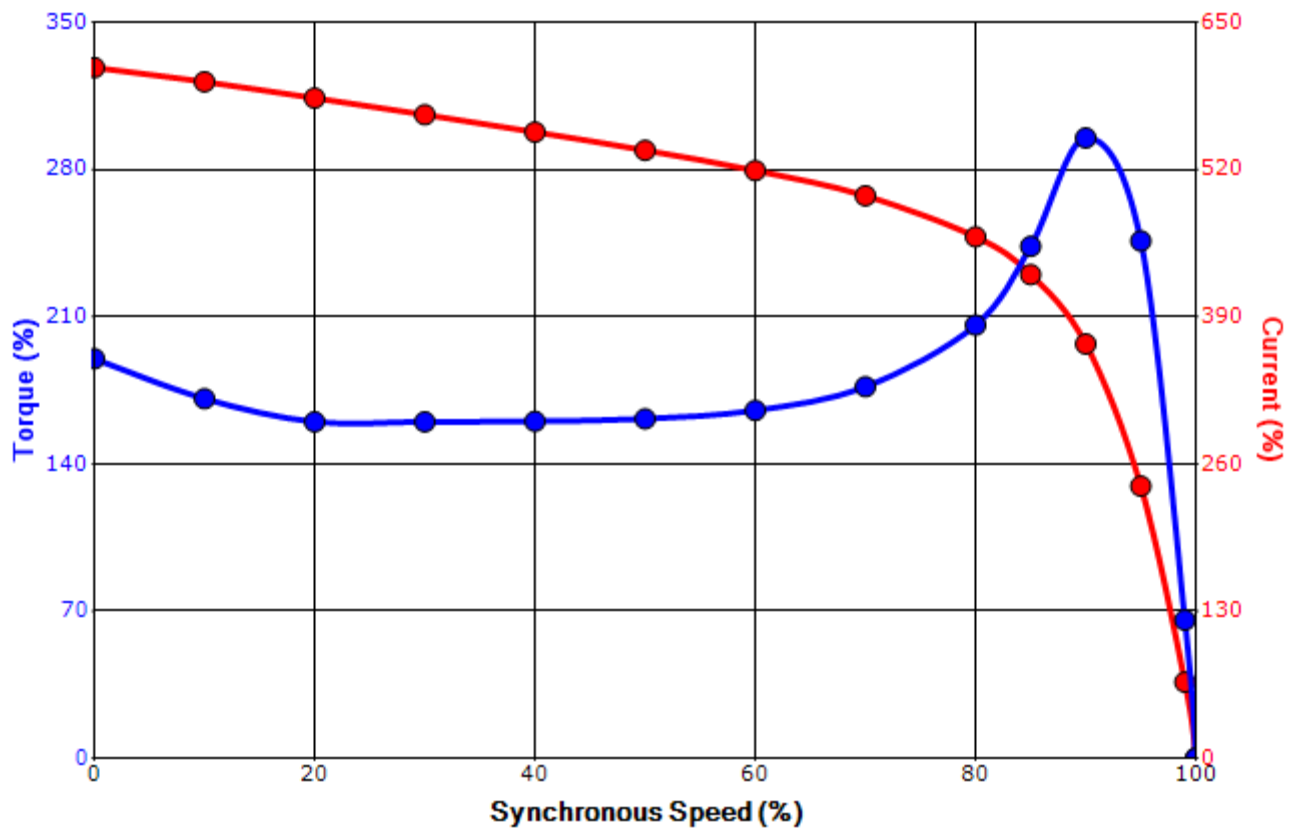
|             |            |            |  |
|-------------|------------|------------|--|
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### SPEED TORQUE/CURRENT CURVE

Model: 0254SDSR42A-P

|                   |   |                   |                  |             |                |             |          |              |
|-------------------|---|-------------------|------------------|-------------|----------------|-------------|----------|--------------|
| HP                | kW  | Pole              | FL RPM           | Frame       | Voltage        | Hz          | Phase    | FL Amps      |
| 25                | 18.5  | 4                 | 1770             | 284TC       | 230/460        | 60          | 3        | 62/31        |
| Enclosure         | IP  | Ins. Class        | S.F.             | Duty        | NEMA Nom. Eff. | NEMA Design | kVA Code | Ambient (°C) |
| TEFC              | 55  | F                 | 1.15             | CONT        | 93.6           | B           | G        | 40 C         |
| Locked Rotor Amps | Rotor wk <sup>2</sup> Inertia (lb-ft <sup>2</sup> ) | Torque            |                  |             |                |             |          |              |
|                   |   | Full Load (lb-ft) | Locked Rotor (%) | Pull Up (%) | Break Down (%) |             |          |              |
| 182               | 5.23  | 74.2              | 190              | 165         | 295            |             |          |              |

### Design Values



|             |  |  |     |
|-------------|--|--|-----|
| Customer    |  | wk <sup>2</sup> Load Inertia (lb-ft <sup>2</sup> ) | -   |
| Customer PO |  | Load Type  | -   |
| Sales Order |  | Voltage (%)  | 100 |
| Project #   |  | Accel. Time  | -   |

Tag:

All characteristics are average expected values.

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|             |           |                  |             |             |             |
|-------------|-----------|------------------|-------------|-------------|-------------|
| Engineering | jhock     | Doc. Written By  | D. Suarez   | Doc.# / Rev | MPCF-1121/1 |
| Engr. Date  | 3/13/2014 | Doc. Approved By | M. Campbell | Doc. Issued | 9/20/2019   |



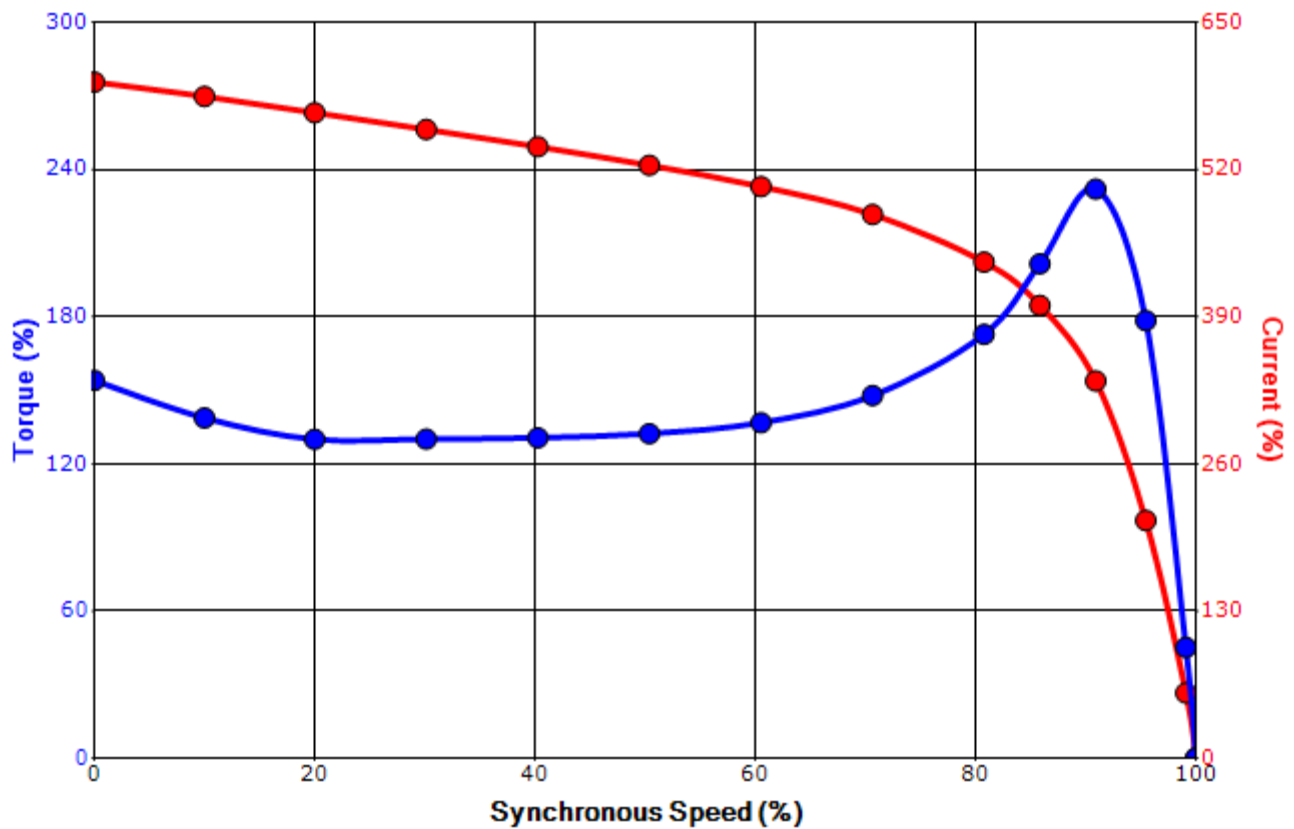
|             |            |            |  |
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Model: 0254SDSR42A-P

|                   |   |                   |                  |             |                |             |          |              |
|-------------------|---|-------------------|------------------|-------------|----------------|-------------|----------|--------------|
| HP                | kW  | Pole              | FL RPM           | Frame       | Voltage        | Hz          | Phase    | FL Amps      |
| 25                | 18.5  | 4                 | 1460             | 284TC       | 190/380        | 50          | 3        | 72/36        |
| Enclosure         | IP  | Ins. Class        | S.F.             | Duty        | NEMA Nom. Eff. | NEMA Design | kVA Code | Ambient (°C) |
| TEFC              | 55  | F                 | 1.0              | CONT        | 91.7           | B           | G        | 40 C         |
| Locked Rotor Amps | Rotor wk <sup>2</sup> Inertia (lb-ft <sup>2</sup> ) | Torque            |                  |             |                |             |          |              |
|                   |   | Full Load (lb-ft) | Locked Rotor (%) | Pull Up (%) | Break Down (%) |             |          |              |
| 215               | 5.23  | 89.9              | 150              | 135         | 230            |             |          |              |

### Design Values



|             |  |  |     |
|-------------|--|--|-----|
| Customer    |  | wk <sup>2</sup> Load Inertia (lb-ft <sup>2</sup> ) | -   |
| Customer PO |  | Load Type  | -   |
| Sales Order |  | Voltage (%)  | 100 |
| Project #   |  | Accel. Time  | -   |

Tag:

All characteristics are average expected values.

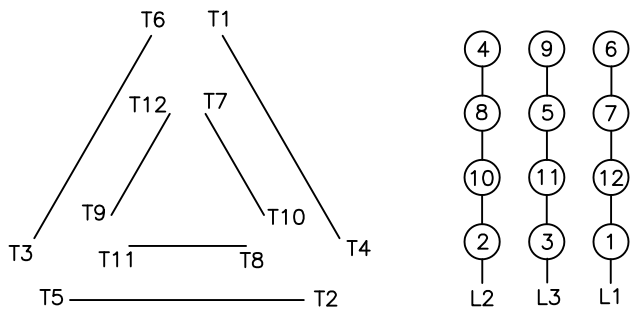
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**Motor Connection Diagrams**  
12 Leads

Across-the-Line Starting / Running Connections

Low Voltage Delta



High Voltage Delta



Switch L1 and L2 to reverse rotation

Suitable for Wye-Delta Starting and Limited Part-Winding-Starting.  
Please Contact Toshiba International for specific connections.