

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: 3000
FRAME: 112M	ENCL: TEFC	FLAMPS: 12.3/7.1	FLRPM: 2910
FORM: FCKL1	S.F.: -	IEC DESIGN N	INSUL CLASS: F
TYPE: IKH	AMB.: 40°C	CODE: -	DUTY: Cont.
MODEL No.: 0042SDMV7HS-PL		kW: 4	
NOM. EFF.: 88.1	MIN. EFF.: -	cosØ 0.90	

AMPERAGE

LOCKED ROTOR: 104/60

TORQUES

FULL LOAD (lb-ft.): 9.7
LOCKED ROTOR (%): 305
BREAK DOWN (%): 350

****BEARINGS:**

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

EFFICIENCY

FULL LOAD: 89.0
3/4 LOAD: 89.5
1/2 LOAD: 88.5

POWER FACTOR

FULL LOAD: 90.8
3/4 LOAD: 88.2
1/2 LOAD: 81.7

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: 1/13/2020

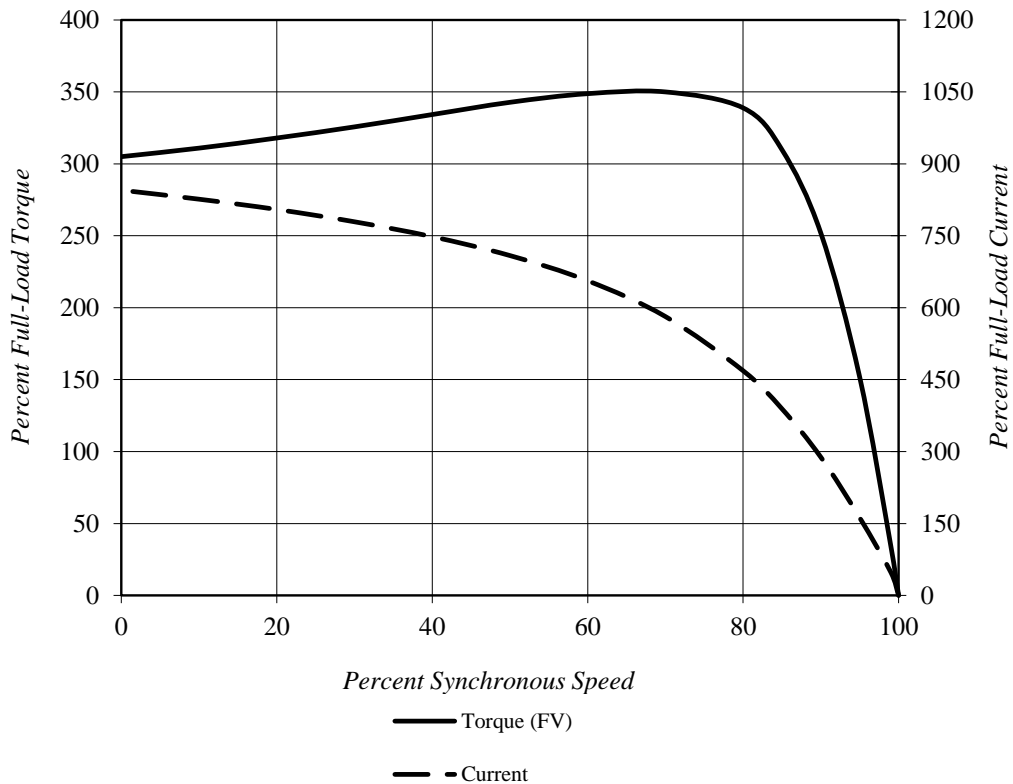
TOSHIBA INTERNATIONAL CORPORATION

Speed Torque/Current Curve

Model #:	0042SDMV7HS-PL			FLAmps:	12.3/7.1
Enclosure:	TEFC	Voltage:	230/400 V	Frame:	112M
Pole:	2	Frequency:	3 PH / 50 Hz	Ins. Class:	F
KW:	4	Rotor Inertia:	0.22 lb-ft ²	Date:	1/13/2020
FLRPM:	2910	Load Inertia:	N/A	File:	GH2004 (4kW)

Locked Rotor Amps:	104/60 A	Load Type:	N/A
Locked Rotor Torque:	305%	Starting at:	N/A
Breakdown Torque:	350%	Accel. Time:	N/A
Rated Torque:	9.7 lb-ft		

Design Values



Comments: PROJECT -

D.E. Curve #: GH2004 (4kW)

Prepared by: Zichao Xie

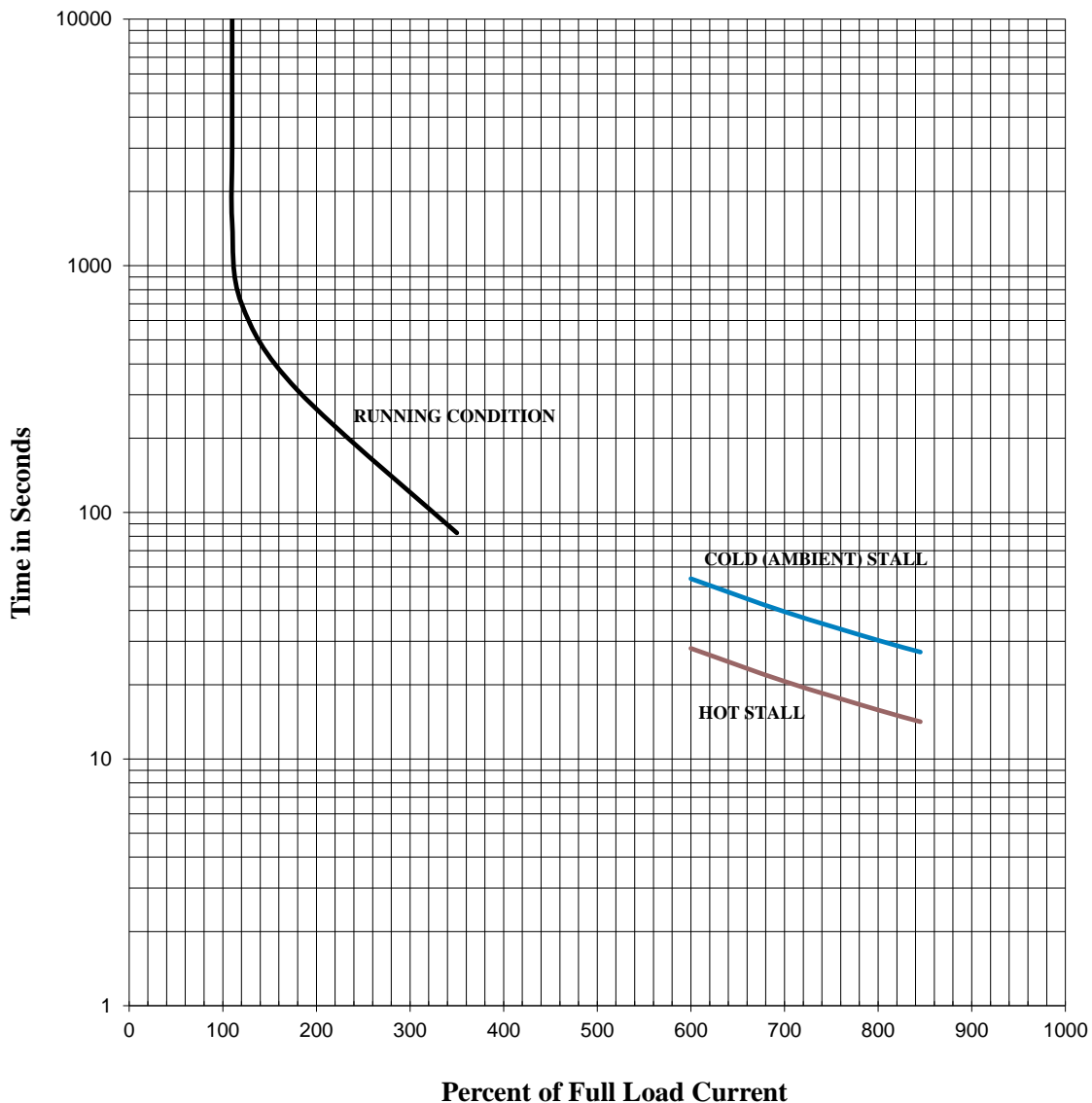
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TOSHIBA INTERNATIONAL CORPORATION

Thermal Limit & Acceleration Curves

Design Values (For Reference Only)

Model #:	0042SDMV7HS-PL			FLAmps:	12.3/7.1
Enclosure:	TEFC	Voltage:	230/400 V	Frame:	112M
Pole:	2	Frequency:	3 PH / 50 Hz	Ins. Class:	F
KW:	4	Rotor Inertia:	0.22 lb-ft ²	Date:	1/13/2020
FLRPM:	2910	Load Inertia:	N/A	File:	GH2004 (4kW)



Comments: PROJECT -

D.E. Curve #: GH2004 (4kW)

Prepared by: Zichao Xie

Checked by:

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CUSTOMER: -
TIC SR No.: -

MOTOR NAMEPLATE DATA			
H.P.: -	VOLTS: 240/415	3 PH / 50 Hz	S. RPM: 3000
FRAME: 112M	ENCL: TEFC	FLAMPS: 12.1/7.0	FLRPM: 2910
FORM: FCKL1	S.F.: -	IEC DESIGN N	INSUL CLASS: F
TYPE: IKH	AMB.: 40°C	CODE: -	DUTY: Cont.
MODEL No.: 0042SDMV7HS-PL		kW: 4	
NOM. EFF.: 88.1	MIN. EFF.: -	cosØ 0.89	

AMPERAGE	TORQUES	**BEARINGS:
LOCKED ROTOR: 109/63	FULL LOAD (lb-ft.): 9.7	DRIVE END: REFER TO NP
	LOCKED ROTOR (%): 325	OPPOSITE DRIVE END: REFER TO NP
	BREAK DOWN (%): 370	

EFFICIENCY	POWER FACTOR
FULL LOAD: 88.9	FULL LOAD: 89.3
3/4 LOAD: 89.2	3/4 LOAD: 85.9
1/2 LOAD: 87.9	1/2 LOAD: 77.8

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).

CERTIFIED BY: Zichao Xie
DATE: 1/13/2020

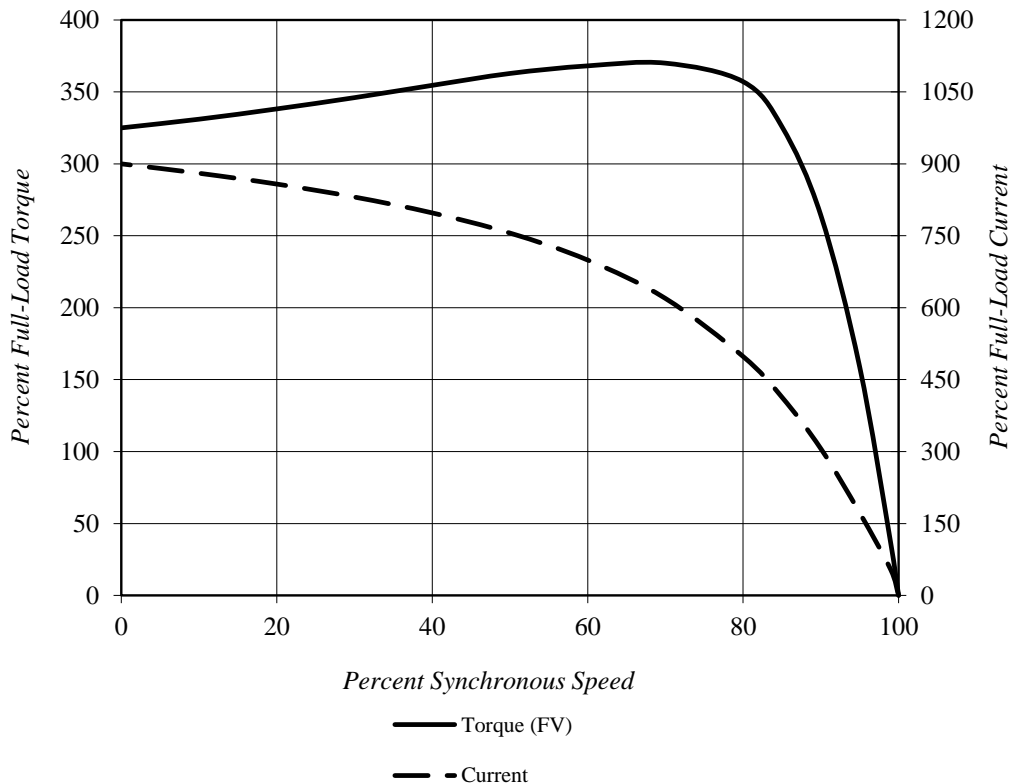
TOSHIBA INTERNATIONAL CORPORATION

Speed Torque/Current Curve

Model #:	0042SDMV7HS-PL			FLAmps:	12.1/7.0
Enclosure:	TEFC	Voltage:	240/415 V	Frame:	112M
Pole:	2	Frequency:	3 PH / 50 Hz	Ins. Class:	F
KW:	4	Rotor Inertia:	0.22 lb-ft ²	Date:	1/13/2020
FLRPM:	2910	Load Inertia:	N/A	File:	GH2004 (4kW)

Locked Rotor Amps:	109/63 A	Load Type:	N/A
Locked Rotor Torque:	325%	Starting at:	N/A
Breakdown Torque:	370%	Accel. Time:	N/A
Rated Torque:	9.7 lb-ft		

Design Values



Comments: PROJECT -

D.E. Curve #: GH2004 (4kW)

Prepared by: Zichao Xie

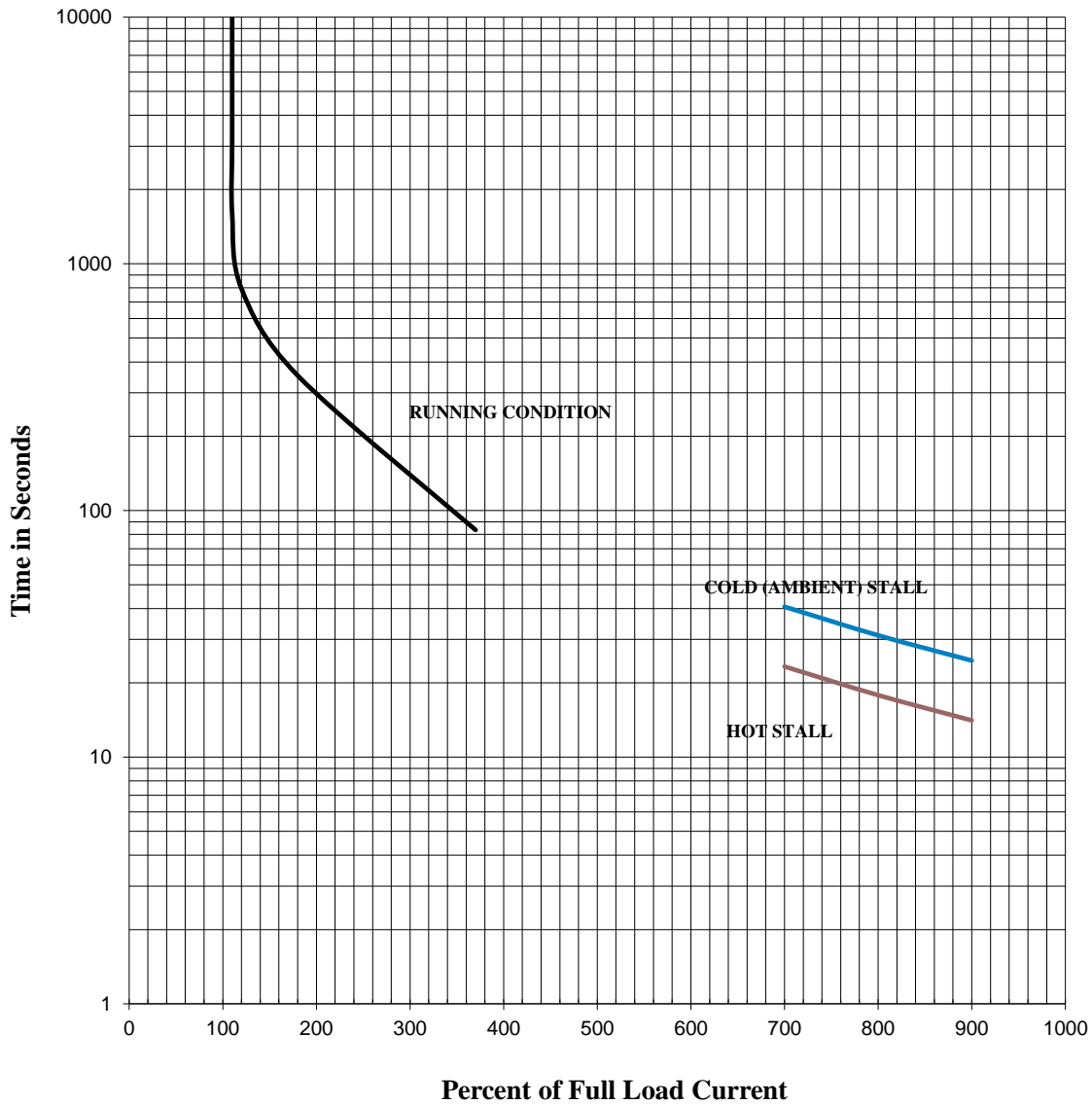
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TOSHIBA INTERNATIONAL CORPORATION

Thermal Limit & Acceleration Curves

Design Values (For Reference Only)

Model #:	0042SDMV7HS-PL			FLAmps:	12.1/7.0
Enclosure:	TEFC	Voltage:	240/415 V	Frame:	112M
Pole:	2	Frequency:	3 PH / 50 Hz	Ins. Class:	F
KW:	4	Rotor Inertia:	0.22 lb-ft ²	Date:	1/13/2020
FLRPM:	2910	Load Inertia:	N/A	File:	GH2004 (4kW)



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CUSTOMER: -
TIC SR No.: -

MOTOR NAMEPLATE DATA

H.P.: -	VOLTS: 220/380	3 PH / 50 Hz	S. RPM: 3000
FRAME: 112M	ENCL: TEFC	FLAMPS: 13/7.5	FLRPM: 2890
FORM: FCKL1	S.F.: -	IEC DESIGN N	INSUL CLASS: F
TYPE: IKH	AMB.: 40°C	CODE: -	DUTY: Cont.
MODEL No.: 0042SDMV7HS-PL		kW: 4	
NOM. EFF.: 88.1	MIN. EFF.: -	cosØ 0.92	

AMPERAGE

LOCKED ROTOR: 99/57

TORQUES

FULL LOAD (lb-ft.): 9.8
LOCKED ROTOR (%): 265
BREAK DOWN (%): 315

****BEARINGS:**

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

EFFICIENCY

FULL LOAD: 87.6
3/4 LOAD: 88.5
1/2 LOAD: 88.1

POWER FACTOR

FULL LOAD: 92.0
3/4 LOAD: 90.4
1/2 LOAD: 85.6

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
DEFINED BY NEMA-MG-12 OR -20.

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

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DATE: 1/13/2020

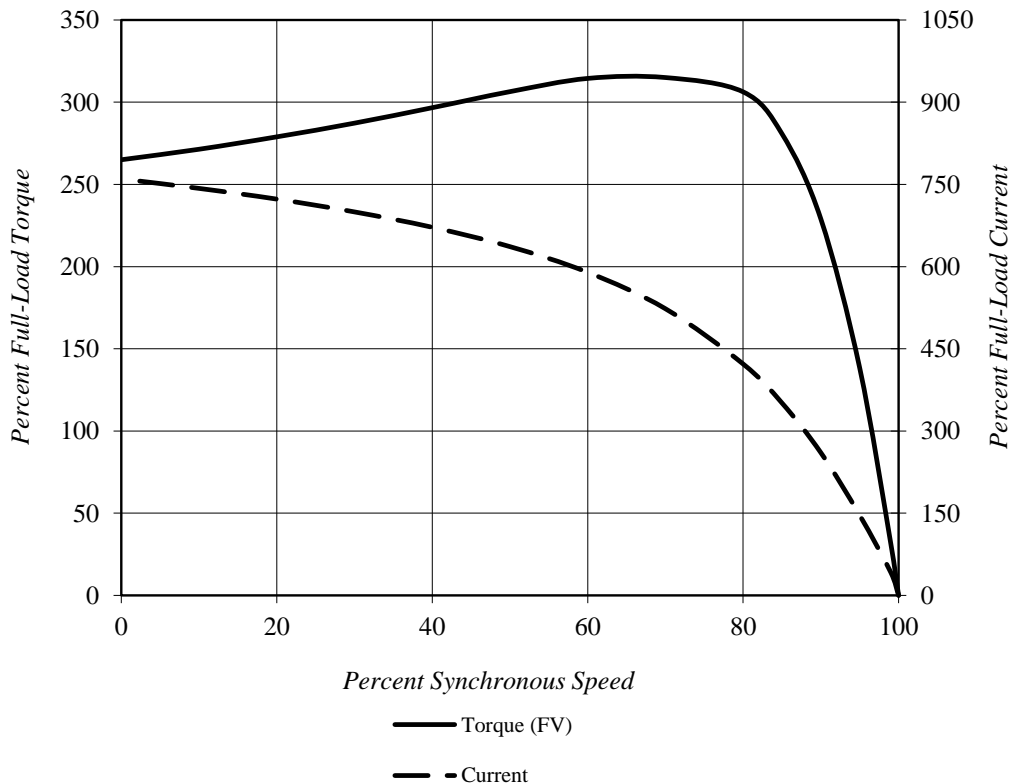
TOSHIBA INTERNATIONAL CORPORATION

Speed Torque/Current Curve

Model #:	0042SDMV7HS-PL			FLAmps:	13/7.5
Enclosure:	TEFC	Voltage:	220/380 V	Frame:	112M
Pole:	2	Frequency:	3 PH / 50 Hz	Ins. Class:	F
KW:	4	Rotor Inertia:	0.22 lb-ft ²	Date:	1/13/2020
FLRPM:	2890	Load Inertia:	N/A	File:	GH2004 (4kW)

Locked Rotor Amps:	99/57 A	Load Type:	N/A
Locked Rotor Torque:	265%	Starting at:	N/A
Breakdown Torque:	315%	Accel. Time:	N/A
Rated Torque:	9.8 lb-ft		

Design Values



Comments: PROJECT -

D.E. Curve #: GH2004 (4kW)

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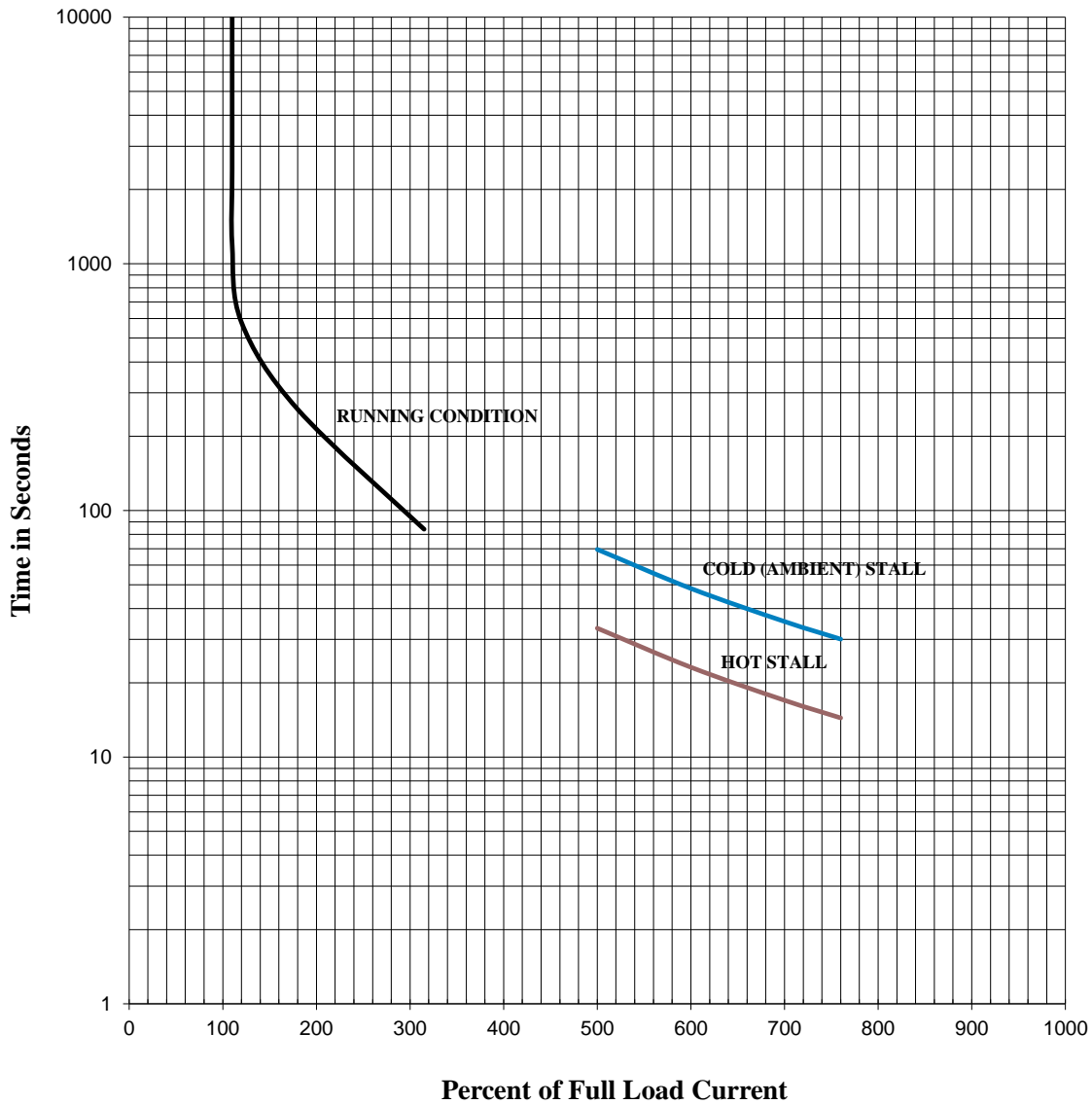
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TOSHIBA INTERNATIONAL CORPORATION

Thermal Limit & Acceleration Curves

Design Values (For Reference Only)

Model #:	0042SDMV7HS-PL			FLAmps:	13/7.5
Enclosure:	TEFC	Voltage:	220/380 V	Frame:	112M
Pole:	2	Frequency:	3 PH / 50 Hz	Ins. Class:	F
KW:	4	Rotor Inertia:	0.22 lb-ft ²	Date:	1/13/2020
FLRPM:	2890	Load Inertia:	N/A	File:	GH2004 (4kW)



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CUSTOMER: -
TIC SR No.: -

MOTOR NAMEPLATE DATA

H.P.: 5.5	VOLTS: 460	3 PH / 60 Hz	S. RPM: 3600
FRAME: 112M	ENCL: TEFC	FLAMPS: 6.2	FLRPM: 3520
FORM: FCKL1	S.F.: 1.15	NEMA DESIGN: A	INSUL CLASS: F
TYPE: IKH	AMB.: 40°C	CODE: L	DUTY: Cont.
MODEL No.: 0042SDMV7HS-PL		kW: 4	
NOM. EFF.: 88.5	MIN. EFF.: -	P.F.: 89.5	

AMPERAGE

LOCKED ROTOR: 67

TORQUES

FULL LOAD (lb-ft.): 8.1
LOCKED ROTOR (%): 355
BREAK DOWN (%): 380

****BEARINGS:**

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

EFFICIENCY

FULL LOAD: 90.5
3/4 LOAD: 90.3
1/2 LOAD: 88.6

POWER FACTOR

FULL LOAD: 89.8
3/4 LOAD: 87.2
1/2 LOAD: 80.5

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

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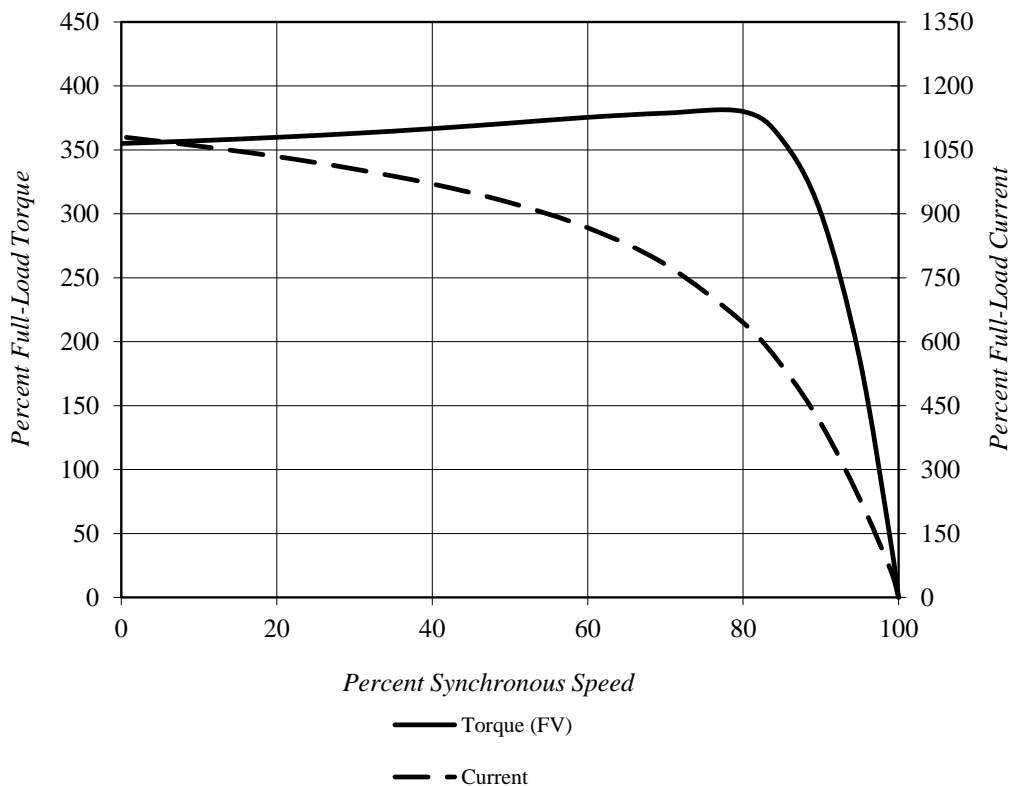
TOSHIBA INTERNATIONAL CORPORATION

Speed Torque/Current Curve

Model #:	0042SDMV7HS-PL			FLAmps:	6.2
Enclosure:	TEFC	Voltage:	460 V	Frame:	112M
Pole:	2	Frequency:	3 PH / 60 Hz	Ins. Class:	F
HP:	5.5	Rotor Inertia:	0.22 lb-ft ²	Date:	1/13/2020
FLRPM:	3520	Load Inertia:	N/A	File:	GH2004 (4kW)

Locked Rotor Amps:	67 A	Load Type:	N/A
Locked Rotor Torque:	355%	Starting at:	N/A
Breakdown Torque:	380%	Accel. Time:	N/A
Rated Torque:	8.1 lb-ft		

Design Values



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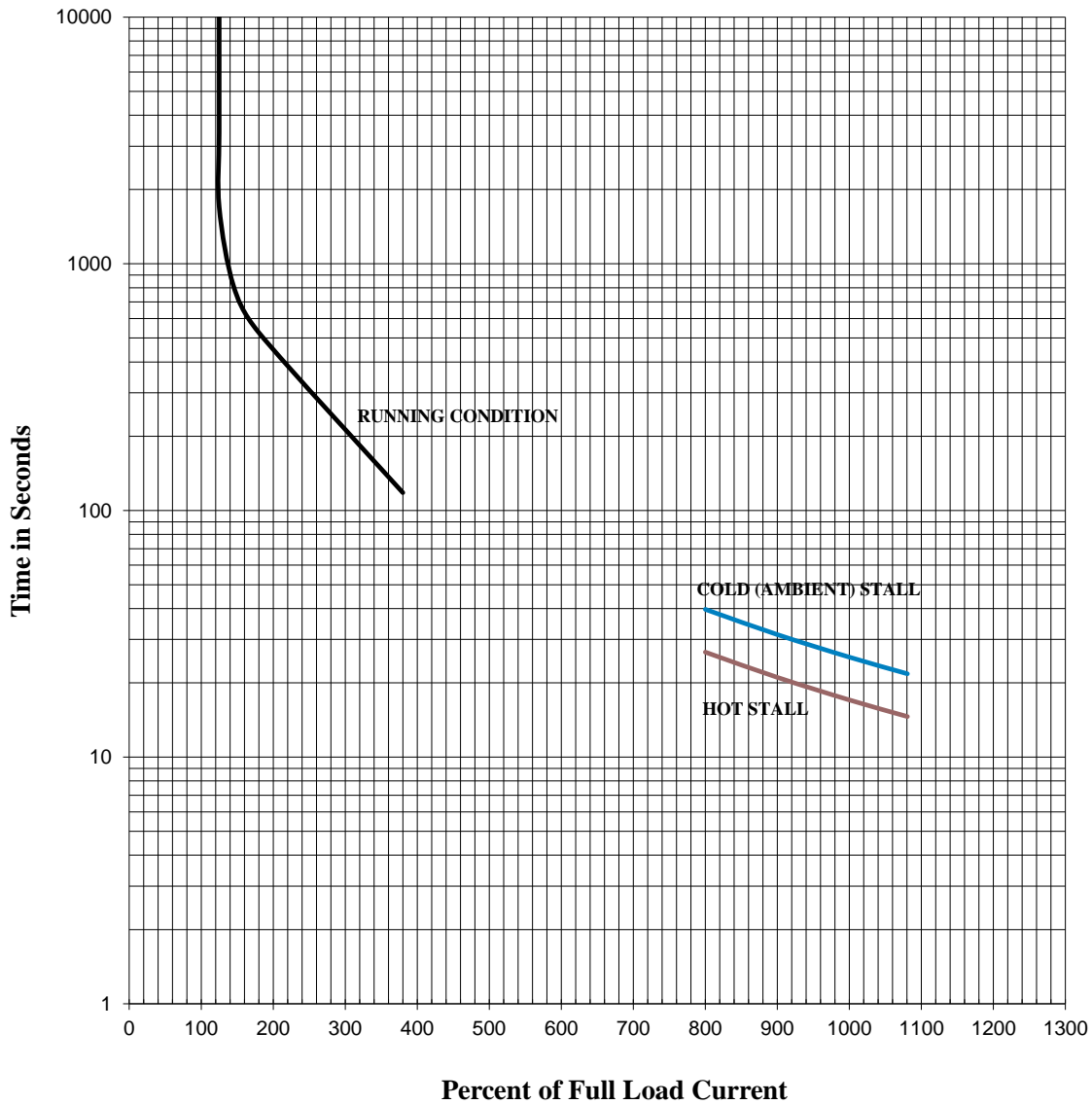
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Thermal Limit & Acceleration Curves

Design Values (For Reference Only)

Model #:	0042SDMV7HS-PL			FLAmps:	6.2
Enclosure:	TEFC	Voltage:	460 V	Frame:	112M
Pole:	2	Frequency:	3 PH / 60 Hz	Ins. Class:	F
HP:	5.5	Rotor Inertia:	0.22 lb-ft ²	Date:	1/13/2020
FLRPM:	3520	Load Inertia:	N/A	File:	GH2004 (4kW)



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