

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: 230/400	3 PH / 50 Hz	S. RPM: 1500
FRAME: 100L	ENCL: TEFC	FLAMPS: 8.7/5.0	FLRPM: 1460
FORM: FBKL1	S.F.: -	IEC DESIGN NE	INSUL CLASS: F
TYPE: IKH	AMB.: 40°C	CODE: -	DUTY: Cont.
MODEL No.: Y224SDMV7JS-PL		kW: 2.2	
NOM. EFF.: 86.7	MIN. EFF.: -	cosØ 0.70	

AMPERAGE

LOCKED ROTOR: 87/50

TORQUES

FULL LOAD (lb-ft.): 10.4
LOCKED ROTOR (%): 440
BREAK DOWN (%): 460

****BEARINGS:**

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

EFFICIENCY

FULL LOAD: 89.4
3/4 LOAD: 88.4
1/2 LOAD: 85.2

POWER FACTOR

FULL LOAD: 70.8
3/4 LOAD: 63.1
1/2 LOAD: 50.4

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

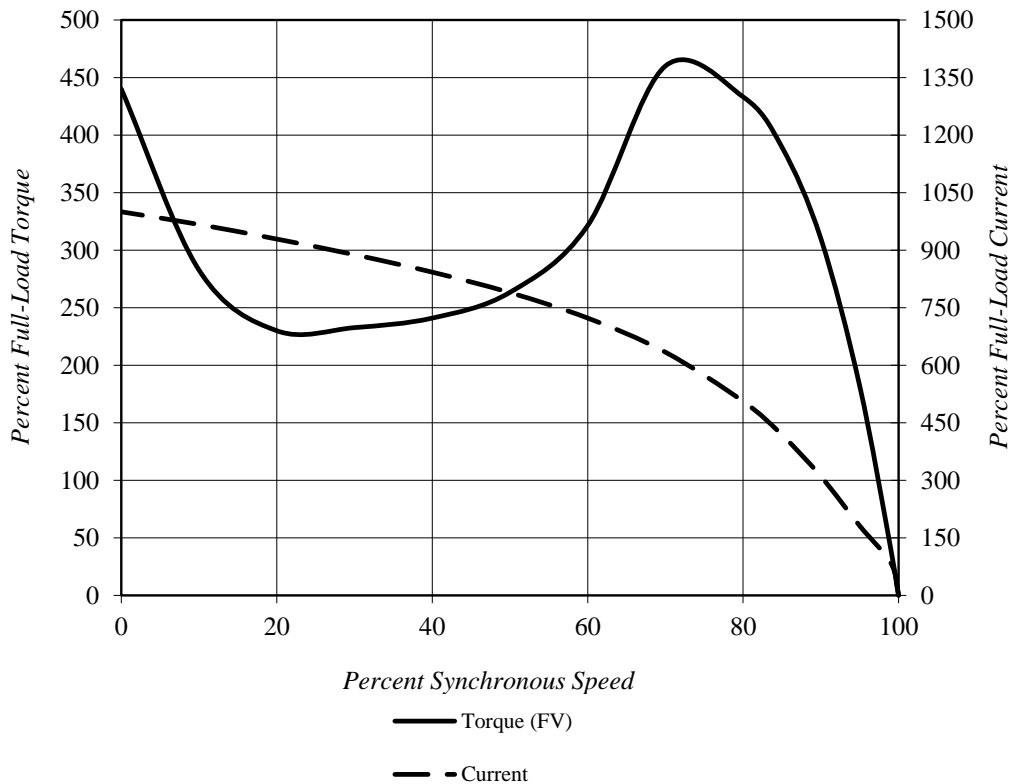
TOSHIBA INTERNATIONAL CORPORATION

Speed Torque/Current Curve

Model #:	Y224SDMV7JS-PL			FLAmps:	8.7/5.0
Enclosure:	TEFC	Voltage:	230/400 V	Frame:	100L
Pole:	4	Frequency:	3 PH / 50 Hz	Ins. Class:	F
KW:	2.2	Rotor Inertia:	0.27 lb-ft ²	Date:	10/18/2019
FLRPM:	1460	Load Inertia:	N/A	File:	GH4Y22 (2.2kW)

Locked Rotor Amps:	87/50 A	Load Type:	N/A
Locked Rotor Torque:	440%	Starting at:	N/A
Breakdown Torque:	460%	Accel. Time:	N/A
Rated Torque:	10.4 lb-ft		

Design Values



Comments: PROJECT -

D.E.Curve #: GH4Y22 (2.2kW)

Prepared by: Zichao Xie

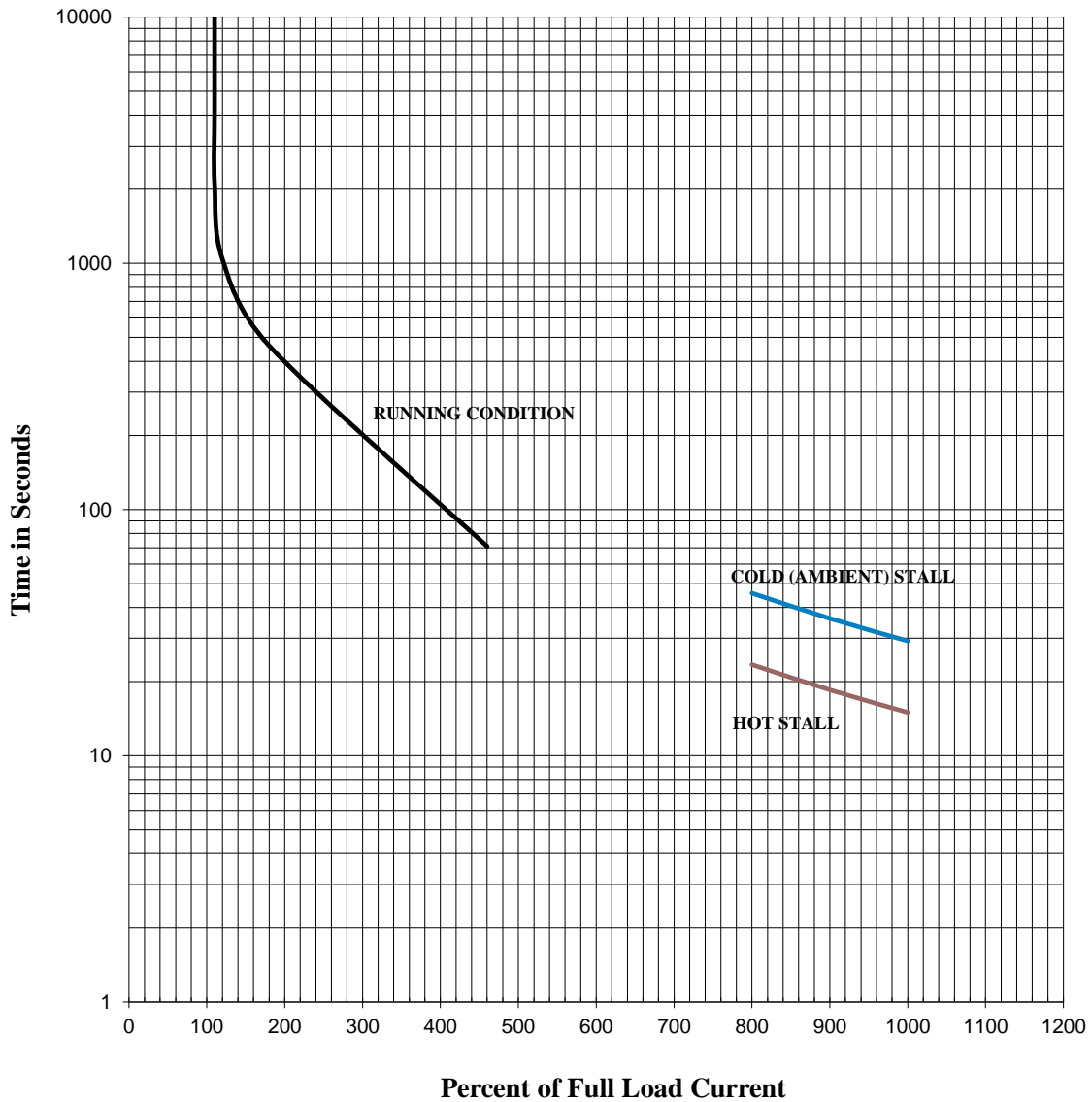
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TOSHIBA INTERNATIONAL CORPORATION

Thermal Limit & Acceleration Curves

Design Values (For Reference Only)

Model #:	Y224SDMV7JS-PL			FLAmps:	8.7/5.0
Enclosure:	TEFC	Voltage:	230/400 V	Frame:	100L
Pole:	4	Frequency:	3 PH / 50 Hz	Ins. Class:	F
KW:	2.2	Rotor Inertia:	0.27 lb-ft ²	Date:	10/18/2019
FLRPM:	1460	Load Inertia:	N/A	File:	GH4Y22 (2.2kW)



Comments: PROJECT -

D.E. Curve #: GH4Y22 (2.2kW)

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Checked by:

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MOTOR NAMEPLATE DATA

H.P.: -	VOLTS: 240/415	3 PH / 50 Hz	S. RPM: 1500
FRAME: 100L	ENCL: TEFC	FLAMPS: 9.0/5.2	FLRPM: 1465
FORM: FBKL1	S.F.: -	IEC DESIGN NE	INSUL CLASS: F
TYPE: IKH	AMB.: 40°C	CODE: -	DUTY: Cont.
MODEL No.: Y224SDMV7JS-PL		kW: 2.2	
NOM. EFF.: 86.7	MIN. EFF.: -	cosØ 0.66	

AMPERAGE

LOCKED ROTOR: 90/52

TORQUES

FULL LOAD (lb-ft.): 10.4
LOCKED ROTOR (%): 485
BREAK DOWN (%): 490

****BEARINGS:**

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

EFFICIENCY

FULL LOAD: 89.2
3/4 LOAD: 87.9
1/2 LOAD: 84.1

POWER FACTOR

FULL LOAD: 66.6
3/4 LOAD: 58.1
1/2 LOAD: 45.2

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).

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DATE: 10/18/2019

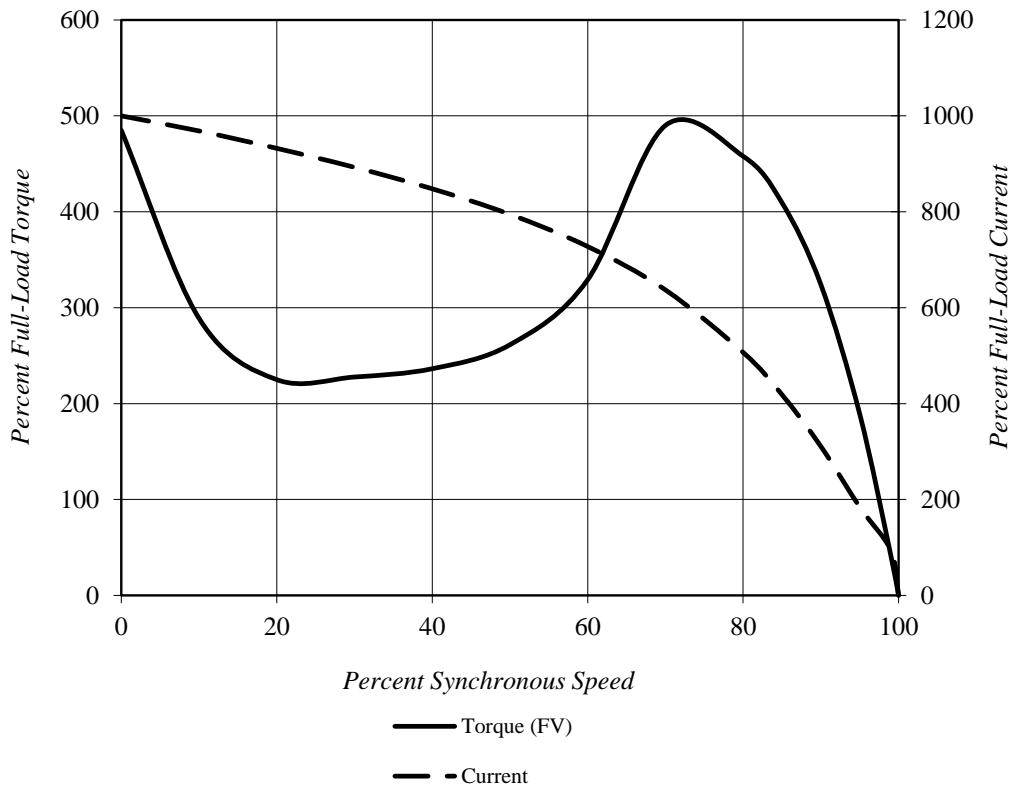
TOSHIBA INTERNATIONAL CORPORATION

Speed Torque/Current Curve

Model #:	Y224SDMV7JS-PL			FLAmps:	9.0/5.2
Enclosure:	TEFC	Voltage:	240/415 V	Frame:	100L
Pole:	4	Frequency:	3 PH / 50 Hz	Ins. Class:	F
KW:	2.2	Rotor Inertia:	0.27 lb-ft ²	Date:	10/18/2019
FLRPM:	1465	Load Inertia:	N/A	File:	GH4Y22 (2.2kW)

Locked Rotor Amps:	90/52 A	Load Type:	N/A
Locked Rotor Torque:	485%	Starting at:	N/A
Breakdown Torque:	490%	Accel. Time:	N/A
Rated Torque:	10.4 lb-ft		

Design Values



Comments: PROJECT -

D.E.Curve #: GH4Y22 (2.2kW)

Prepared by: Zichao Xie

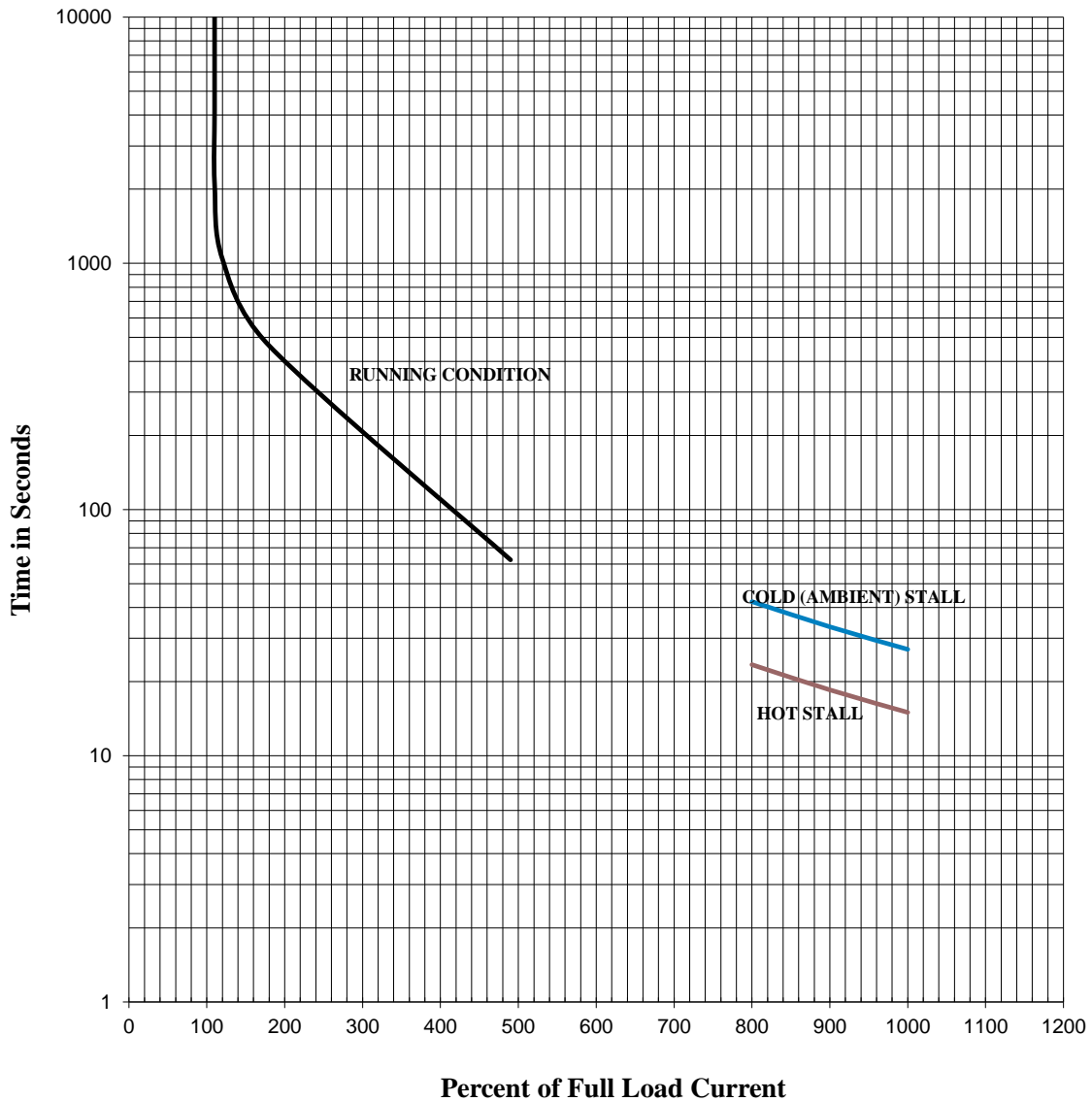
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TOSHIBA INTERNATIONAL CORPORATION

Thermal Limit & Acceleration Curves

Design Values (For Reference Only)

Model #:	Y224SDMV7JS-PL			FLAmps:	9.0/5.2
Enclosure:	TEFC	Voltage:	240/415 V	Frame:	100L
Pole:	4	Frequency:	3 PH / 50 Hz	Ins. Class:	F
KW:	2.2	Rotor Inertia:	0.27 lb-ft ²	Date:	10/18/2019
FLRPM:	1465	Load Inertia:	N/A	File:	GH4Y22 (2.2kW)



Comments: PROJECT -

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TIC SR No.: -

MOTOR NAMEPLATE DATA

H.P.: -	VOLTS: 220/380	3 PH / 50 Hz	S. RPM: 1500
FRAME: 100L	ENCL: TEFC	FLAMPS: 8.6/5.0	FLRPM: 1460
FORM: FBKL1	S.F.: -	IEC DESIGN NE	INSUL CLASS: F
TYPE: IKH	AMB.: 40°C	CODE: -	DUTY: Cont.
MODEL No.: Y224SDMV7JS-PL		kW: 2.2	
NOM. EFF.: 86.7	MIN. EFF.: -	cosØ 0.75	

AMPERAGE

LOCKED ROTOR: 81/47

TORQUES

FULL LOAD (lb-ft.): 10.4
LOCKED ROTOR (%): 390
BREAK DOWN (%): 420

****BEARINGS:**

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

EFFICIENCY

FULL LOAD: 89.4
3/4 LOAD: 88.9
1/2 LOAD: 86.4

POWER FACTOR

FULL LOAD: 75.2
3/4 LOAD: 68.7
1/2 LOAD: 56.8

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).

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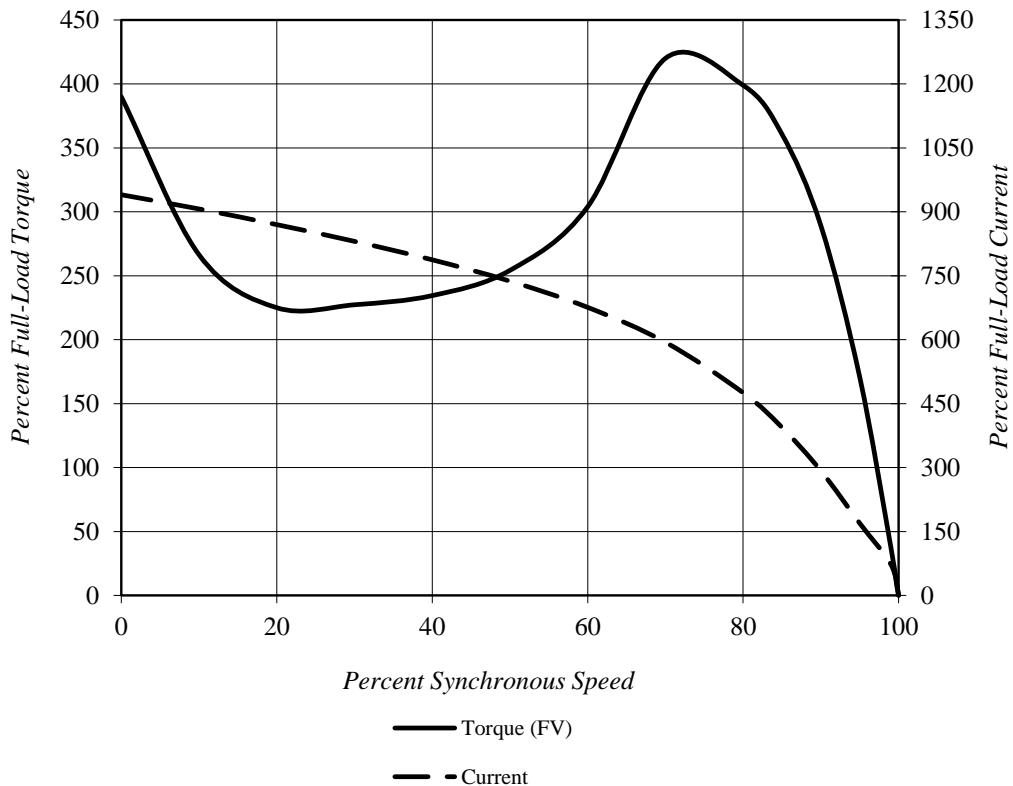
TOSHIBA INTERNATIONAL CORPORATION

Speed Torque/Current Curve

Model #:	Y224SDMV7JS-PL			FLAmps:	8.6/5.0
Enclosure:	TEFC	Voltage:	220/380 V	Frame:	100L
Pole:	4	Frequency:	3 PH / 50 Hz	Ins. Class:	F
KW:	2.2	Rotor Inertia:	0.27 lb-ft ²	Date:	10/18/2019
FLRPM:	1460	Load Inertia:	N/A	File:	GH4Y22 (2.2kW)

Locked Rotor Amps:	81/47 A	Load Type:	N/A
Locked Rotor Torque:	390%	Starting at:	N/A
Breakdown Torque:	420%	Accel. Time:	N/A
Rated Torque:	10.4 lb-ft		

Design Values



Comments: PROJECT -

D.E. Curve #: GH4Y22 (2.2kW)

Prepared by: Zichao Xie

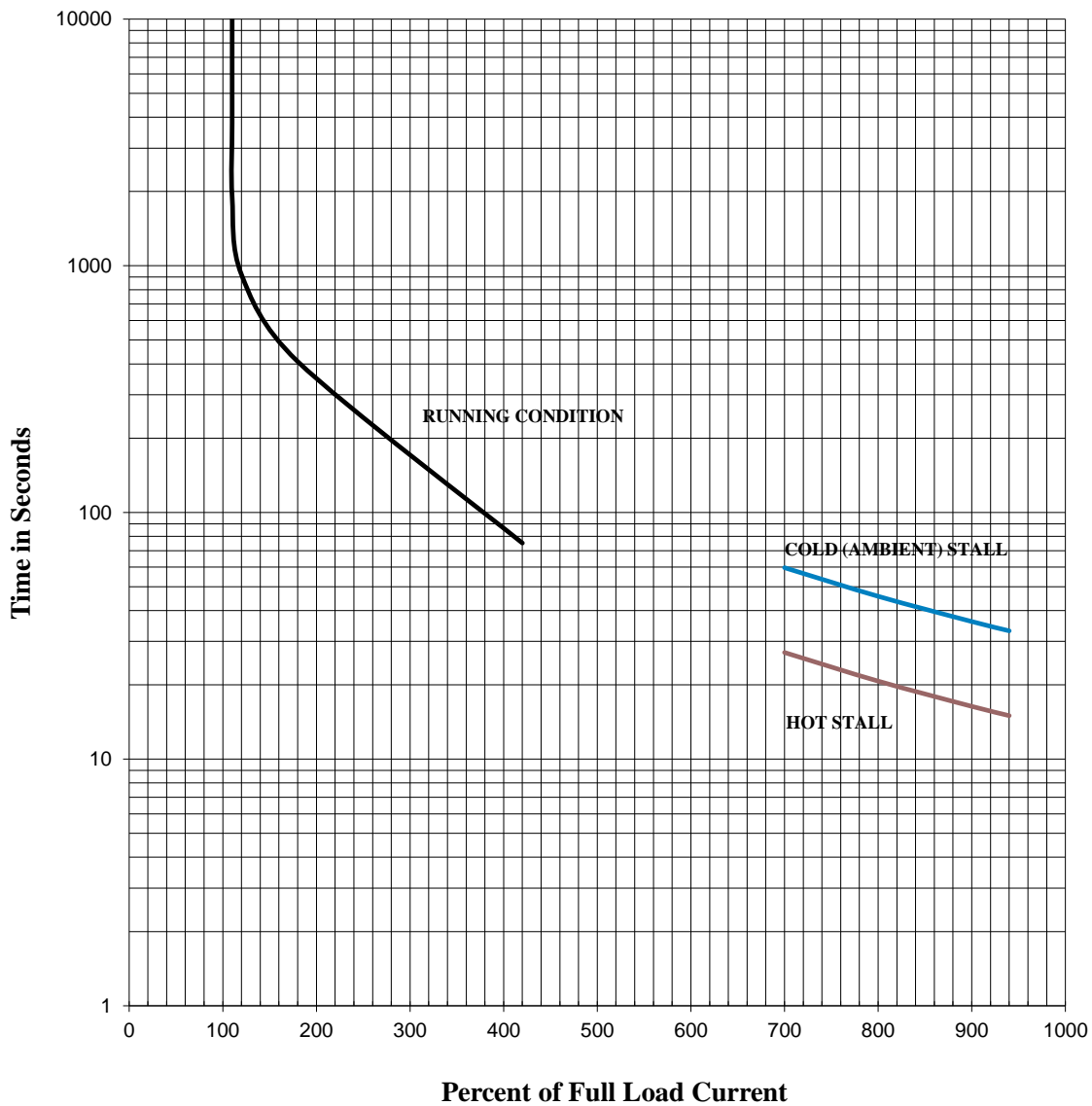
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TOSHIBA INTERNATIONAL CORPORATION

Thermal Limit & Acceleration Curves

Design Values (For Reference Only)

Model #:	Y224SDMV7JS-PL			FLAmps:	8.6/5.0
Enclosure:	TEFC	Voltage:	220/380 V	Frame:	100L
Pole:	4	Frequency:	3 PH / 50 Hz	Ins. Class:	F
KW:	2.2	Rotor Inertia:	0.27 lb-ft ²	Date:	10/18/2019
FLRPM:	1460	Load Inertia:	N/A	File:	GH4Y22 (2.2kW)



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CUSTOMER: -
TIC SR No.: -

MOTOR NAMEPLATE DATA

H.P.: 3	VOLTS: 460	3 PH / 60 Hz	S. RPM: 1800
FRAME: 100L	ENCL: TEFC	FLAMPS: 4.5	FLRPM: 1770
FORM: FBKL1	S.F.: 1.15	NEMA DESIGN: A	INSUL CLASS: F
TYPE: IKH	AMB.: 40°C	CODE: R	DUTY: Cont.
MODEL No.: Y224SDMV7JS-PL		kW: 2.2	
NOM. EFF.: 89.5	MIN. EFF.: -	P.F.: 68.0	

AMPERAGE

LOCKED ROTOR: 53

TORQUES

FULL LOAD (lb-ft.): 8.6
LOCKED ROTOR (%): 595
BREAK DOWN (%): 485

****BEARINGS:**

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

EFFICIENCY

FULL LOAD: 90.5
3/4 LOAD: 89.1
1/2 LOAD: 85.3

POWER FACTOR

FULL LOAD: 68.4
3/4 LOAD: 60.7
1/2 LOAD: 48.3

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

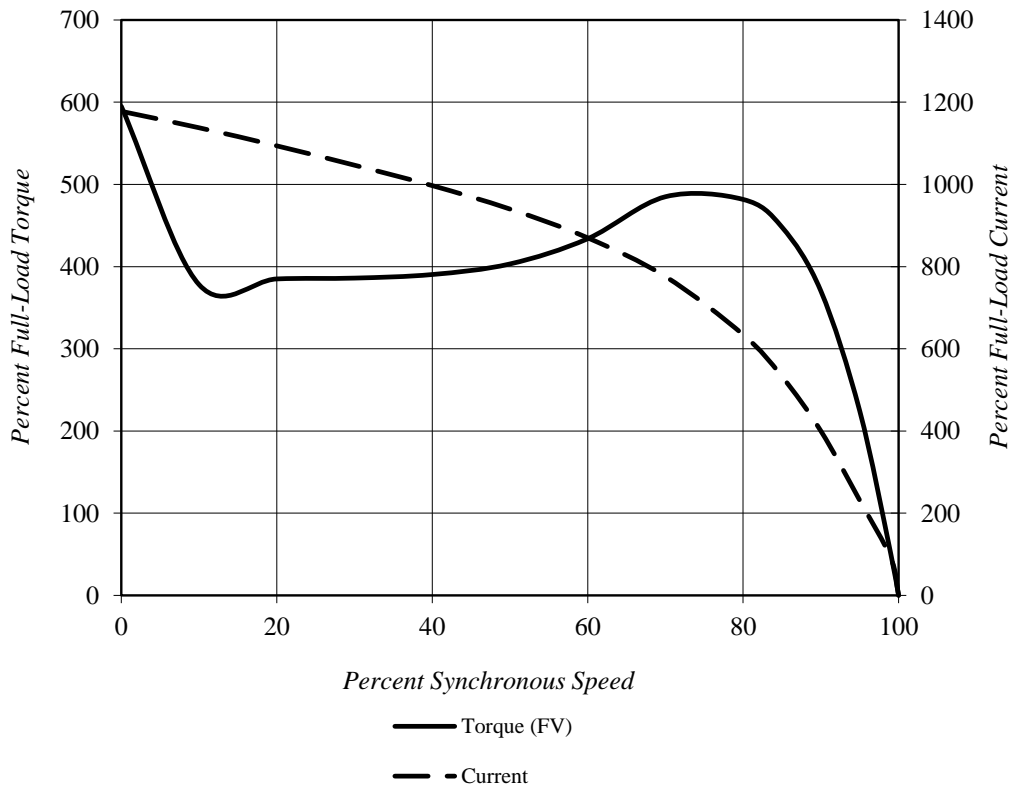
TOSHIBA INTERNATIONAL CORPORATION

Speed Torque/Current Curve

Model #:	Y224SDMV7JS-PL			FLAmps:	4.5
Enclosure:	TEFC	Voltage:	460 V	Frame:	100L
Pole:	4	Frequency:	3 PH / 60 Hz	Ins. Class:	F
HP:	3	Rotor Inertia:	0.27 lb-ft ²	Date:	10/18/2019
FLRPM:	1770	Load Inertia:	N/A	File:	GH4Y22 (2.2kW)

Locked Rotor Amps:	53 A	Load Type:	N/A
Locked Rotor Torque:	595%	Starting at:	N/A
Breakdown Torque:	485%	Accel. Time:	N/A
Rated Torque:	8.6 lb-ft		

Design Values



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Prepared by: Zichao Xie

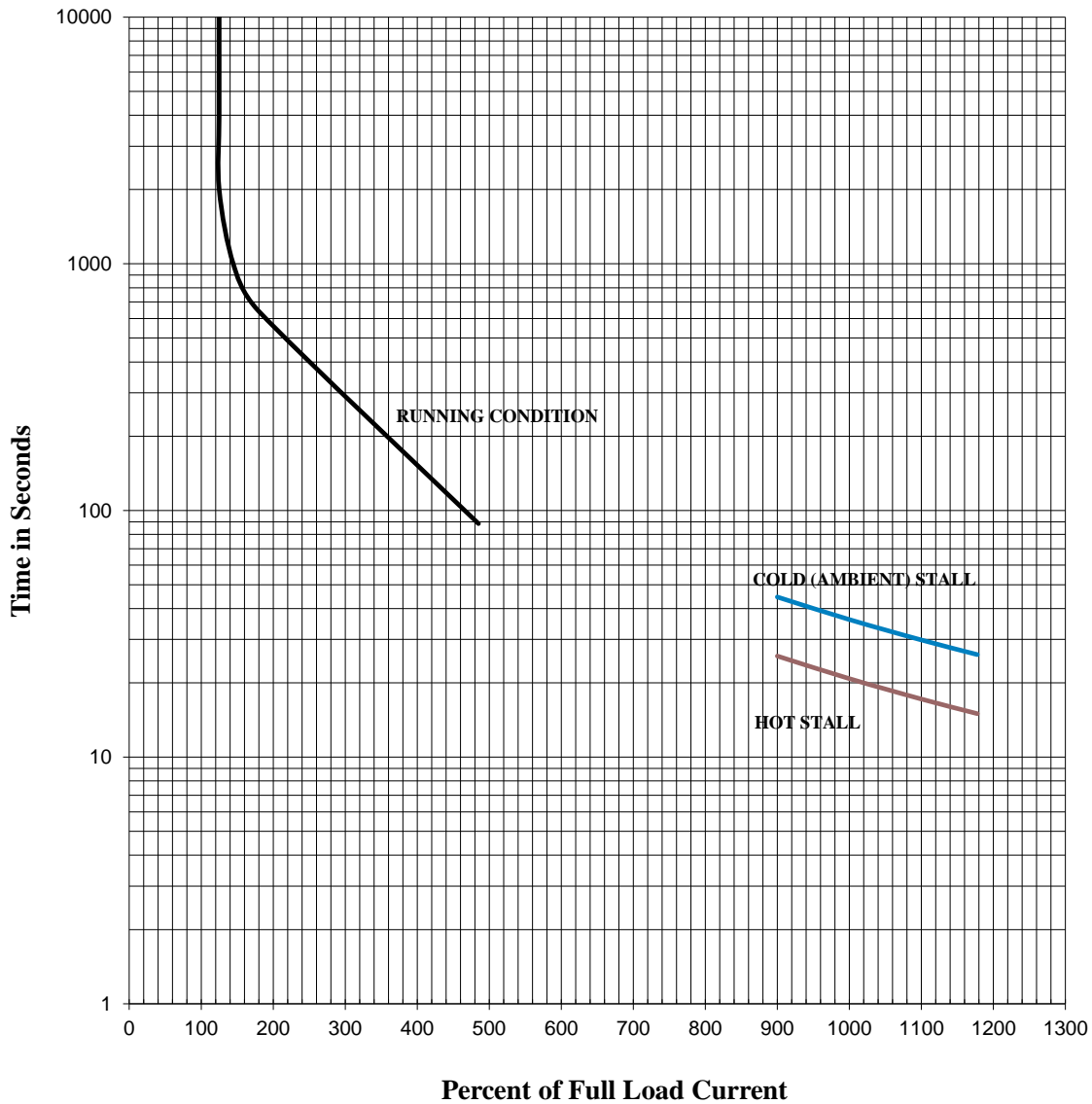
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Thermal Limit & Acceleration Curves

Design Values (For Reference Only)

Model #:	Y224SDMV7JS-PL			FLAmps:	4.5
Enclosure:	TEFC	Voltage:	460 V	Frame:	100L
Pole:	4	Frequency:	3 PH / 60 Hz	Ins. Class:	F
HP:	3	Rotor Inertia:	0.27 lb-ft ²	Date:	10/18/2019
FLRPM:	1770	Load Inertia:	N/A	File:	GH4Y22 (2.2kW)



Comments: PROJECT -

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