

PRODUCT INFORMATION PACKET

marathon®
Motors

Model No: SCA0112A4181GAA001

Catalog No: SCA0112A4181GAA001

TerraMAX® Cast Iron Motor, 15 HP, 3 Ph, 50 Hz, 380/660 V, 1500 RPM, 160M Frame, TEFC



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RegalRexnord

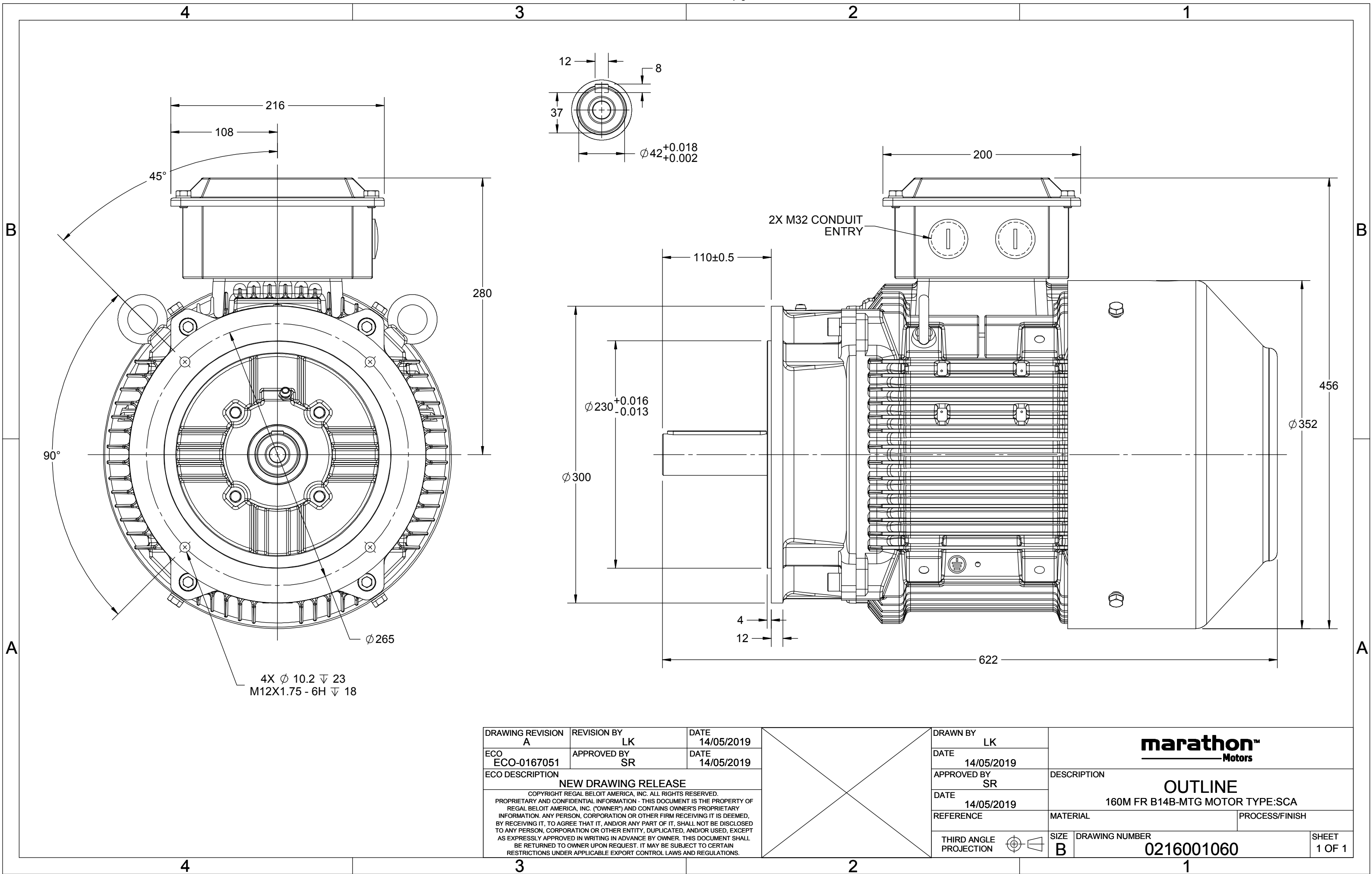
Nameplate Specifications

| | | | |
|------------------------|---------------|----------------------------|-----------------------------|
| Output HP | 15 Hp | Output KW | 11.0 kW |
| Frequency | 50 Hz | Voltage | 380/660 V |
| Current | 22.1 A | Speed | 1465 rpm |
| Service Factor | 1 | Phase | 3 |
| Efficiency | 89.8 % | Power Factor | 0.84 |
| Duty | S1 | Insulation Class | F |
| Frame | 160M | Enclosure | Totally Enclosed Fan Cooled |
| Thermal Protection | No Protection | Ambient Temperature | 40 °C |
| Drive End Bearing Size | 6309 | Opp Drive End Bearing Size | 6209 |
| UL | No | CSA | No |
| CE | Yes | IP Code | 55 |
| Number of Speeds | 1 | Efficiency Class | IE2 |

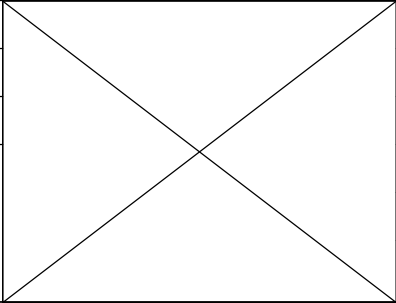
Technical Specifications

| | | | |
|-----------------------|---------------|-----------------------|----------------|
| Electrical Type | Squirrel Cage | Starting Method | Direct On Line |
| Poles | 4 | Rotation | Bi-Directional |
| Mounting | B14B | Motor Orientation | Horizontal |
| Drive End Bearing | 2z-C3 | Opp Drive End Bearing | 2z-C3 |
| Frame Material | Cast Iron | Shaft Type | Keyed |
| Overall Length | 622 mm | Frame Length | 254 mm |
| Shaft Diameter | 42 mm | Shaft Extension | 110 mm |
| Assembly/Box Mounting | Top | | |
| Connection Drawing | 8442000085 | Outline Drawing | 0216001060 |

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| | | |
|--|-------------------|--------------------|
| DRAWING REVISION A | REVISION BY LK | DATE 14/05/2019 |
| ECO ECO-0167051 | APPROVED BY SR | DATE 14/05/2019 |
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| | | | |
|---------------------------|--|-------------------------------------|-----------------|
| DRAWN BY LK | marathon™ Motors | | |
| DATE 14/05/2019 | | | |
| APPROVED BY SR | DESCRIPTION OUTLINE 160M FR B14B-MTG MOTOR TYPE:SCA | | |
| DATE 14/05/2019 | | | |
| REFERENCE | MATERIAL | PROCESS/FINISH | |
| THIRD ANGLE PROJECTION | SIZE B | DRAWING NUMBER 0216001060 | SHEET 1 OF 1 |

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DRAWING REVISION
A

REVISION BY
SN

DATE
13/01/2017

ECO
ECO-0116390

APPROVED BY
SBD

DATE
13/01/2017

ECO DESCRIPTION

NEW DRAWING RELEASE

GEOMETRIC TOLERANCE

| | | |
|------------|---------|------|
| LINEAR DIM | >0~6 | ±0.1 |
| | >6~30 | ±0.2 |
| | >30~120 | ±0.3 |



NOTES:

1. PRESSURE-SENSITIVE ADHESIVE COATED PAPER ON THE BACK OF SELF-ADHESIVE.
2. AT THE END OF YELLOW, WORDS, SYMBOLS, LETTERS ARE BLACK, BORDER IS BLACK.
3. THE TOLERANCE OF THE LINEAR SIZE OF THE TOLERANCE WITHOUT THE TOLERANCE BY THE TABLE.

8WD.442.2017



DRAWN BY
SN
DATE
16/12/2016
APPROVED BY
SBD
DATE
16/12/2016
REFERENCE
THIRD ANGLE
PROJECTION

REGALTM Regal Beloit America, Inc.
DESCRIPTION
CONN DIAGRAM-NAMEPLATE
MATERIAL
PROCESS/FINISH
SIZE
A
DRAWING NUMBER
8442000085
SHEET
1 OF 1

Model No. SCA0112A4181GAA001

| U (V) | Δ / Y Conn | f [Hz] | P [kW] | P [hp] | I [A] | n [RPM] | T [Nm] | IE Class | % EFF at __ load | | | | PF at __ load | | | I _A /I _N [pu] | T _A /T _N [pu] | T _K /T _N [pu] |
|----------|---------------|-----------|-----------|-----------|----------|------------|-----------|-------------|------------------|----|-------|-------|---------------|-------|-------|--|--|--|
| 380/660 | Δ | 50 | 11 | 15 | 22.1 | 1465 | 71.7 | IE2 | 5/4FL | FL | 3/4FL | 1/2FL | FL | 3/4FL | 1/2FL | 6.76041179 | 2.3 | 2.7 |
| | | | | | | | | | | | | | | | | | | |

| | | | |
|----------------------------------|--------------------|---|--|
| Motor type | SCA | Degree of protection | IP 55 |
| Enclosure | TEFC | Mounting type | IM B14B |
| Frame Material | Cast Iron | Cooling method | IC 411 |
| Frame size | 160M | Motor weight - approx. | 123 kg |
| Duty | S1 | Gross weight - approx. | 143 kg |
| Voltage variation * | ± 10% | Motor inertia | 0.0900 kgm ² |
| Frequency variation * | ± 5% | Load inertia | Customer to Provide |
| Combined variation * | 10% | Vibration level | 2.2 mm/s |
| Design | N | Noise level (1meter distance from motor) | 66 dB(A) |
| Service factor | 1.0 | No. of starts hot/cold/Equally spread | 2/3/4 |
| Insulation class | F | Starting method | DOL |
| Ambient temperature | -20 to +40 °C | Type of coupling | Direct |
| Temperature rise (by resistance) | 80 [Class B] K | LR withstand time (hot/cold) | 6/10 s |
| Altitude above sea level | 1000 meter | Direction of rotation | Bi-directional |
| Hazardous area classification | NA | Standard rotation | Clockwise form DE |
| Zone classification | NA | Paint shade | RAL 5014 |
| Gas group | NA | Accessories | |
| Temperature class | NA | Accessory - 1 | - |
| Rotor type | Aluminum Die cast | Accessory - 2 | - |
| Bearing type | Anti-friction ball | Accessory - 3 | - |
| DE / NDE bearing | 6309-2Z / 6209-2Z | Terminal box position | TOP |
| Lubrication method | Greased for life | Maximum cable size/conduit size | 1R x 3C x 35mm ² /2 X M32 x 1.5 |
| Type of grease | NA | Auxiliary terminal box | Available on Request |

I_A/I_N - Locked Rotor Current / Rated Current

T_K/T_N - Breakdown Torque / Rated Torque

T_A/T_N - Locked Rotor Torque / Rated Torque

NOTE

All performance values at rated voltage and frequency.

All performance parameters are subjected to standard tolerance as per IEC 60034-1

* Voltage, Frequency and combine variation are as per IEC60034-1

Technical data are subject to change. There may be discrepancies between calculated and name plate values.

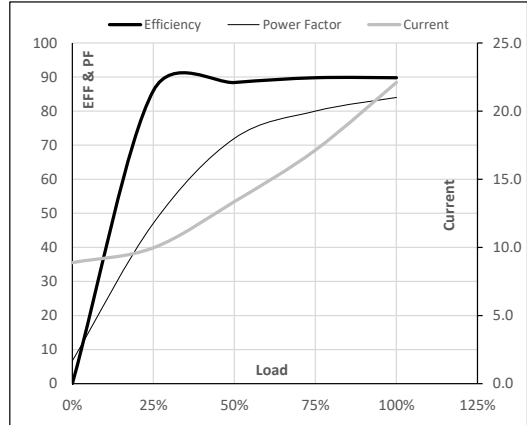
| Efficiency Standards | Europe | China | India | Aus/Nz | Brazil | Global IEC |
|----------------------|--------|-----------------------|-------|--------|--------|---------------|
| | - | GB 18613-2012 Grade 2 | - | - | - | IEC: 60034-30 |

Model No. SCA0112A4181GAA001

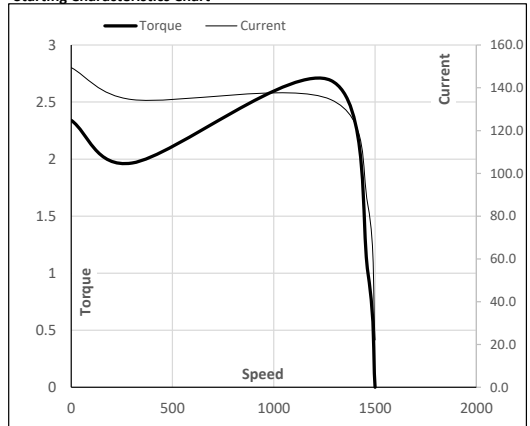
| Enclosure | U (V) | Δ / Y Conn | f [Hz] | P [kW] | P [hp] | I [A] | n [RPM] | T [kgm] | T [Nm] | IE Class | Amb [°C] | Duty | Elevation [m] | Inertia [kg-m ²] | Weight [kg] |
|-----------|----------|----------------------|-----------|-----------|-----------|----------|------------|------------|-----------|-------------|-------------|------|------------------|---------------------------------|----------------|
| TEFC | 380/660 | Δ | 50 | 11 | 15 | 22.1 | 1465 | 7.31 | 71.70 | IE2 | 40 | S1 | 1000 | 0.0900 | 123 |

Motor Load Data

| Load Point | | NL | 1/4FL | 1/2FL | 3/4FL | FL | 5/4FL |
|--------------|-------|------|-------|-------|-------|------|-------|
| Current | A | 8.9 | 10.0 | 13.4 | 17.1 | 22.1 | |
| Torque | Nm | 0.0 | 17.9 | 36.0 | 54.2 | 71.7 | |
| Speed | r/min | 1500 | 1493 | 1485 | 1478 | 1465 | |
| Efficiency | % | 0.0 | 86.0 | 88.4 | 89.8 | 89.8 | |
| Power Factor | % | 6.7 | 47.1 | 72.0 | 80.0 | 84.0 | |

Performance vs Load Chart

Motor Speed Torque Data

| Load Point | | LR | P-Up | BD | Rated | NL |
|------------|-------|-------|-------|------|-------|------|
| Speed | r/min | 0 | 300 | 1281 | 1465 | 1500 |
| Current | A | 149.4 | 134.5 | 84.9 | 22.1 | 8.9 |
| Torque | pu | 2.3 | 2.0 | 2.7 | 1 | 0 |

Starting Characteristics Chart

NOTE Refer data sheet for applicable standard and tolerances on performance parameters

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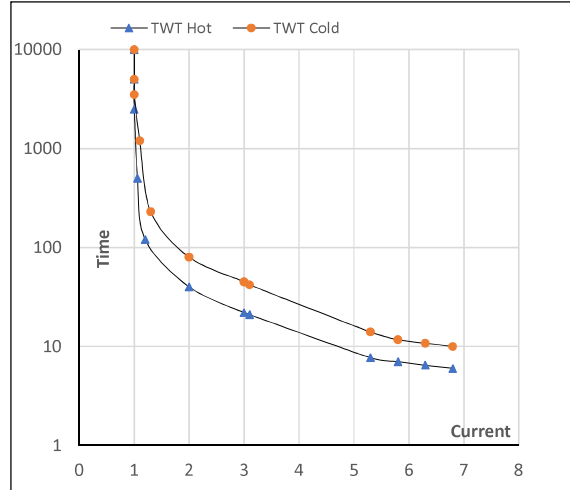
Issued Date


Model No. SCA0112A4181GAA001

| Enclosure | U (V) | Δ / Y Conn | f [Hz] | P [kW] | P [hp] | I [A] | n [rpm] | T [kgm] | T [Nm] | IE Class | Amb [°C] | Duty | Elevation [m] | Inertia [kg·m ²] | Weight [kg] |
|-----------|----------|----------------------|-----------|-----------|-----------|----------|------------|------------|-----------|-------------|-------------|------|------------------|---------------------------------|----------------|
| TEFC | 380/660 | Δ | 50 | 11 | 15 | 22.1 | 1465 | 7.31 | 71.70 | IE2 | 40 | S1 | 1000 | 0.0900 | 123 |

Motor Speed Torque Data

| Load | FL | I_1 | I_2 | I_3 | I_4 | I_5 | LR |
|----------|---------|-------|-------|-------|-------|-------|-----|
| TWT Hot | s 10000 | 40 | 24 | 15 | 9 | 7 | 6 |
| TWT Cold | s 10000 | 80 | 48 | 25 | 16 | 12 | 10 |
| Current | pu 1 | 2 | 3 | 4 | 5 | 5.5 | 6.8 |

Thermal Characteristics Chart

NOTE Refer data sheet for applicable standard and tolerances on performance parameters

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