

- 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)
- 0.500" x 0.500" x 2.00"

UNITS: INCHES

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.

**320TS TEFC FRAME  
F1 ASSEMBLY**

MDSL002-06

**TOSHIBA**

TOSHIBA INTERNATIONAL CORPORATION

TOLERANCES

.X	.1
.XX	.03
.XXX	.005
.XXXX	.0005

MAXIMUM MOTOR WEIGHT	3	CHANGED 'H' DIMENSION FROM 0.67	MO	04/17/14	JR
	2	ADDED AIR DEFLECTOR (GUIDE PLATE)	M. O'DOWD	12/07/12	JR
651 lbs.	1	ADDED KEY DIMENSIONS	S. CLANCY	08/10/12	JR
295 kgs.	0	FIRST ISSUE	N. MOMIN	09/15/10	JR
	NO	REVISION	DRAWN BY	DATE	CHECK



DRAWN BY: N. MOMIN  
 CHECK BY: J. RUSSELL  
 APPROVED BY: \_\_\_\_\_  
 www.toshiba.com/ind

**TYPICAL MOTOR PERFORMANCE DATA**

Model: 0504SDSR41B-P

HP	kW	Pole	FL RPM	Frame	Voltage	Hz	Phase	FL Amps
50	37	4	1775	326TS	230/460	60	3	120/60
Enclosure	IP	Ins. Class	S.F.	Duty	NEMA Nom. Eff.	NEMA Design	kVA Code	Ambient (°C)
TEFC	54	F	1.15	CONT	94.5	B	G	40 C

Load	HP	kW	Amperes	Efficiency (%)	Power Factor (%)
Full Load	50	37.3	60.0	94.5	85.7
¾ Load	37.50	28.0	45.5	93.8	83.4
½ Load	25.00	18.6	34.0	92.2	77.1
¼ Load	12.50	9.3	24.9	86.3	54.4
No Load			18.7		5.3
Locked Rotor			363.00		30.0

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)	
148	175	145	265	11.60

Safe Stall Time(s)		Sound Pressure dB(A) @ 1M	Bearings*		Approx. Motor Weight (lbs)
Cold	Hot		DE	NDE	
35	15	-	6312ZC3	6312ZC3	

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

**Motor Options:**  
Mounting:Footed,Shaft:TS Shaft

Customer	
Customer PO	
Sales Order	
Project #	

Tag:

All characteristics are average expected values.

**TOSHIBA INTERNATIONAL CORPORATION · HOUSTON, TEXAS U.S.A.**

Engineering	jhock	Doc. Written By	D. Suarez	Doc.# / Rev	MPCF-1119 / 0
Engr. Date	3/17/2014	Doc. Approved By	M. Campbell	Doc. Issued	6/8/2011

**TYPICAL MOTOR PERFORMANCE DATA**

Model: 0504SDSR41B-P

HP	kW	Pole	FL RPM	Frame	Voltage	Hz	Phase	FL Amps
50	37	4	1470	326TS	190/380	50	3	142/71
Enclosure	IP	Ins. Class	S.F.	Duty	NEMA Nom. Eff.	NEMA Design	kVA Code	Ambient (°C)
TEFC	54	F	1.0	CONT	93	B	G	40 C

Load	HP	kW	Amperes	Efficiency (%)	Power Factor (%)
Full Load	50	37.3	71.0	94.3	85.0
¾ Load	37.50	28.0	53.2	94.8	82.9
½ Load	25.00	18.6	37.1	94.7	76.6
¼ Load	12.50	9.3	23.0	87.3	70.3
No Load			18.0		4.8
Locked Rotor			426.00		28.9

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)	
179	140	125	210	11.60

Safe Stall Time(s)		Sound Pressure dB(A) @ 1M	Bearings*		Approx. Motor Weight (lbs)
Cold	Hot		DE	NDE	
22	6	-	6312ZC3	6312ZC3	

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

**Motor Options:**  
Mounting:Footed,Shaft:TS Shaft

Customer	
Customer PO	
Sales Order	
Project #	

Tag:

All characteristics are average expected values.

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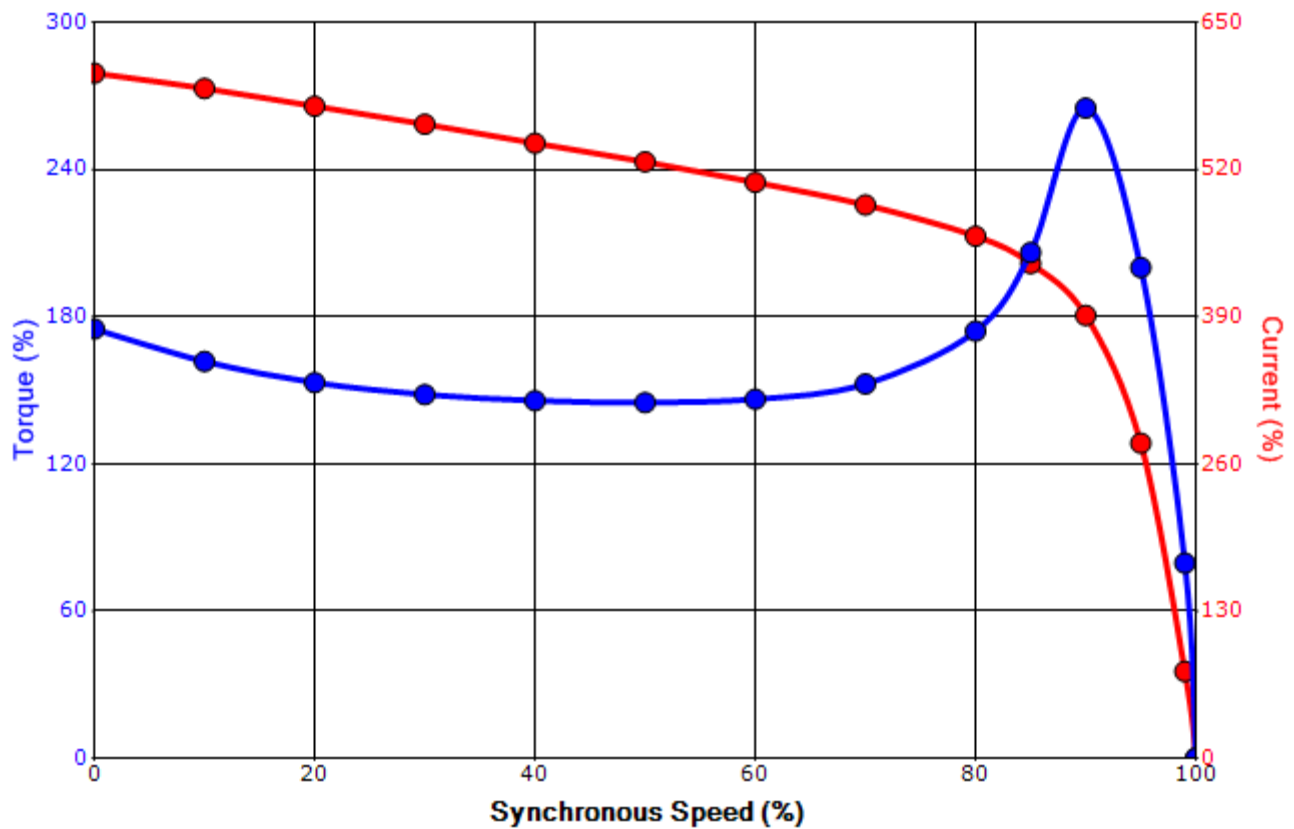
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**SPEED TORQUE/CURRENT CURVE**

Model: 0504SDSR41B-P

HP	kW	Pole	FL RPM	Frame	Voltage	Hz	Phase	FL Amps
50	37	4	1775	326TS	230/460	60	3	120/60
Enclosure	IP	Ins. Class	S.F.	Duty	NEMA Nom. Eff.	NEMA Design	kVA Code	Ambient (°C)
TEFC	54	F	1.15	CONT	94.5	B	G	40 C
Locked Rotor Amps	Rotor wk <sup>2</sup> Inertia (lb-ft <sup>2</sup> )	Torque						Break Down (%)
		Full Load (lb-ft)	Locked Rotor (%)	Pull Up (%)				
363.00	11.60	148	175	145			265	

**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.

**TOSHIBA INTERNATIONAL CORPORATION · HOUSTON, TEXAS U.S.A.**

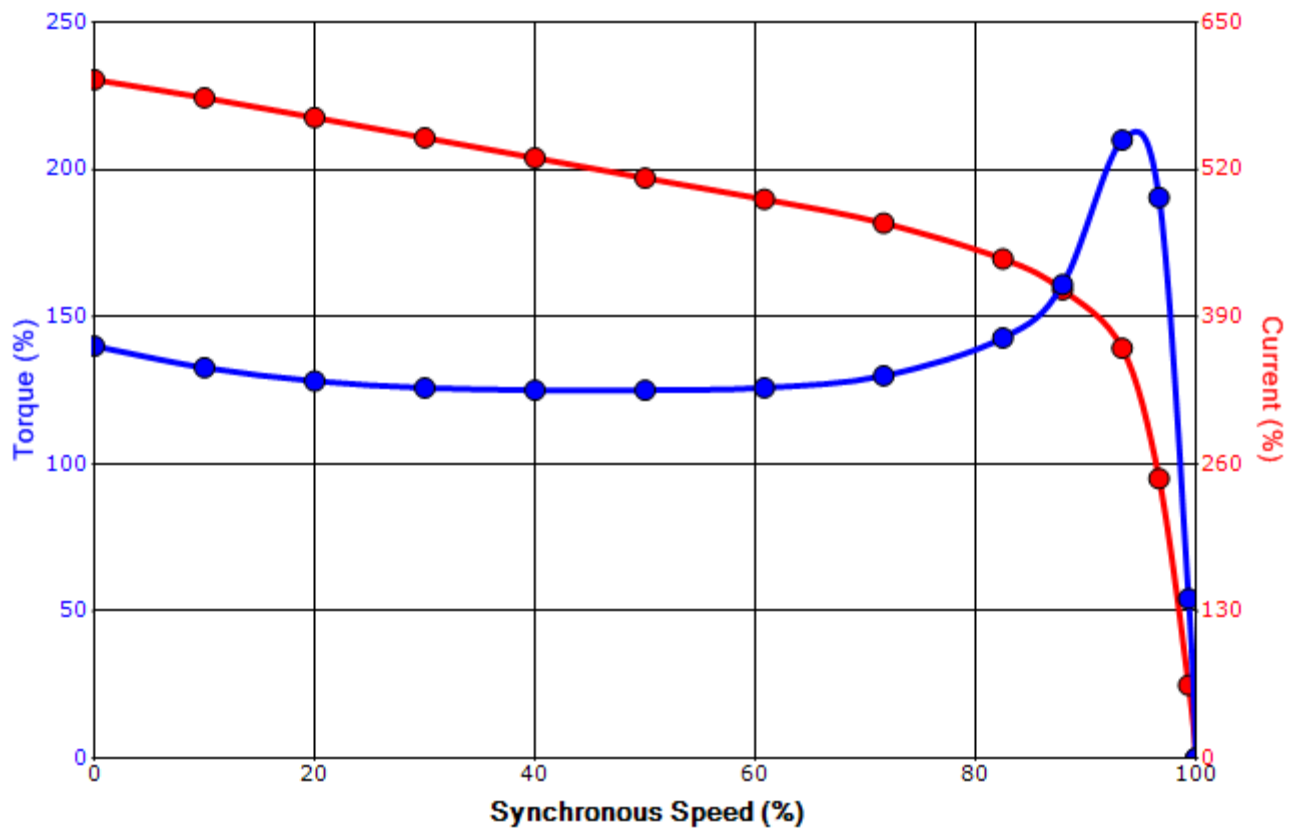
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**SPEED TORQUE/CURRENT CURVE**

Model: 0504SDSR41B-P

HP	kW	Pole	FL RPM	Frame	Voltage	Hz	Phase	FL Amps
50	37	4	1470	326TS	190/380	50	3	142/71
Enclosure	IP	Ins. Class	S.F.	Duty	NEMA Nom. Eff.	NEMA Design	kVA Code	Ambient (°C)
TEFC	54	F	1.0	CONT	93	B	G	40 C
Locked Rotor Amps	Rotor wk <sup>2</sup> Inertia (lb-ft <sup>2</sup> )	Torque						Break Down (%)
		Full Load (lb-ft)	Locked Rotor (%)	Pull Up (%)				
426.00	11.60	179	140	125			210	

**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.

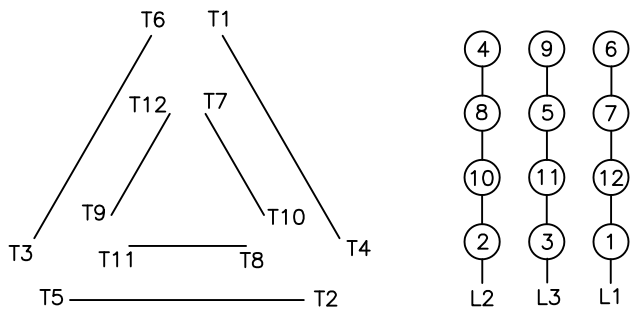
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**Motor Connection Diagrams**  
12 Leads

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.