

DATA SHEET



Three Phase Induction Motor - Squirrel Cage

| | | | | |
|--|---|--|---------------------------|-------------------------|
| Customer : | | | | |
| Product line | | : W21 Explosion Proof NEMA Premium Efficiency Three-Phase | | Product code : 14323498 |
| Frame | : 143/5TC | 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 | : 32.1 kg | |
| Protection degree | : IP55 | Moment of inertia (J) | : 0.0041 kgm ² | |
| Design | : B | | | |
| Output [HP] | 1 | 1 | 1 | 1 |
| Poles | 4 | 4 | 4 | 4 |
| Frequency [Hz] | 60 | 50 | 50 | 50 |
| Rated voltage [V] | 230/460 | 380 | 400 | 415 |
| Rated current [A] | 2.94/1.47 | 1.73 | 1.68 | 1.66 |
| L. R. Amperes [A] | 25.3/12.6 | 11.6 | 12.4 | 13.1 |
| LRC [A] | 8.6x(Code M) | 6.7x(Code J) | 7.4x(Code K) | 7.9x(Code L) |
| No load current [A] | 1.88/0.940 | 0.920 | 0.990 | 1.06 |
| Rated speed [RPM] | 1755 | 1445 | 1450 | 1455 |
| Slip [%] | 2.50 | 3.67 | 3.33 | 3.00 |
| Rated torque [kgfm] | 0.414 | 0.502 | 0.501 | 0.499 |
| Locked rotor torque [%] | 280 | 210 | 240 | 260 |
| Breakdown torque [%] | 360 | 250 | 280 | 310 |
| Service factor | 1.15 | 1.00 | 1.00 | 1.00 |
| Temperature rise | 80 K | 80 K | 80 K | 80 K |
| Locked rotor time | 32s (cold) 18s (hot) | 36s (cold) 20s (hot) | 36s (cold) 20s (hot) | 36s (cold) 20s (hot) |
| Noise level ² | 51.0 dB(A) | 49.0 dB(A) | 49.0 dB(A) | 49.0 dB(A) |
| Efficiency (%) | 25% | | | |
| | 50% | 80.0 | 81.5 | 81.0 |
| | 75% | 82.5 | 82.5 | 82.5 |
| | 100% | 85.5 | 82.5 | 82.5 |
| Power Factor | 25% | | | |
| | 50% | 0.57 | 0.62 | 0.58 |
| | 75% | 0.68 | 0.74 | 0.70 |
| | 100% | 0.75 | 0.80 | 0.78 |
| Bearing type | : <u>Drive end</u> 6205 2RS <u>Non drive end</u> 6204 2RS | Foundation loads | | |
| Sealing | : Oil Seal Lip Seal | Max. traction : 28 kgf | | |
| Lubrication interval | : - - | Max. compression : 60 kgf | | |
| Lubricant amount | : - - | | | |
| Lubricant type | : Mobil Polyrex EM | | | |
| Notes USABLE @208V 3.16A SF 1.15 SFA 3.64A | | | | |
| 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 |
| | | | | |
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| Date | 15/01/2024 | | | |

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Customer : _____

Thermal protection

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

| Rev. | Changes Summary | Performed | Checked | Date |
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LOAD PERFORMANCE CURVE

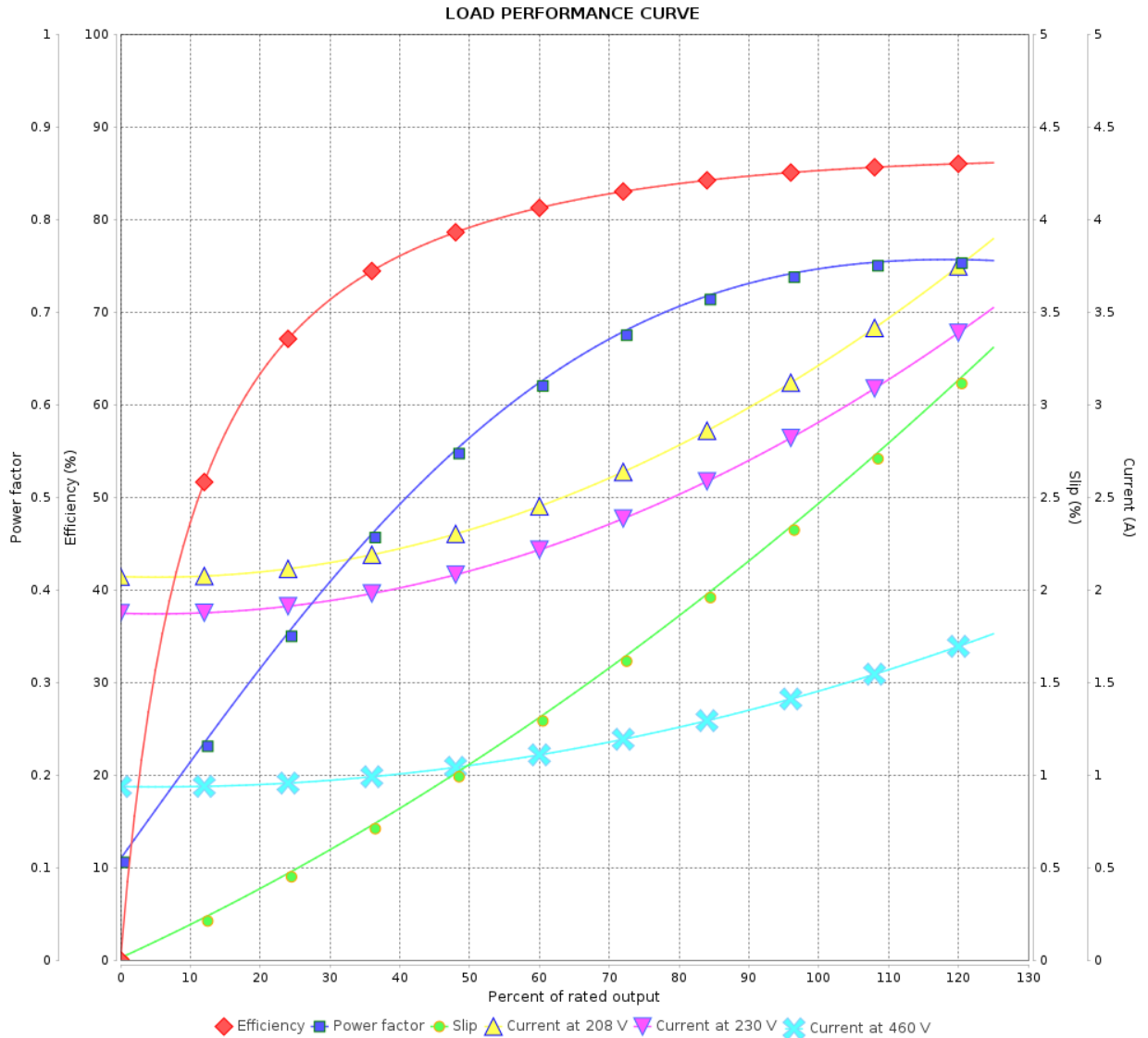
Three Phase Induction Motor - Squirrel Cage



Customer : _____

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

Product code : 14323498



Performance : 230/460 V 60 Hz 4P

Rated current : 2.94/1.47 A
 LRC : 8.6
 Rated torque : 0.414 kgfm
 Locked rotor torque : 280 %
 Breakdown torque : 360 %
 Rated speed : 1755 rpm

Moment of inertia (J) : 0.0041 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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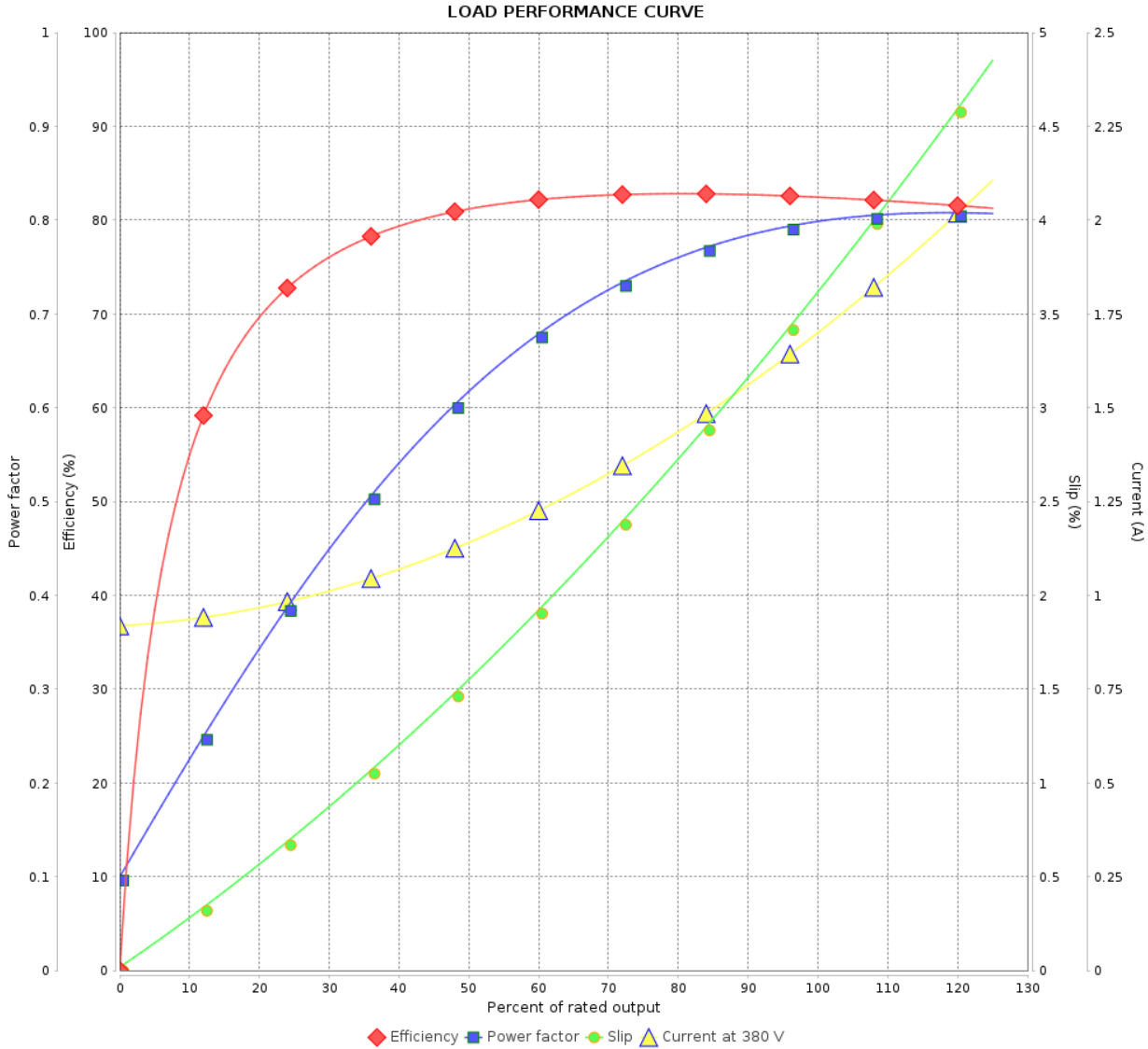
Three Phase Induction Motor - Squirrel Cage



Customer :

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

Product code : 14323498



Performance : 380 V 50 Hz 4P IE3

Rated current : 1.73 A
 LRC : 6.7
 Rated torque : 0.502 kgfm
 Locked rotor torque : 210 %
 Breakdown torque : 250 %
 Rated speed : 1445 rpm

Moment of inertia (J) : 0.0041 kgm²
 Duty cycle : Cont.(S1)
 Insulation class : F
 Service factor : 1.00
 Temperature rise : 80 K
 Design : B

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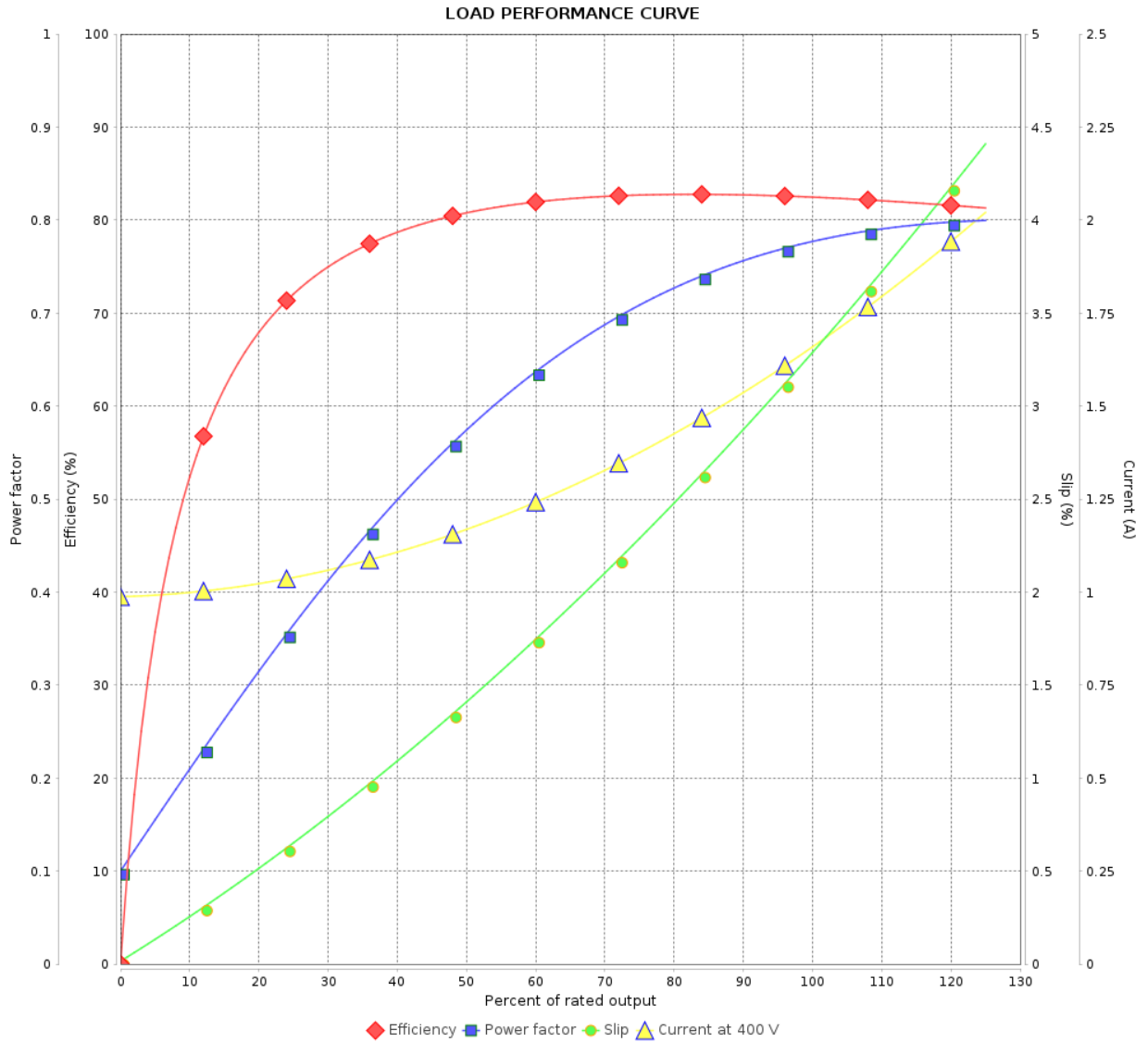
Three Phase Induction Motor - Squirrel Cage



Customer : _____

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

Product code : 14323498



Performance : 400 V 50 Hz 4P IE3

Rated current : 1.68 A
LRC : 7.4
Rated torque : 0.501 kgfm
Locked rotor torque : 240 %
Breakdown torque : 280 %
Rated speed : 1450 rpm

Moment of inertia (J) : 0.0041 kgm²
Duty cycle : Cont.(S1)
Insulation class : F
Service factor : 1.00
Temperature rise : 80 K
Design : B

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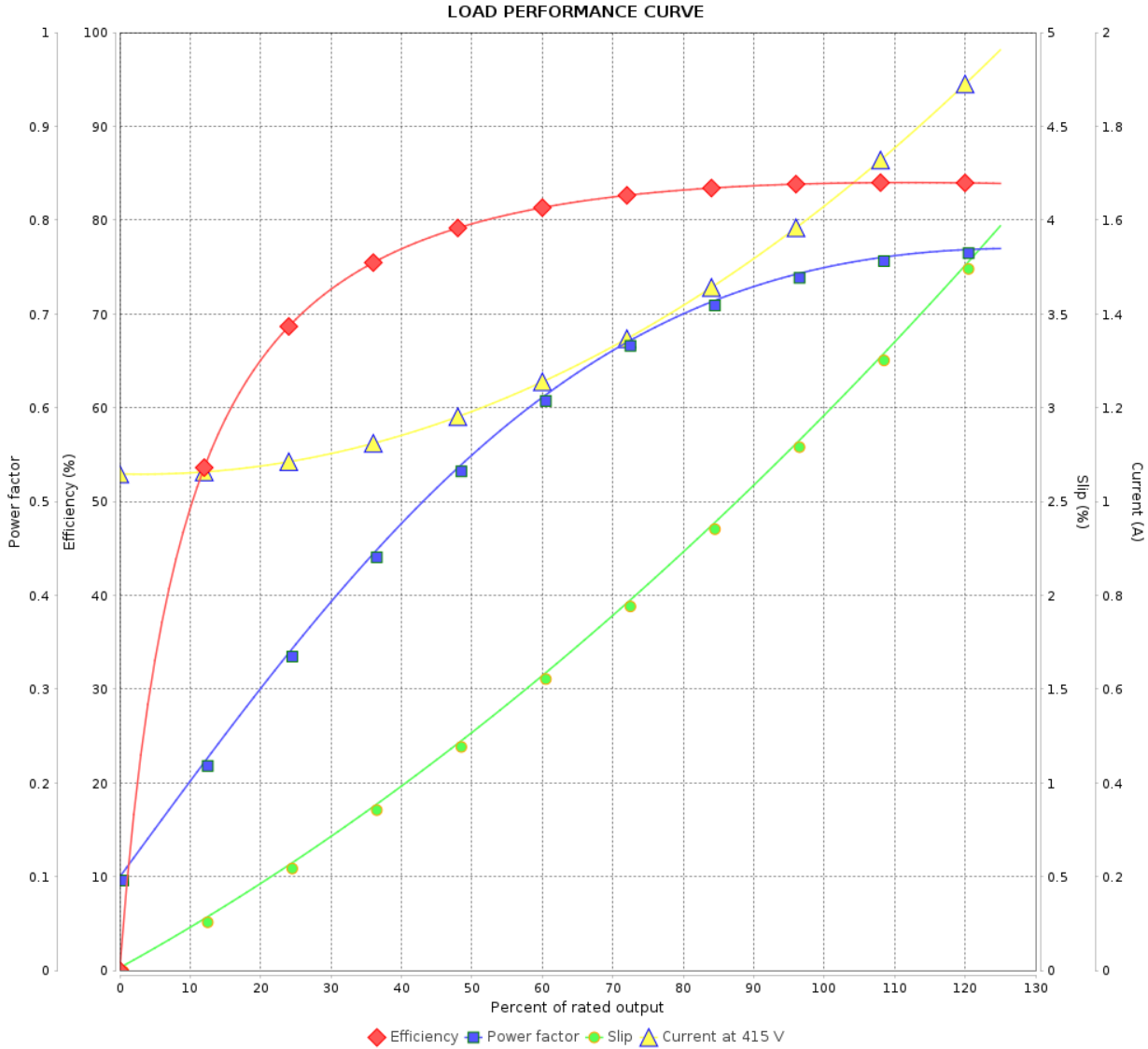
Three Phase Induction Motor - Squirrel Cage



Customer : _____

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

Product code : 14323498



Performance : 415 V 50 Hz 4P IE3

Rated current : 1.66 A
LRC : 7.9
Rated torque : 0.499 kgfm
Locked rotor torque : 260 %
Breakdown torque : 310 %
Rated speed : 1455 rpm

Moment of inertia (J) : 0.0041 kgm²
Duty cycle : Cont.(S1)
Insulation class : F
Service factor : 1.00
Temperature rise : 80 K
Design : B

| Rev. | Changes Summary | Performed | Checked | Date |
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| Date | 15/01/2024 | | | |