

- NOTES:
1. MAIN CONDUIT BOX MAY BE ROTATED IN 90~INCREMENTS
 2. STANDARD PRODUCT USE BI-DIRECTIONAL FAN. OPPOSITE ROTATION AVAILABLE ONLY BY CONNECTION CHANGE.
 3. KEY DIMENSIONS EQUAL (MOTOR SUPPLIED WITH KEY)

UNITS: mm

TOSHIBA RESERVES THE RIGHT TO MAKE CHANGES OF TECHNICAL IMPROVEMENT WITHOUT NOTICE. DO NOT USE FOR CONSTRUCTION, INSTALLATION, OR APPLICATION PURPOSES UNLESS THE DRAWING IS CERTIFIED.

PERMANENT MAGNET 71 IEC
TEFC (IP55) B3 ALUMINUM FRAME

MDSLE024-01

| TOLERANCES | |
|----------------------|-------|
| .X | .1 |
| .XX | .03 |
| .XXX | .005 |
| .XXXX | .0005 |
| MAXIMUM MOTOR WEIGHT | |
| XXX kgs. | |
| (XXX lbs.) | |

Tosh-ECO PM

TOSHIBA
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| NO | REVISION | DRAWN BY | DATE | CHECK |
|----|-------------|----------|----------|-------|
| 0 | FIRST ISSUE | R. Roth | 08/24/16 | |

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APPROVED BY: _____

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| | | | |
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| Issued Date | 12/9/2016 | Transmit # | |
| Issued By | Yu Wenhao | Issued Rev | |

TYPICAL MOTOR PERFORMANCE DATA

Model: PM13

| | | | | | | | | |
|--|-----------|-------------------|--------------|--------------|-------------------------------------|-----------|--------------|-------------------------------|
| | kW | Pole | r/min | Frame | BEMF K_E Volt. (V) | Hz | Phase | I_N Amps (A) |
| | 2.2 | 6 | 4500 | 71M | 273.5 | 225 | 3 | 4.6 |
| | IP | Ins. Class | | Duty | Nom. Eff. | | | Ambient (°C) |
| | 55 | F | | S1 | 91.5 | | | 40 |

| | | | | |
|------------------|--|-----------|--------------------|-----------------------|
| Load | | kW | Amperes (A) | Efficiency (%) |
| Full Load | | 2.20 | 4.57 | 91.5 |
| ¾ Load | | 1.65 | 3.63 | 91.1 |
| ½ Load | | 1.10 | 2.52 | 89.1 |
| ¼ Load | | 0.55 | 1.39 | 81.8 |
| No Load | | | 0.59 | |

| | | | |
|------------------------|--|--------------------------|--|
| Torque | | | Rotor wk² Inertia (kg-m²) |
| Full Load (N-m) | | Breakdown (% FLT) | |
| 4.98 | | 260 | 0.0008 |

| | | | | |
|--|----------------------------------|------------------|------------|----------------------------------|
| | Sound Pressure dB(A) @ 1M | Bearings* | | Approx. Motor Weight (kg) |
| | | DE | NDE | |
| | 69 | 6202-2RS | 6202-2RS | 7 |

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

Motor Options:

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

Tag:

All characteristics are average expected values. The declared locked rotor current has a tolerance of 20%.

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| | | | | | |
|--------------------|--|-------------------------|-------------|--------------------|---------------|
| Engineering | | Doc. Written By | P. Anderson | Doc.# / Rev | MPCF-1190 / 0 |
| Engr. Date | | Doc. Approved By | PAA | Doc. Issued | 12/6/2016 |



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|-------------|-----------|------------|--|
| Issued Date | 12/9/2016 | Transmit # | |
| Issued By | Yu Wenhao | Issued Rev | |

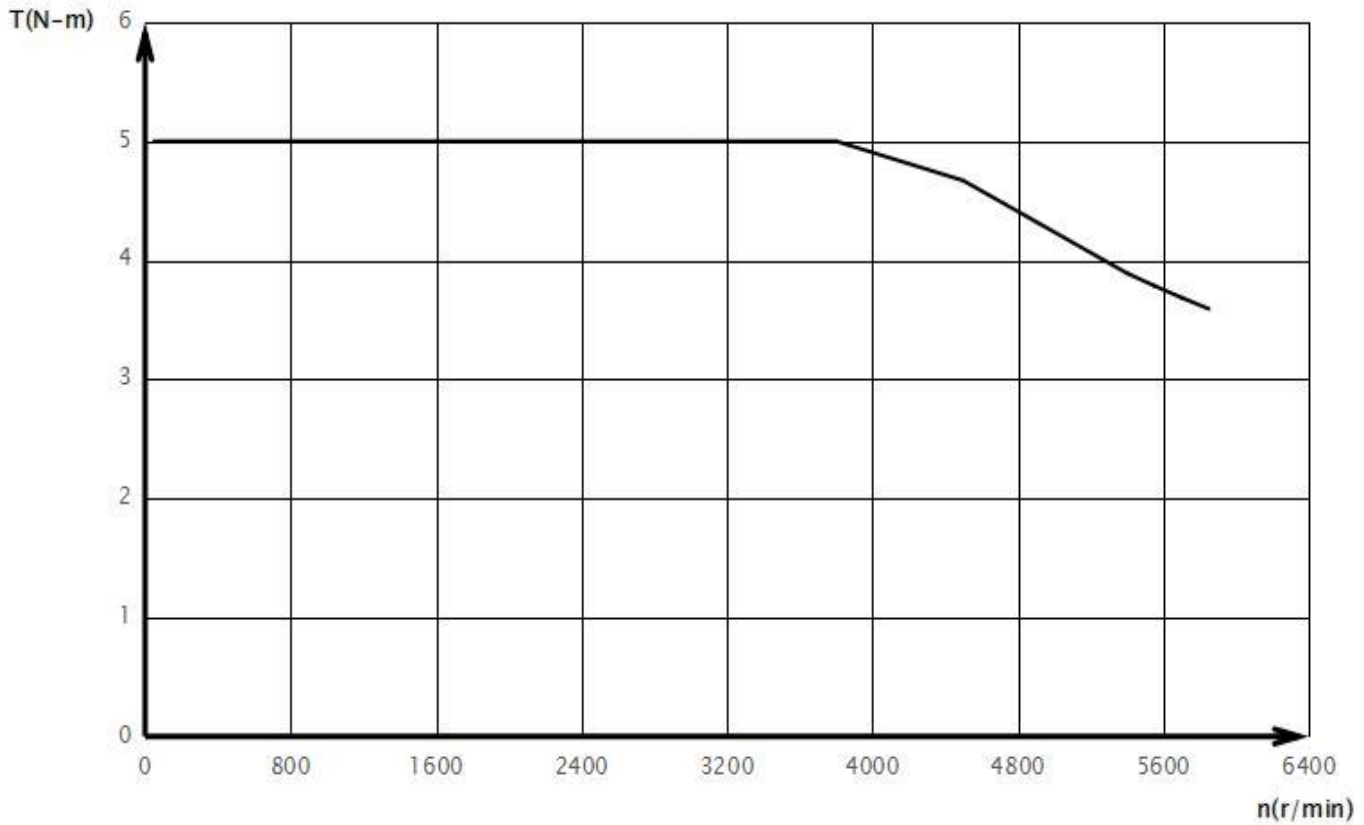
SPEED TORQUE/CURRENT CURVE

Model: PM13

| | | | | | | | | |
|--|--|------------------------|--------------|--------------|-------------------------------------|-----------|--------------|-------------------------------|
| | kW | Pole | r/min | Frame | BEMF K_E Volt. (V) | Hz | Phase | I_N Amps (A) |
| | 2.2 | 6 | 4500 | 71M | 273.5 | 225 | 3 | 4.6 |
| | IP | Ins. Class | | Duty | Nom. Eff. | | | Ambient (°C) |
| | 55 | F | | S1 | 91.5 | | | 40 |
| | Rotor wk² Inertia (kg-m²) | Torque | | | | | | Breakdown (%) |
| | | Full Load (N-m) | | | | | | |
| | 0.0008 | 4.98 | | | | | | 260 |

CHARACTERISTIC CURVES RELATED TO SPEED

Three-phase synchronous motor



| | | | | |
|--------------------|--|--|---|--------|
| Customer | | | wk² Load Inertia (kg-m²) | |
| Customer PO | | | Load Type | CONT |
| Sales Order | | | Voltage (%) | |
| Project # | | | Accel. Time | 10-15S |

Tag:

All characteristics are average expected values. The declared locked rotor current has a tolerance of 20%.

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| Engineering | | Doc. Written By | P. Anderson | Doc.# / Rev | MPCF-1192 / 0 |
| Engr. Date | | Doc. Approved By | PAA | Doc. Issued | 12/6/2016 |



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|--------------------|-----------|-------------------|--|
| Issued Date | 12/9/2016 | Transmit # | |
| Issued By | Yu Wenhao | Issued Rev | |

SPARE PARTS LIST*

Model: PM13

| | kW | Pole | r/min | Frame | BEMF K_E Volt. (V) | Hz | Phase | I_N Amps (A) |
|--|-----------|-------------------|--------------|--------------|-------------------------------------|-----------|--------------|-------------------------------|
| | 2.2 | 6 | 4500 | 71M | 273.5 | 225 | 3 | 4.6 |
| | IP | Ins. Class | | Duty | Nom. Eff. | | | Ambient (°C) |
| | 55 | F | | S1 | 91.5 | | | 40 |

| | |
|---------------------|----------|
| DE Bearing: | 6202-2RS |
| NDE Bearing: | 6202-2RS |

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

Other than the grease used for regreasable bearings and the oil used for oil-lubricated bearings, Toshiba advises that there are no "use" parts. The only insurance spares that Toshiba suggests for these squirrel-cage induction motors are industry-standard and commercially available off-the-shelf bearings as noted above.

Motor components such as terminal boxes, fan covers and other machined parts are available on special request. In these cases, please advise our order entry department of the model and serial numbers found on the motor nameplate and a description of the needed components. With this information they will be able to furnish the current part number, price and availability.

Note: Our internal part numbers are subject to change without notice and are not published.

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

Tag:

All characteristics are average expected values.

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| | | | | | |
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| Engineering | | Doc. Written By | P. Anderson | Doc.# / Rev | MPCF-1193 / 0 |
| Engr. Date | | Doc. Approved By | PAA | Doc. Issued | 12/6/2016 |



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|-------------|-----------|------------|--|
| Issued Date | 12/9/2016 | Transmit # | |
| Issued By | Yu Wenhao | Issued Rev | |

NAMEPLATE DATA

Model: PM13

| | kW | Pole | r/min | Frame | BEMF K _E Volt. (V) | Hz | Phase | I _N Amps (A) |
|--|-----|------------|-------|-------|-------------------------------|-----|-------|-------------------------|
| | 2.2 | 6 | 4500 | 71M | 273.5 | 225 | 3 | 4.6 |
| | IP | Ins. Class | | Duty | Nom. Eff. | | | Ambient (°C) |
| | 55 | F | | S1 | 91.5 | | | 40 |

Drive End Bearing: 6202-2RS

Non-Drive End Bearing: 6202-2RS

Rated Torque: 4.98 Nm

Voltage Constant (K_e): 0.585 VS

Torque Constant (K_t): 1.02 Nm/A

BEMF at: 4500 r/min

Comments 1:

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

Tag:

All characteristics are average expected values.

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| | | | | | |
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| Engineering | | Doc. Written By | P. Anderson | Doc.# / Rev | MPCF-1191 / 0 |
| Engr. Date | | Doc. Approved By | PAA | Doc. Issued | 12/6/2016 |

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Motor Connection Diagrams

