

DATA SHEET

Three Phase Induction Motor - Squirrel Cage



Customer :

Product line : W21 Explosion Proof NEMA Premium Efficiency Three-Phase Product code : 15488756

| | |
|--------------------------------------|---|
| Frame : 254T | Cooling method : IC411 - TEFC |
| Insulation class : F | Mounting : F-1 |
| Duty cycle : Cont.(S1) | Rotation ¹ : Both (CW and CCW) |
| Ambient temperature : -20°C to +40°C | Starting method : Direct On Line |
| Altitude : 1000 m.a.s.l. | Approx. weight ³ : 147 kg |
| Protection degree : IP55 | Moment of inertia (J) : 0.1436 kgm ² |
| Design : B | |

| | | | | |
|--------------------------|----------------------|----------------------|----------------------|----------------------|
| Output [HP] | 5 | 5 | 5 | 5 |
| Poles | 8 | 8 | 8 | 8 |
| Frequency [Hz] | 60 | 50 | 50 | 50 |
| Rated voltage [V] | 230/460 | 380 | 400 | 415 |
| Rated current [A] | 15.9/7.93 | 9.17 | 8.92 | 8.73 |
| L. R. Amperes [A] | 84.0/42.0 | 48.6 | 47.3 | 46.3 |
| LRC [A] | 5.3x(Code H) | 5.3x(Code H) | 5.3x(Code H) | 5.3x(Code H) |
| No load current [A] | 11.0/5.50 | 5.44 | 5.77 | 6.03 |
| Rated speed [RPM] | 880 | 720 | 725 | 730 |
| Slip [%] | 2.22 | 4.00 | 3.33 | 2.67 |
| Rated torque [kgfm] | 4.12 | 5.04 | 5.01 | 4.97 |
| Locked rotor torque [%] | 210 | 160 | 180 | 200 |
| Breakdown torque [%] | 270 | 200 | 229 | 250 |
| Service factor | 1.15 | 1.00 | 1.00 | 1.00 |
| Temperature rise | 80 K | 80 K | 80 K | 80 K |
| Locked rotor time | 37s (cold) 21s (hot) | 37s (cold) 21s (hot) | 37s (cold) 21s (hot) | 37s (cold) 21s (hot) |
| Noise level ² | 55.0 dB(A) | 53.0 dB(A) | 53.0 dB(A) | 53.0 dB(A) |
| Efficiency (%) | 25% | | | |
| | 50% | 84.0 | 82.5 | 82.5 |
| | 75% | 86.5 | 84.0 | 84.0 |
| | 100% | 87.5 | 84.0 | 85.5 |
| Power Factor | 25% | | | |
| | 50% | 0.46 | 0.53 | 0.50 |
| | 75% | 0.58 | 0.65 | 0.62 |
| | 100% | 0.67 | 0.73 | 0.70 |

| | | | |
|------------------------|------------------|----------------------|----------------------------|
| | <u>Drive end</u> | <u>Non drive end</u> | |
| Bearing type : | 6309 | 6209 | Foundation loads |
| | 2RS C3 | 2RS C3 | Max. traction : 122 kgf |
| Sealing : | Oil Seal | Lip Seal | Max. compression : 268 kgf |
| Lubrication interval : | - | - | |
| Lubricant amount : | - | - | |
| Lubricant type : | Mobil Polyrex EM | | |

Notes
USABLE @208V 17.5A SF 1.15 SFA 20.2A

This revision replaces and cancel the previous one, which must be eliminated.
(1) Looking the motor from the shaft end.
(2) Measured at 1m and with tolerance of +3dB(A).
(3) Approximate weight subject to changes after manufacturing process.
(4) At 100% of full load.

These are average values based on tests with sinusoidal power supply, subject to the tolerances stipulated in NEMA MG-1.

| Rev. | Changes Summary | Performed | Checked | Date |
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| Performed by | | | | |
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| Date | 30/10/2024 | | Page 1 / 6 | Revision |

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Customer :

Thermal protection

| ID | Application | Type | Quantity | Sensing Temperature |
|----|-------------|----------------------|-----------|---------------------|
| 1 | Winding | Thermostat - 2 wires | 1 x Phase | 155 °C |

| | | | | | |
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LOAD PERFORMANCE CURVE

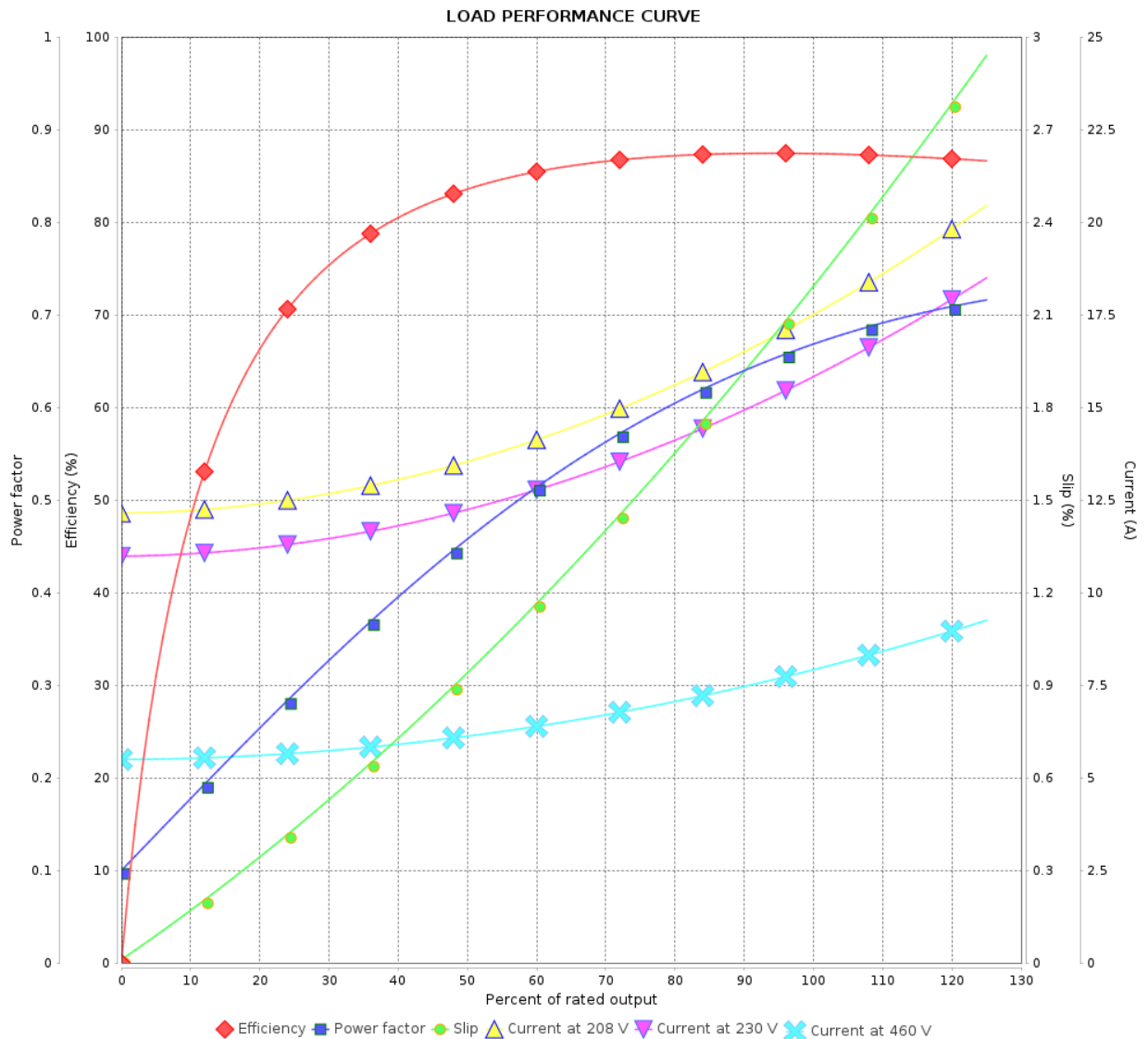
Three Phase Induction Motor - Squirrel Cage



Customer :

Product line : W21 Explosion Proof NEMA
Premium Efficiency Three-Phase

Product code : 15488756



Performance : 230/460 V 60 Hz 8P

Rated current : 15.9/7.93 A
LRC : 5.3
Rated torque : 4.12 kgfm
Locked rotor torque : 210 %
Breakdown torque : 270 %
Rated speed : 880 rpm

Moment of inertia (J) : 0.1436 kgm²
Duty cycle : Cont.(S1)
Insulation class : F
Service factor : 1.15
Temperature rise : 80 K
Design : B

| Rev. | Changes Summary | | Performed | Checked | Date |
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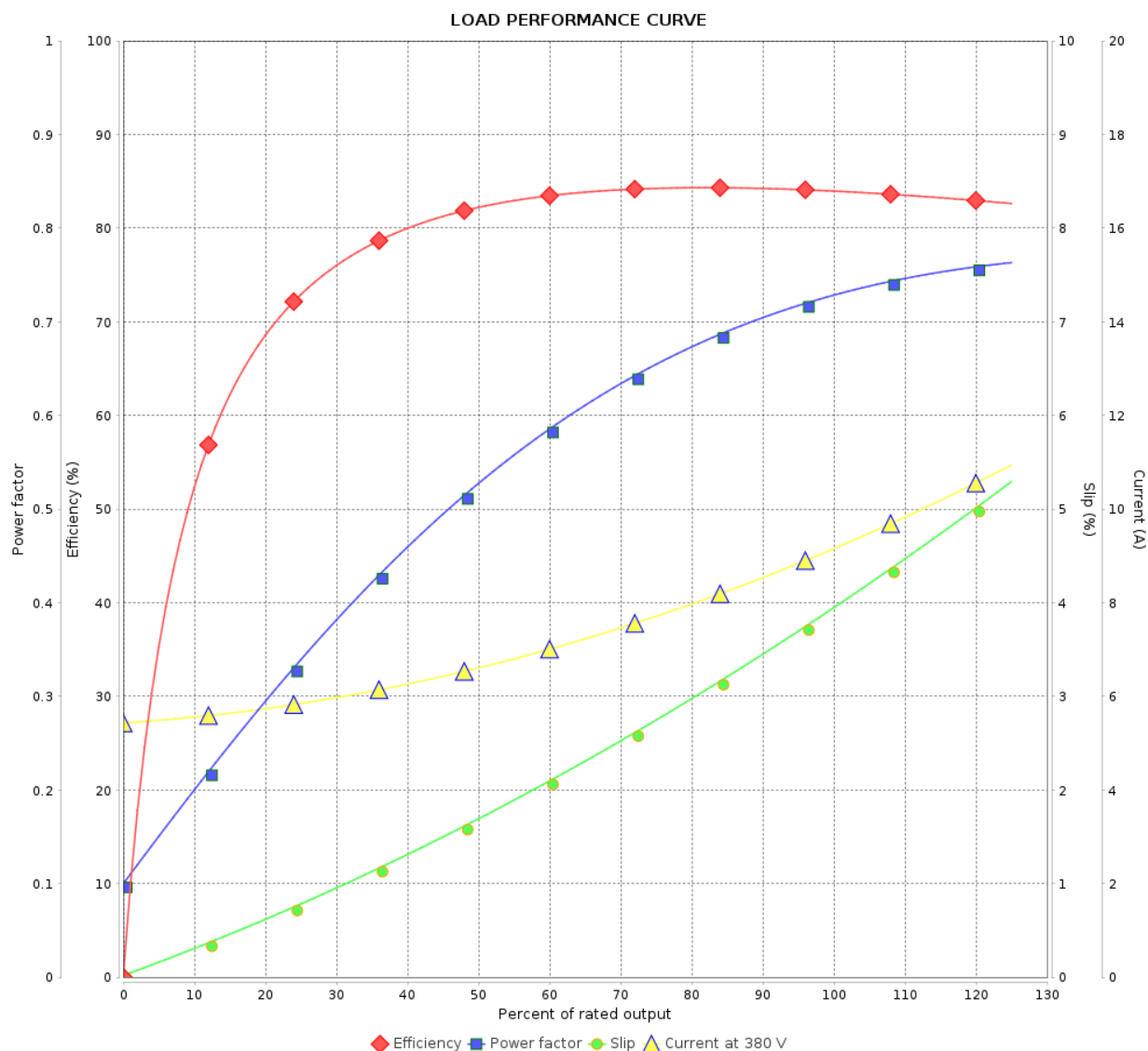
Three Phase Induction Motor - Squirrel Cage



Customer :

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Performance : 380 V 50 Hz 8P IE2

Rated current : 9.17 A
LRC : 5.3
Rated torque : 5.04 kgfm
Locked rotor torque : 160 %
Breakdown torque : 200 %
Rated speed : 720 rpm

Moment of inertia (J) : 0.1436 kgm²
Duty cycle : Cont.(S1)
Insulation class : F
Service factor : 1.00
Temperature rise : 80 K
Design : B

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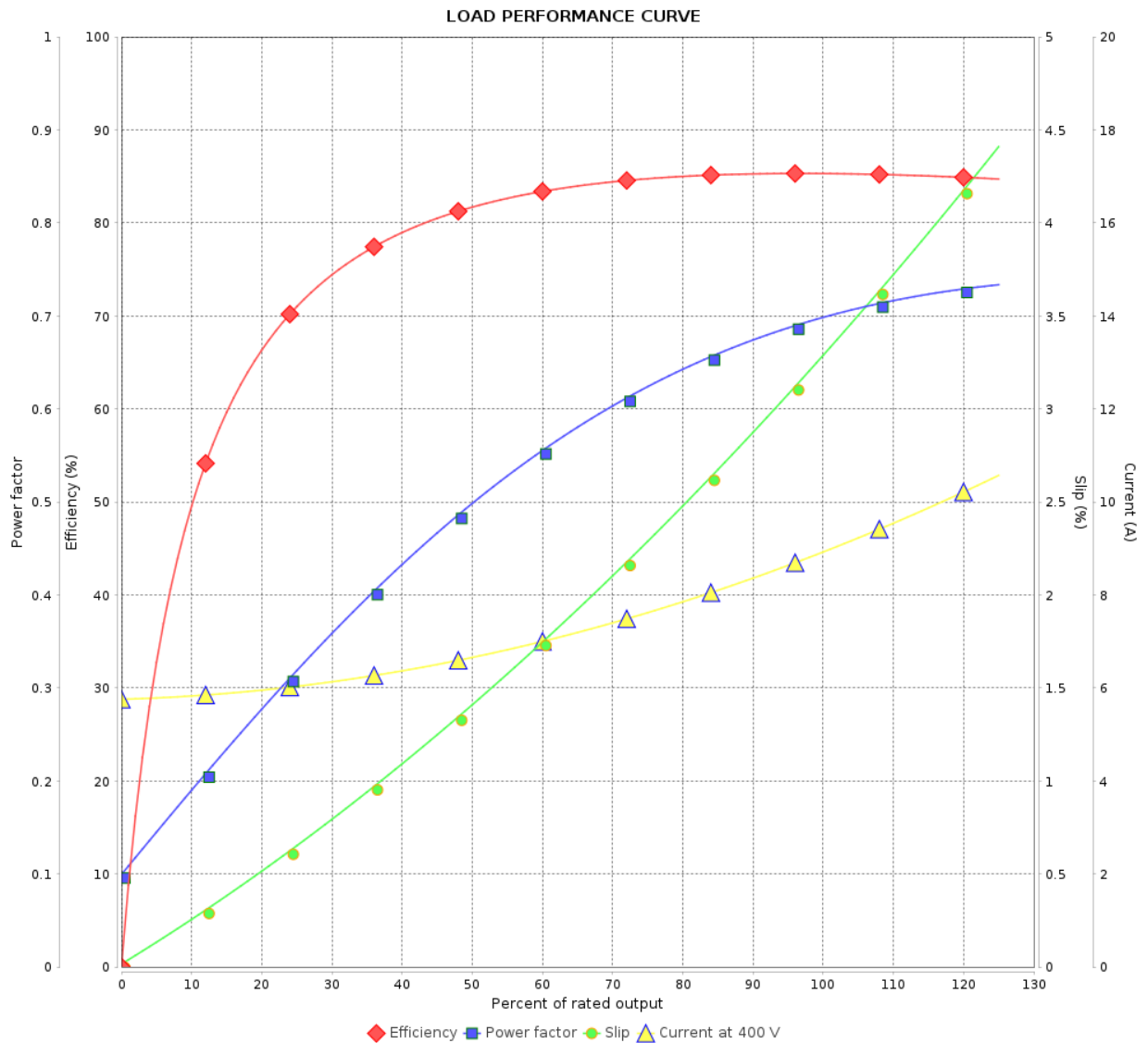
Three Phase Induction Motor - Squirrel Cage



Customer :

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Product code : 15488756



Performance : 400 V 50 Hz 8P IE3

Rated current : 8.92 A
LRC : 5.3
Rated torque : 5.01 kgfm
Locked rotor torque : 180 %
Breakdown torque : 229 %
Rated speed : 725 rpm

Moment of inertia (J) : 0.1436 kgm²
Duty cycle : Cont.(S1)
Insulation class : F
Service factor : 1.00
Temperature rise : 80 K
Design : B

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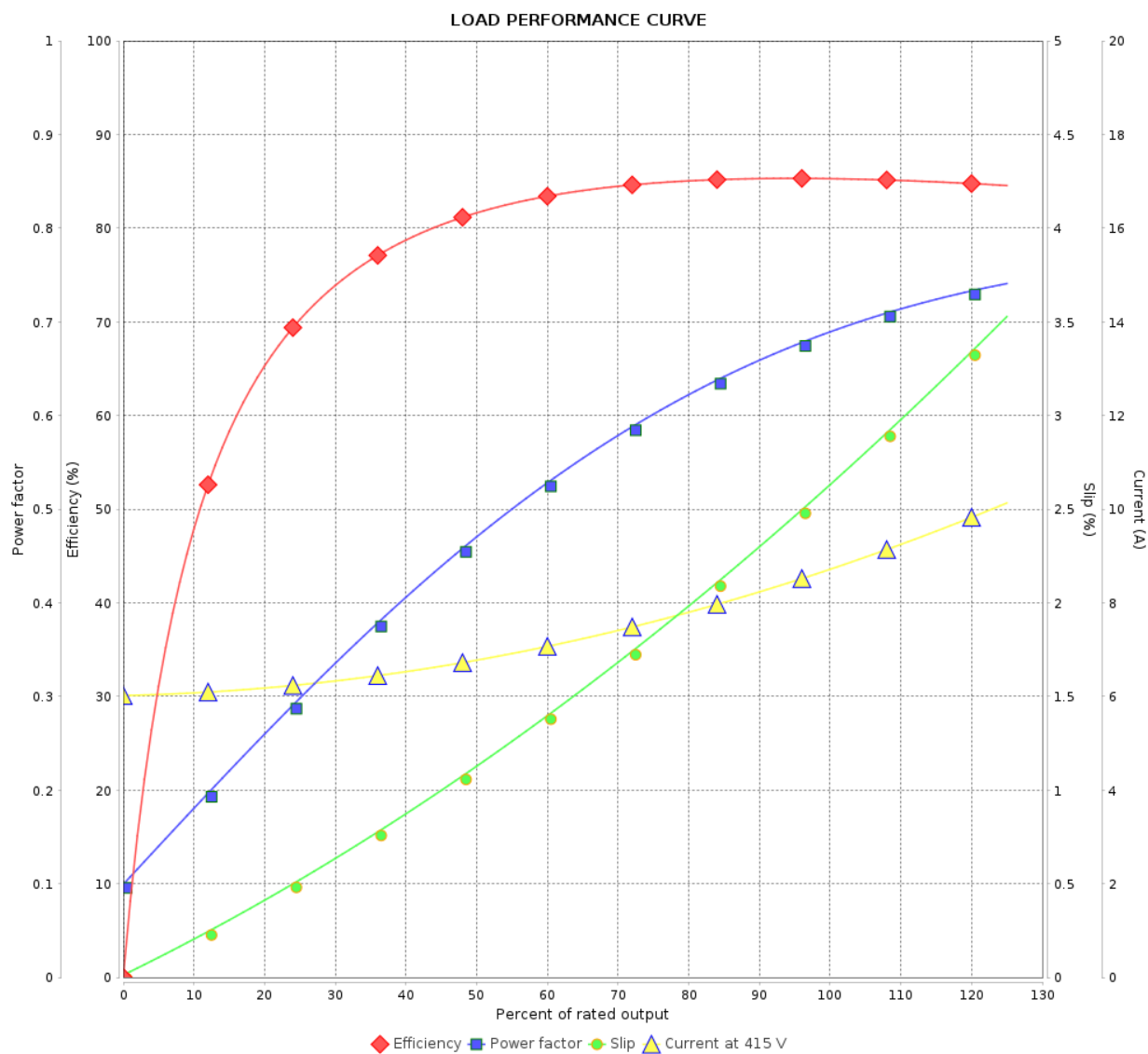
Three Phase Induction Motor - Squirrel Cage



Customer :

Product line : W21 Explosion Proof NEMA
Premium Efficiency Three-Phase

Product code : 15488756



Performance : 415 V 50 Hz 8P IE3

Rated current : 8.73 A
LRC : 5.3
Rated torque : 4.97 kgfm
Locked rotor torque : 200 %
Breakdown torque : 250 %
Rated speed : 730 rpm

Moment of inertia (J) : 0.1436 kgm²
Duty cycle : Cont.(S1)
Insulation class : F
Service factor : 1.00
Temperature rise : 80 K
Design : B

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