


UNIT: 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.

B3-FOOT MOUNTED MOTOR OL DRAWING IEC GLOBAL	TYPE: 2-4-6P - 400V	TOLERANCES X. $\pm 2.0$ X.X $\pm 0.5$ X.XX $\pm 0.1$						
	FRAME: 180L							
3HFN000223		MAXIMUM MOTOR WEIGHT - lbs. - kgs.	03	Adding dimension Overall length	T.Danh	Sep-07-18	B.Quynh	DRAWN BY: HIEN, NGUYEN
TOSHIBA TOSHIBA INTERNATIONAL CORPORATION			02	change to M20S-EB	T.Danh	May-07-18	Q.Hung	CHECK BY: B.X.QUYNH
		01	change to fancover	T.Danh	Feb-08-18	Q.Hung	APPROVED BY: JAY BUGBEE	
		NO	REVISION	DRAWN BY	DATE	CHECK	www.toshiba.com/ind	

<b>TOSHIBA INTERNATIONAL CORPORATION</b> Industrial Division / Houston Motor Plant  <b>SQUIRREL CAGE INDUCTION MOTOR</b> <b>PERFORMANCE SPECIFICATIONS</b>	INDEX	MPCF-1033
	SHEET NO.	1 of 1
	ISSUED	7/31/13
	SUPERSEDES	11/8/96
	REVISION	2
	WRITTEN BY	MDC
	APPROVED BY	PAA

CUSTOMER: -  
TIC SR No.: -

MOTOR NAMEPLATE DATA			
H.P.: -	VOLTS: 400	3 PH / 50 Hz	S. RPM: 1500
FRAME: 180L	ENCL: TEFC	FLAMPS: 41	FLRPM: 1470
FORM: FBK1	S.F.: -	IEC DESIGN NE	INSUL CLASS: F
TYPE: TKKH	AMB.: 40°C	CODE: -	DUTY: Cont.
MODEL No.: 0224SDMW7FS-P		kW: 22	
NOM. EFF.: 93.0	MIN. EFF.: -	cosØ 0.83	

AMPERAGE	TORQUES	**BEARINGS:
LOCKED ROTOR: 348	FULL LOAD (lb-ft.): 105	DRIVE END: REFER TO NP
	LOCKED ROTOR (%): 250	OPPOSITE DRIVE END: REFER TO NP
	BREAK DOWN (%): 335	

EFFICIENCY	POWER FACTOR
FULL LOAD: 93.2	FULL LOAD: 83.2
3/4 LOAD: 93.0	3/4 LOAD: 78.6
1/2 LOAD: 91.7	1/2 LOAD: 68.5

ALL CHARACTERISTICS ARE AVERAGE EXPECTED VALUES BASED UPON RATED VOLTAGE, FREQUENCY AND SINEWAVE POWER INPUT.  
THE DECLARED LOCKED ROTOR CURRENT HAS A TOLERANCE OF 20%.  
\* TEMPERATURE RISE WILL BE CONSISTENT WITH INSULATION, AMBIENT AND SERVICE FACTOR AS DEFINED BY NEMA-MG-12 OR -20.  
\*\* BEARINGS ARE THE ONLY RECOMMENDED SPARE PART(S).

**CERTIFIED BY:** Zichao Xie  
**DATE:** 10/18/2019

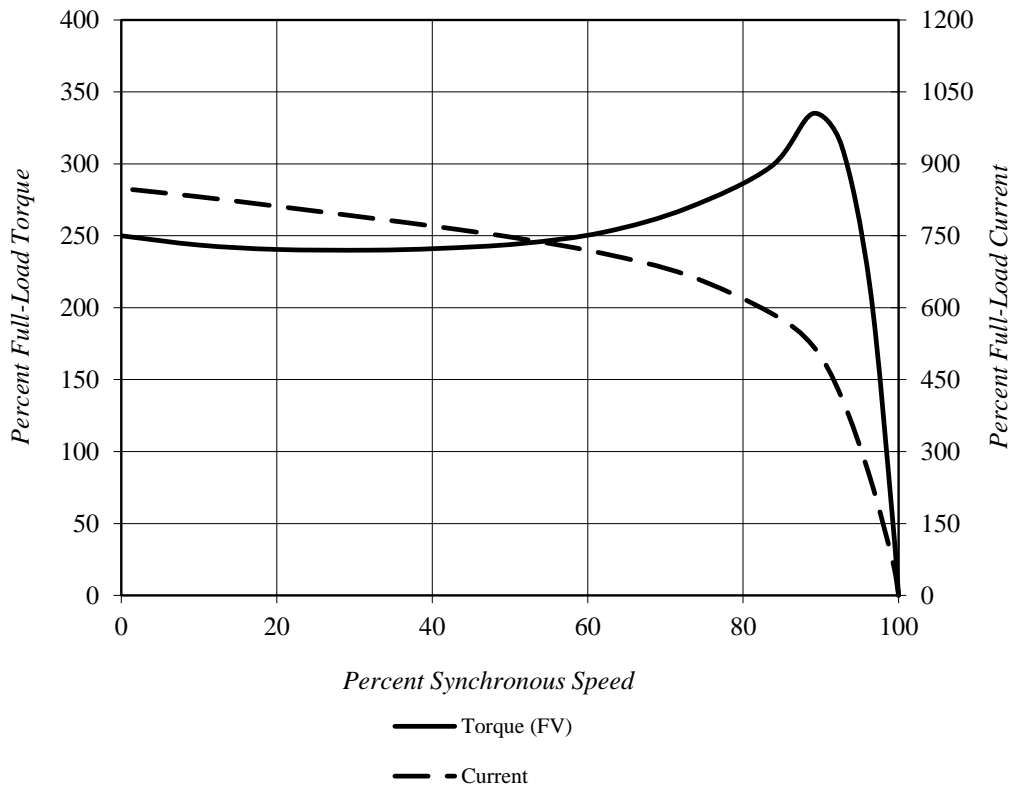
# TOSHIBA INTERNATIONAL CORPORATION

## Speed Torque/Current Curve

<b>Model #:</b>	0224SDMW7FS-P			<b>FLAmps:</b>	41
<b>Enclosure:</b>	TEFC	<b>Voltage:</b>	400 V	<b>Frame:</b>	180L
<b>Pole:</b>	4	<b>Frequency:</b>	3 PH / 50 Hz	<b>Ins. Class:</b>	F
<b>KW:</b>	22	<b>Rotor Inertia:</b>	5.5 lb-ft <sup>2</sup>	<b>Date:</b>	10/18/2019
<b>FLRPM:</b>	1470	<b>Load Inertia:</b>	N/A	<b>File:</b>	GH4022 (22kW)

<b>Locked Rotor Amps:</b>	348 A	<b>Load Type:</b>	N/A
<b>Locked Rotor Torque:</b>	250%	<b>Starting at:</b>	N/A
<b>Breakdown Torque:</b>	335%	<b>Accel. Time:</b>	N/A
<b>Rated Torque:</b>	105 lb-ft		

### Design Values



**Comments:** PROJECT -  
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**D.E.Curve #:** GH4022 (22kW)

**Prepared by:** Zichao Xie

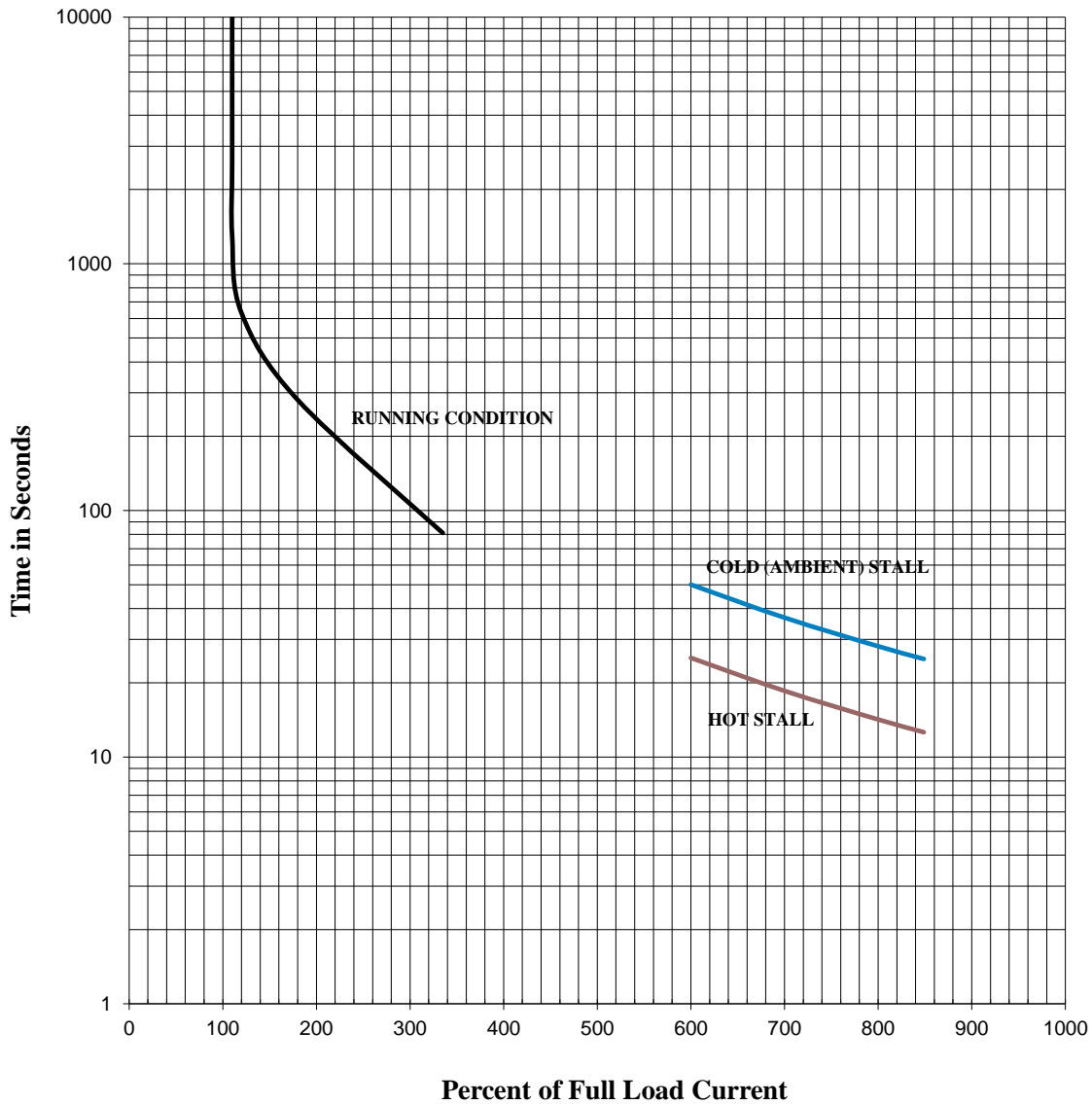
**Checked by:**

# TOSHIBA INTERNATIONAL CORPORATION

## Thermal Limit & Acceleration Curves

*Design Values (For Reference Only)*

<b>Model #:</b>	0224SDMW7FS-P			<b>FLAmps:</b>	41
<b>Enclosure:</b>	TEFC	<b>Voltage:</b>	400 V	<b>Frame:</b>	180L
<b>Pole:</b>	4	<b>Frequency:</b>	3 PH / 50 Hz	<b>Ins. Class:</b>	F
<b>KW:</b>	22	<b>Rotor Inertia:</b>	5.5 lb-ft <sup>2</sup>	<b>Date:</b>	10/18/2019
<b>FLRPM:</b>	1470	<b>Load Inertia:</b>	N/A	<b>File:</b>	GH4022 (22kW)



**Comments:** PROJECT -  
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**D.E. Curve #:** GH4022 (22kW)

**Prepared by:** Zichao Xie

**Checked by:**

**TOSHIBA INTERNATIONAL CORPORATION**  
**Industrial Division / Houston Motor Plant**

**SQUIRREL CAGE INDUCTION MOTOR**  
**PERFORMANCE SPECIFICATIONS**

INDEX	MPCF-1033
SHEET NO.	1 of 1
ISSUED	7/31/13
SUPERSEDES	11/8/96
REVISION	2
WRITTEN BY	MDC
APPROVED BY	PAA

CUSTOMER: -  
TIC SR No.: -

**MOTOR NAMEPLATE DATA**

H.P.: -	VOLTS: 415	3 PH / 50 Hz	S. RPM: 1500
FRAME: 180L	ENCL: TEFC	FLAMPS: 40	FLRPM: 1475
FORM: FBK1	S.F.: -	IEC DESIGN NE	INSUL CLASS: F
TYPE: TKKH	AMB.: 40°C	CODE: -	DUTY: Cont.
MODEL No.: 0224SDMW7FS-P		kW: 22	
NOM. EFF.: 93.0	MIN. EFF.: -	cosØ 0.81	

**AMPERAGE**

LOCKED ROTOR: 363

**TORQUES**

FULL LOAD (lb-ft.): 105  
LOCKED ROTOR (%): 275  
BREAK DOWN (%): 355

**\*\*BEARINGS:**

DRIVE END: REFER TO NP  
OPPOSITE DRIVE END: REFER TO NP

**EFFICIENCY**

FULL LOAD: 93.6  
3/4 LOAD: 93.2  
1/2 LOAD: 91.6

**POWER FACTOR**

FULL LOAD: 81.4  
3/4 LOAD: 76.0  
1/2 LOAD: 64.9

ALL CHARACTERISTICS ARE AVERAGE EXPECTED VALUES BASED UPON RATED VOLTAGE,  
FREQUENCY AND SINEWAVE POWER INPUT.

THE DECLARED LOCKED ROTOR CURRENT HAS A TOLERANCE OF 20%.

\* TEMPERATURE RISE WILL BE CONSISTENT WITH INSULATION, AMBIENT AND SERVICE FACTOR AS  
DEFINED BY NEMA-MG-12 OR -20.

\*\* BEARINGS ARE THE ONLY RECOMMENDED SPARE PART(S).

**CERTIFIED BY:** Zichao Xie

**DATE:** 10/18/2019

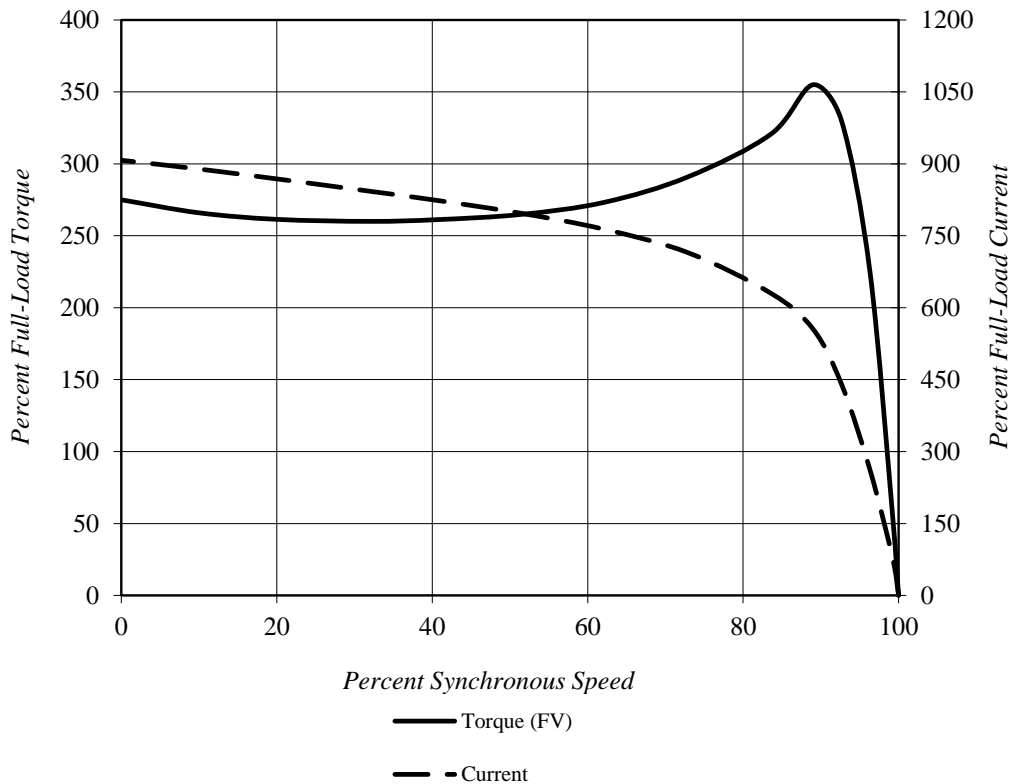
# TOSHIBA INTERNATIONAL CORPORATION

## Speed Torque/Current Curve

<b>Model #:</b>	0224SDMW7FS-P			<b>FLAmps:</b>	40
<b>Enclosure:</b>	TEFC	<b>Voltage:</b>	415 V	<b>Frame:</b>	180L
<b>Pole:</b>	4	<b>Frequency:</b>	3 PH / 50 Hz	<b>Ins. Class:</b>	F
<b>KW:</b>	22	<b>Rotor Inertia:</b>	5.5 lb-ft <sup>2</sup>	<b>Date:</b>	10/18/2019
<b>FLRPM:</b>	1475	<b>Load Inertia:</b>	N/A	<b>File:</b>	GH4022 (22kW)

<b>Locked Rotor Amps:</b>	363 A	<b>Load Type:</b>	N/A
<b>Locked Rotor Torque:</b>	275%	<b>Starting at:</b>	N/A
<b>Breakdown Torque:</b>	355%	<b>Accel. Time:</b>	N/A
<b>Rated Torque:</b>	105 lb-ft		

### *Design Values*



**Comments:** PROJECT -  
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**D.E.Curve #:** GH4022 (22kW)

**Prepared by:** Zichao Xie

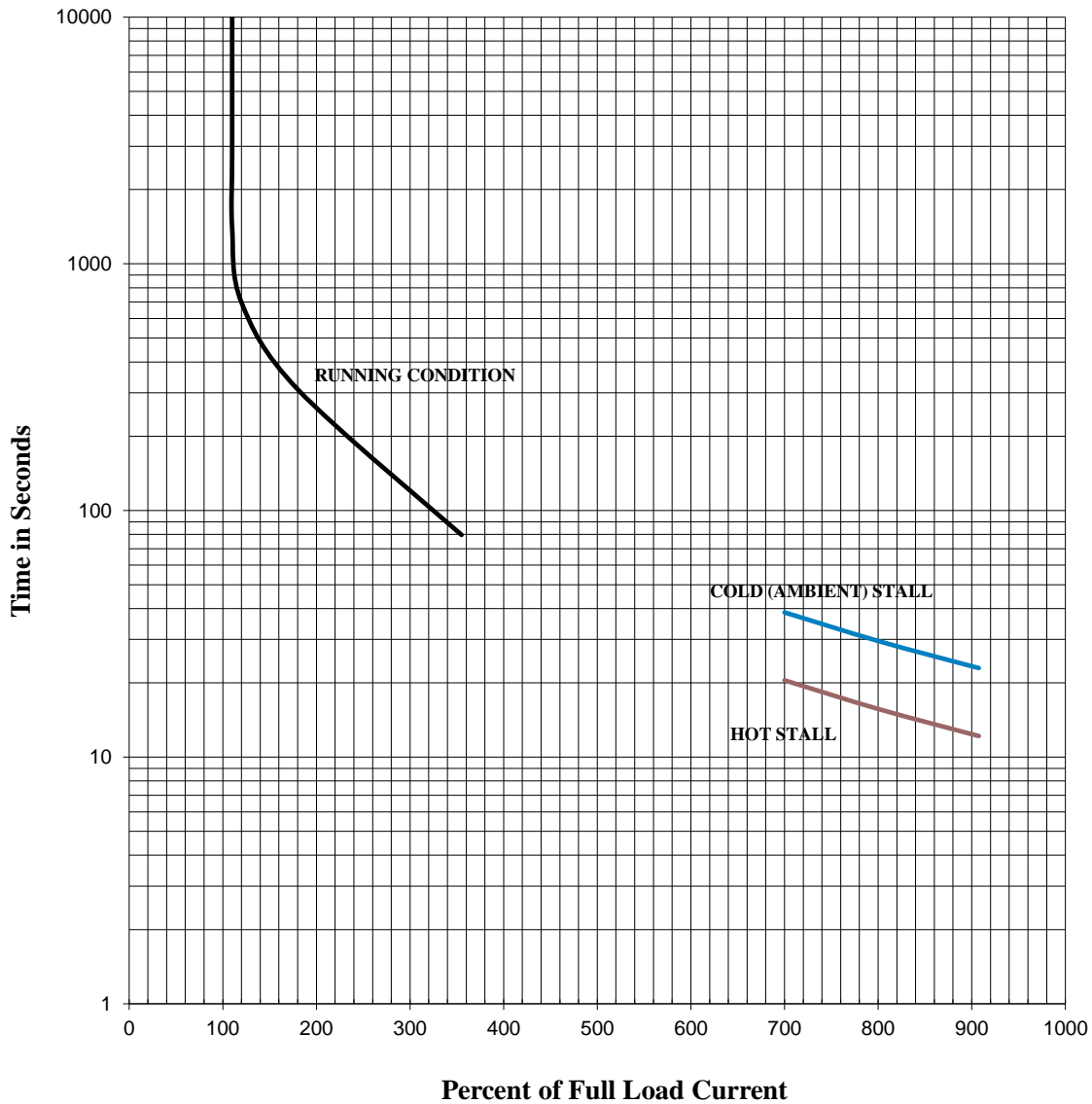
**Checked by:**

# TOSHIBA INTERNATIONAL CORPORATION

## Thermal Limit & Acceleration Curves

*Design Values (For Reference Only)*

<b>Model #:</b>	0224SDMW7FS-P			<b>FLAmps:</b>	40
<b>Enclosure:</b>	TEFC	<b>Voltage:</b>	415 V	<b>Frame:</b>	180L
<b>Pole:</b>	4	<b>Frequency:</b>	3 PH / 50 Hz	<b>Ins. Class:</b>	F
<b>KW:</b>	22	<b>Rotor Inertia:</b>	5.5 lb-ft <sup>2</sup>	<b>Date:</b>	10/18/2019
<b>FLRPM:</b>	1475	<b>Load Inertia:</b>	N/A	<b>File:</b>	GH4022 (22kW)



**Comments:** PROJECT -  
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**D.E. Curve #:** GH4022 (22kW)

**Prepared by:** Zichao Xie

**Checked by:**

<b>TOSHIBA INTERNATIONAL CORPORATION</b> Industrial Division / Houston Motor Plant  <b>SQUIRREL CAGE INDUCTION MOTOR</b> <b>PERFORMANCE SPECIFICATIONS</b>	INDEX	MPCF-1033
	SHEET NO.	1 of 1
	ISSUED	7/31/13
	SUPERSEDES	11/8/96
	REVISION	2
	WRITTEN BY	MDC
	APPROVED BY	PAA

CUSTOMER: -  
TIC SR No.: -

MOTOR NAMEPLATE DATA			
H.P.: -	VOLTS: 380	3 PH / 50 Hz	S. RPM: 1500
FRAME: 180L	ENCL: TEFC	FLAMPS: 42	FLRPM: 1470
FORM: FBK1	S.F.: -	IEC DESIGN NE	INSUL CLASS: F
TYPE: TKKH	AMB.: 40°C	CODE: -	DUTY: Cont.
MODEL No.: 0224SDMW7FS-P		kW: 22	
NOM. EFF.: 93.0	MIN. EFF.: -	cosØ 0.85	

AMPERAGE	TORQUES	**BEARINGS:
LOCKED ROTOR: 328	FULL LOAD (lb-ft.): 105	DRIVE END: REFER TO NP
	LOCKED ROTOR (%): 220	OPPOSITE DRIVE END: REFER TO NP
	BREAK DOWN (%): 305	

EFFICIENCY	POWER FACTOR
FULL LOAD: 92.9	FULL LOAD: 85.0
3/4 LOAD: 92.9	3/4 LOAD: 81.5
1/2 LOAD: 91.8	1/2 LOAD: 72.9

ALL CHARACTERISTICS ARE AVERAGE EXPECTED VALUES BASED UPON RATED VOLTAGE, FREQUENCY AND SINEWAVE POWER INPUT.  
THE DECLARED LOCKED ROTOR CURRENT HAS A TOLERANCE OF 20%.  
\* TEMPERATURE RISE WILL BE CONSISTENT WITH INSULATION, AMBIENT AND SERVICE FACTOR AS DEFINED BY NEMA-MG-12 OR -20.  
\*\* BEARINGS ARE THE ONLY RECOMMENDED SPARE PART(S).

**CERTIFIED BY:** Zichao Xie  
**DATE:** 10/18/2019



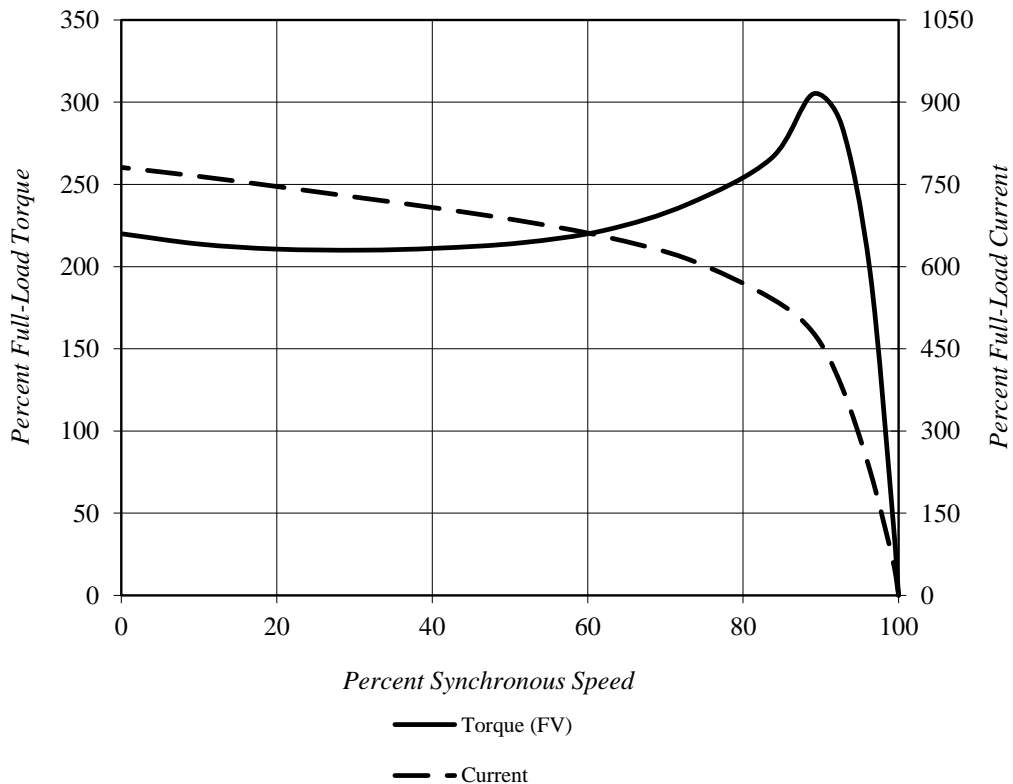
# TOSHIBA INTERNATIONAL CORPORATION

## Speed Torque/Current Curve

<b>Model #:</b>	0224SDMW7FS-P			<b>FLAmps:</b>	42
<b>Enclosure:</b>	TEFC	<b>Voltage:</b>	380 V	<b>Frame:</b>	180L
<b>Pole:</b>	4	<b>Frequency:</b>	3 PH / 50 Hz	<b>Ins. Class:</b>	F
<b>KW:</b>	22	<b>Rotor Inertia:</b>	5.5 lb-ft <sup>2</sup>	<b>Date:</b>	10/18/2019
<b>FLRPM:</b>	1470	<b>Load Inertia:</b>	N/A	<b>File:</b>	GH4022 (22kW)

<b>Locked Rotor Amps:</b>	328 A	<b>Load Type:</b>	N/A
<b>Locked Rotor Torque:</b>	220%	<b>Starting at:</b>	N/A
<b>Breakdown Torque:</b>	305%	<b>Accel. Time:</b>	N/A
<b>Rated Torque:</b>	105 lb-ft		

### *Design Values*



**Comments:** PROJECT -  
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**D.E. Curve #:** GH4022 (22kW)

**Prepared by:** Zichao Xie

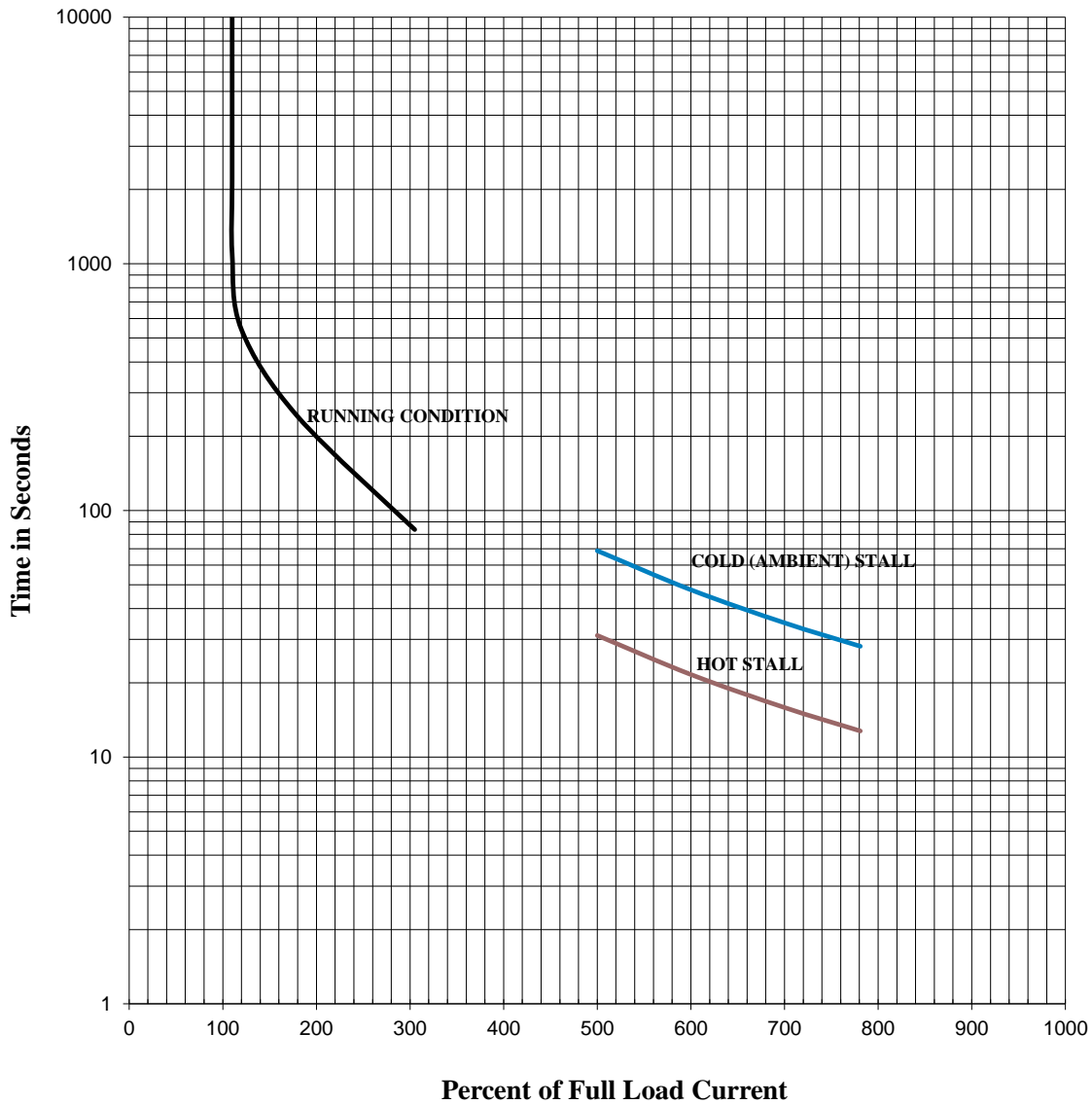
**Checked by:**

# TOSHIBA INTERNATIONAL CORPORATION

## Thermal Limit & Acceleration Curves

*Design Values (For Reference Only)*

<b>Model #:</b>	0224SDMW7FS-P			<b>FLAmps:</b>	42
<b>Enclosure:</b>	TEFC	<b>Voltage:</b>	380 V	<b>Frame:</b>	180L
<b>Pole:</b>	4	<b>Frequency:</b>	3 PH / 50 Hz	<b>Ins. Class:</b>	F
<b>KW:</b>	22	<b>Rotor Inertia:</b>	5.5 lb-ft <sup>2</sup>	<b>Date:</b>	10/18/2019
<b>FLRPM:</b>	1470	<b>Load Inertia:</b>	N/A	<b>File:</b>	GH4022 (22kW)



**Comments:** PROJECT -  
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**D.E. Curve #:** GH4022 (22kW)

**Prepared by:** Zichao Xie

**Checked by:**

**TOSHIBA INTERNATIONAL CORPORATION**  
**Industrial Division / Houston Motor Plant**

**SQUIRREL CAGE INDUCTION MOTOR**  
**PERFORMANCE SPECIFICATIONS**

INDEX	MPCF-1033
SHEET NO.	1 of 1
ISSUED	7/31/13
SUPERSEDES	11/8/96
REVISION	2
WRITTEN BY	MDC
APPROVED BY	PAA

CUSTOMER: -  
TIC SR No.: -

**MOTOR NAMEPLATE DATA**

H.P.: 30	VOLTS: 460	3 PH / 60 Hz	S. RPM: 1800
FRAME: 180L	ENCL: TEFC	FLAMPS: 35	FLRPM: 1775
FORM: FBK1	S.F.: 1.15	NEMA DESIGN: A	INSUL CLASS: F
TYPE: TKKH	AMB.: 40°C	CODE: L	DUTY: Cont.
MODEL No.: 0224SDMW7FS-P		kW: 22	
NOM. EFF.: 93.6	MIN. EFF.: -	P.F.: 83.5	

**AMPERAGE**

LOCKED ROTOR: 340

**TORQUES**

FULL LOAD (lb-ft.): 87  
 LOCKED ROTOR (%): 260  
 BREAK DOWN (%): 370

**\*\*BEARINGS:**

DRIVE END: REFER TO NP  
 OPPOSITE DRIVE END: REFER TO NP

**EFFICIENCY**

FULL LOAD: 93.9  
 3/4 LOAD: 93.3  
 1/2 LOAD: 91.5

**POWER FACTOR**

FULL LOAD: 83.5  
 3/4 LOAD: 78.3  
 1/2 LOAD: 67.6

ALL CHARACTERISTICS ARE AVERAGE EXPECTED VALUES BASED UPON RATED VOLTAGE,  
 FREQUENCY AND SINEWAVE POWER INPUT.

THE DECLARED LOCKED ROTOR CURRENT HAS A TOLERANCE OF 20%.

\* TEMPERATURE RISE WILL BE CONSISTENT WITH INSULATION, AMBIENT AND SERVICE FACTOR AS  
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**DATE:** 10/18/2019

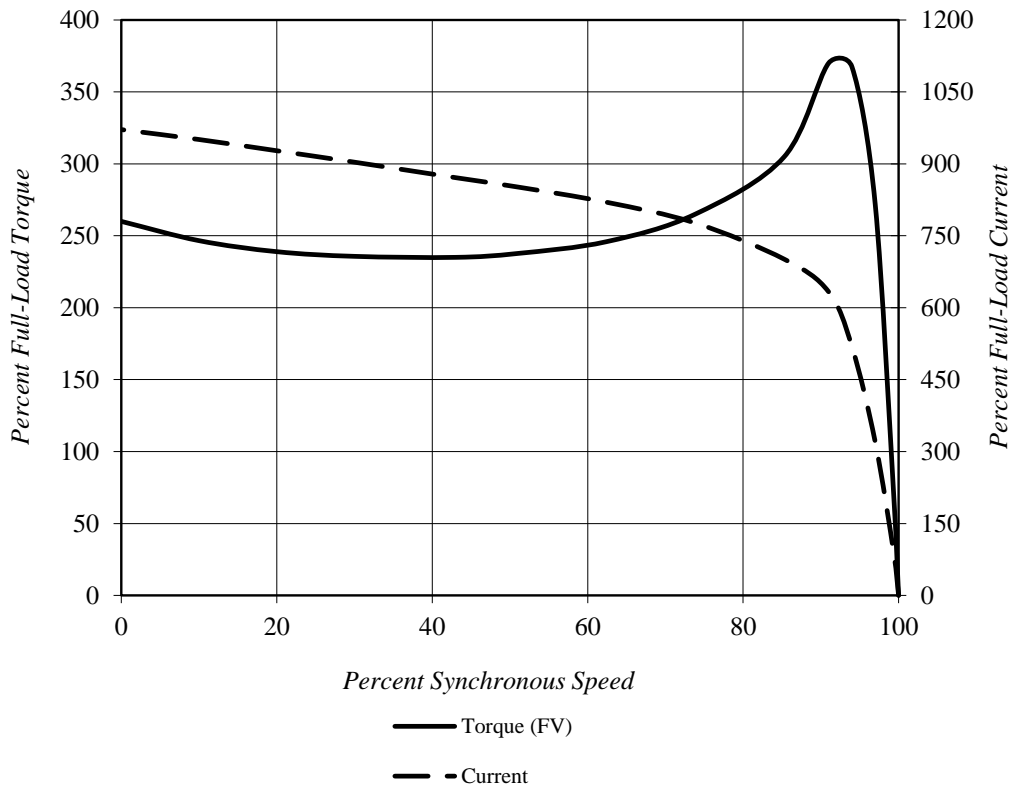
# TOSHIBA INTERNATIONAL CORPORATION

## Speed Torque/Current Curve

<b>Model #:</b>	0224SDMW7FS-P			<b>FLAmps:</b>	35
<b>Enclosure:</b>	TEFC	<b>Voltage:</b>	460 V	<b>Frame:</b>	180L
<b>Pole:</b>	4	<b>Frequency:</b>	3 PH / 60 Hz	<b>Ins. Class:</b>	F
<b>HP:</b>	30	<b>Rotor Inertia:</b>	5.5 lb-ft <sup>2</sup>	<b>Date:</b>	10/18/2019
<b>FLRPM:</b>	1775	<b>Load Inertia:</b>	N/A	<b>File:</b>	GH4022 (22kW)

<b>Locked Rotor Amps:</b>	340 A	<b>Load Type:</b>	N/A
<b>Locked Rotor Torque:</b>	260%	<b>Starting at:</b>	N/A
<b>Breakdown Torque:</b>	370%	<b>Accel. Time:</b>	N/A
<b>Rated Torque:</b>	87 lb-ft		

### *Design Values*



**Comments:** PROJECT -  
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**D.E.Curve #:** GH4022 (22kW)

**Prepared by:** Zichao Xie

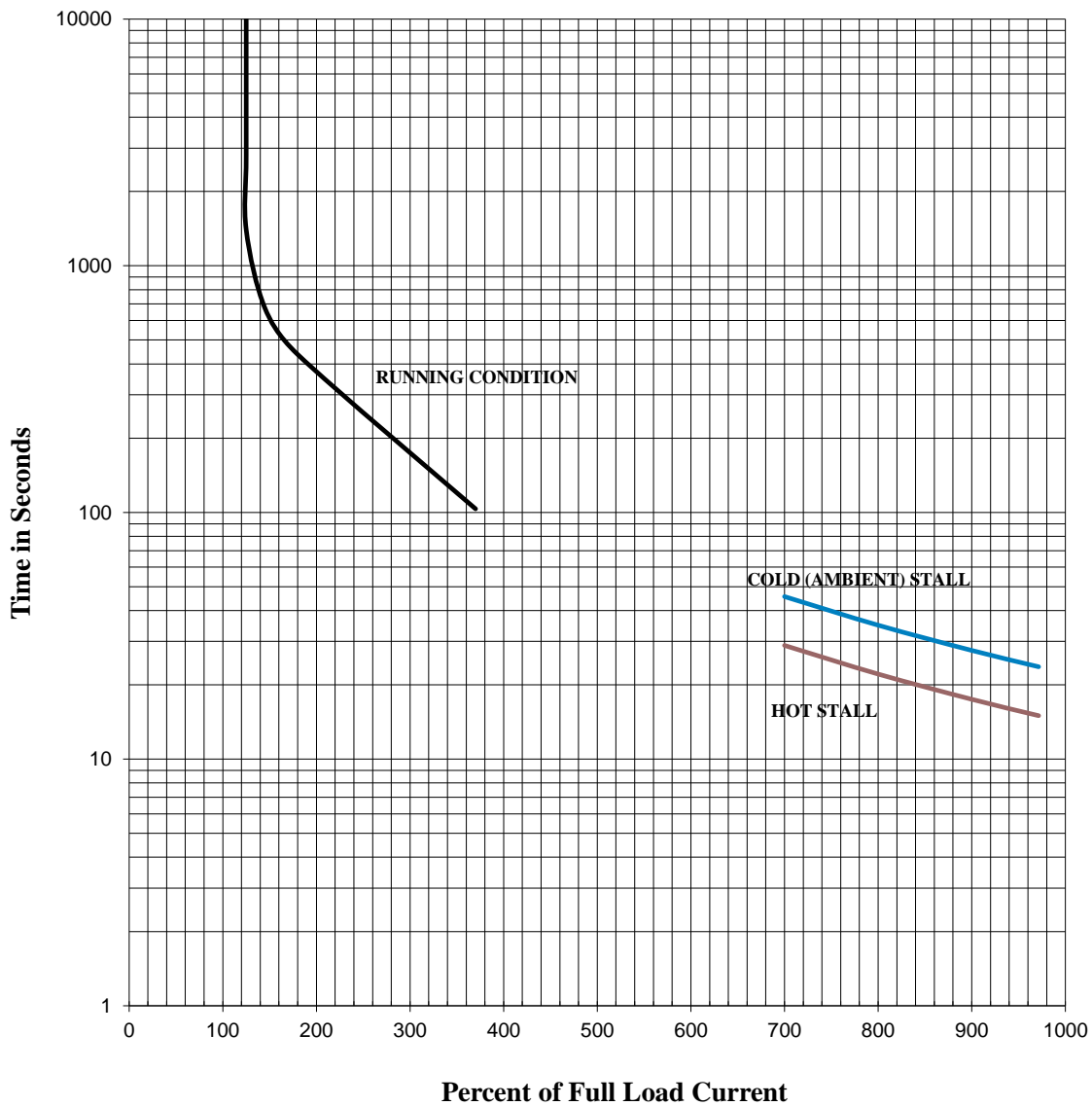
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# TOSHIBA INTERNATIONAL CORPORATION

## Thermal Limit & Acceleration Curves

*Design Values (For Reference Only)*

<b>Model #:</b>	0224SDMW7FS-P			<b>FLAmps:</b>	35
<b>Enclosure:</b>	TEFC	<b>Voltage:</b>	460 V	<b>Frame:</b>	180L
<b>Pole:</b>	4	<b>Frequency:</b>	3 PH / 60 Hz	<b>Ins. Class:</b>	F
<b>HP:</b>	30	<b>Rotor Inertia:</b>	5.5 lb-ft <sup>2</sup>	<b>Date:</b>	10/18/2019
<b>FLRPM:</b>	1775	<b>Load Inertia:</b>	N/A	<b>File:</b>	GH4022 (22kW)



**Comments:** PROJECT \_\_\_\_\_  
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**D.E. Curve #:** GH4022 (22kW)

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