

| RADIAL LOAD CAPACITY (Kgs) -<br>NO AXIAL LOAD - FOR L10 LIFE OF 10,000 HOURS   |          |          |         |  |
|--|----------|----------|---------|--|
| Radial Load Capacity at the End of the Shaft (Kgs)                             |          |          |         |  |
| 2500 RPM   | 1750 RPM | 1150 RPM | 850 RPM |  |
| 220  | 250      | 290      | 320     |  |
| AXIAL THRUST CAPACITY (Kgs) -<br>NO RADIAL LOAD - FOR L10 LIFE OF 10,000 HOURS |          |          |         |  |
| Horizontal Mounting Load Capacity at the End of the Shaft (Kgs)                |          |          |         |  |
| 2500 RPM   | 1750 RPM | 1150 RPM | 850 RPM |  |
| 180  | 210      | 240      | 260     |  |

|                             |         |             |                      |      |        |
|-----------------------------|---------|-------------|----------------------|------|--------|
|                             |         |             |                      |      |        |
|                             |         |             |                      |      |        |
|                             |         |             |                      |      |        |
| 01                          | 1021550 | VS          | RELEASED             |      |        |
| REV                         | ECN     | BY          | REVISION DESCRIPTION | CHKR | DATE   |
| PREPARED BY                 |         | DATE        | DESIGN ENGINEER      |      | DATE   |
| VS                          |         | 4/4/2006    |                      |      |        |
| TITLE                       |         |             |                      |      |        |
| ES, ELEC, HPK-B1307E-SC44AA |         |             |                      |      |        |
| Allen-Bradley               |         | PART NO.    |                      |      |        |
|                             |         | L13M5205ESE |                      |      |        |
|                             |         | A SIZE      | SHEET                |      | 1 OF 4 |

Notes: Print or enlarge waveforms for improved clarity.  
For additional specifications see L13M5205ESM.



Feedback Specifications:

Electrical Hardware:

1. SIN, COS waveform output: 1024 sinusoids/rev.
2. SIN, COS waveform amplitude: 0.9 to 1.1 Volts peak to peak.
3. SIN -, COS - voltage offset with respect to power input common: 2.2 to 2.8 VDC.
4. +5VDC voltage input: 4.5 to 12.0 VDC.
5. +5VDC current input: 125 mA DC max continuous, 1.0 A DC max inrush.
6. TS+, TS- thermostat operating voltage: 250 Volts max.
7. TS+, TS- thermostat operating current: 1.6/2.5 Amps max at 0.6/1.0 power factor.

Serial Communication:

1. DATA+, DATA- signal type, rate: RS 485, 9600 baud, asynchronous.
2. Communication hierarchy: Encoder is slave, communication is externally initiated.
3. Single turn absolute position value range: 0 to 32,767 steps (12 bit).
4. Absolute position data: Binary, value increases with CW shaft rotation viewing motor mounting face.
5. Data (byte) format: Start bit, 8 data bits, parity bit, stop bit.
6. Memory storage capacity: 128 bytes, EEPROM.
7. Encoder temperature data: Binary value of encoder temperature in degrees C.

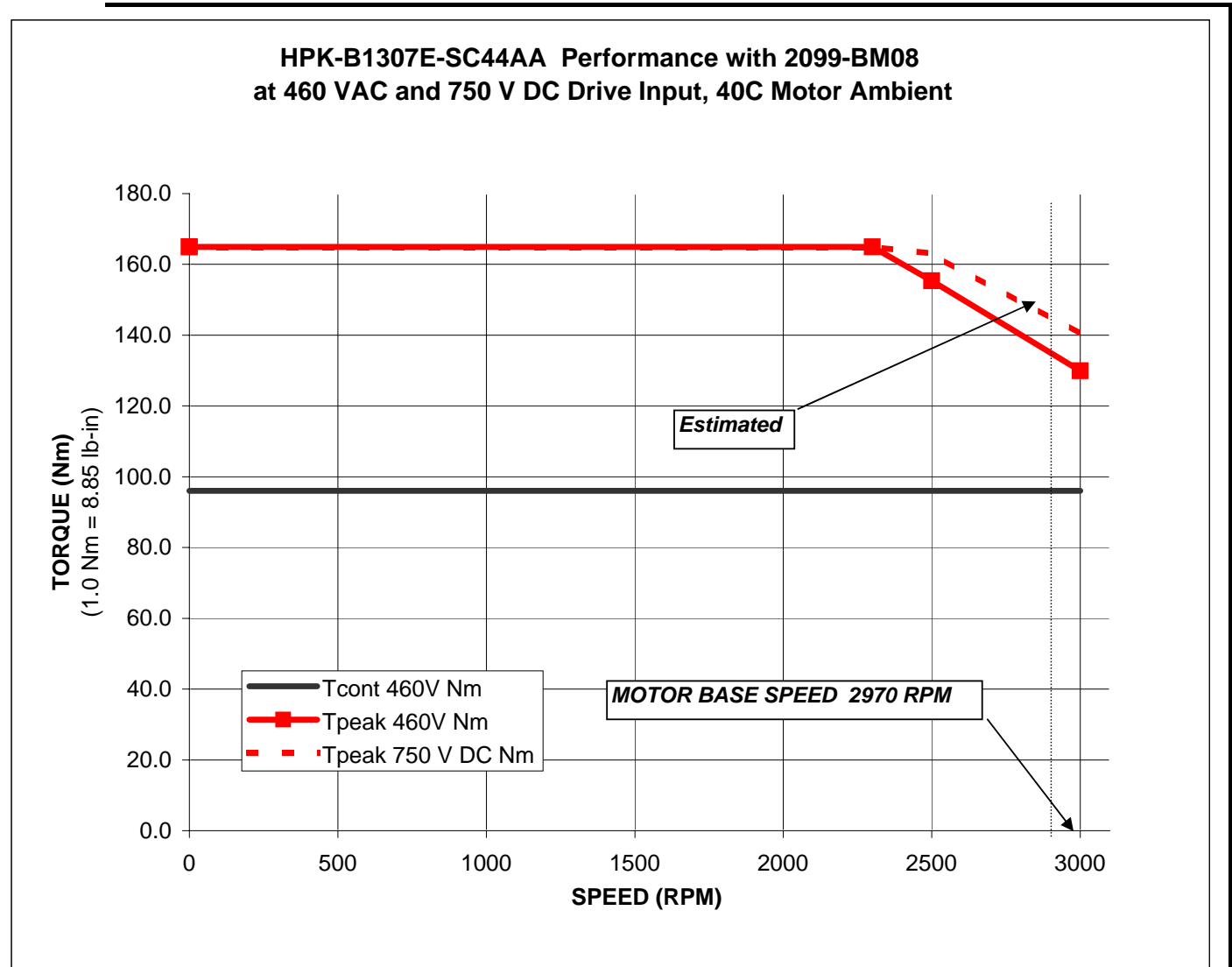
Note: "Ref" denotes untoleranced specifications, provided for reference only.

|               |                             |              |
|---------------|-----------------------------|--------------|
| 01            | TITLE                       |              |
| REV           | ES, ELEC, HPK-B1307E-SC44AA |              |
| Allen-Bradley | PART NO.                    |              |
|               | L13M5205ESE                 |              |
|               | A SIZE                      | SHEET 3 OF 4 |

| SPEED<br>RPM | TORQUE     |            |                   |
|--------------|------------|------------|-------------------|
|              | Tcont 460V | Tpeak 460V | Tpeak 750<br>V DC |
|              | Nm         | Nm         | Nm                |
| 0            | 96.0       | 165.0      | 165.0             |
| 0            | 96.0       | 165.0      | 165.0             |
| 2300         | 96.0       | 165.0      | 165.0             |
| 2500         | 96.0       | 155.4      | 163.1             |
| 3000         | 96.0       | 129.9      | 140.1             |

| SPEED<br>RPM | TORQUE     |            |                   |
|--------------|------------|------------|-------------------|
|              | Tcont 460V | Tpeak 460V | Tpeak 750<br>V DC |
|              | lb-in      | lb-in      | lb-in             |
| 0            | 849.6      | 1460       | 1460              |
| 0            | 849.6      | 1460       | 1460              |
| 2300         | 849.6      | 1460       | 1460              |
| 2500         | 849.6      | 1375       | 1460              |
| 3000         | 849.6      | 1150       | 1240              |

Note: Nm torque values shown are converted from tested lb-in data.



|               |                             |              |
|---------------|-----------------------------|--------------|
| 01            | TITLE                       |              |
| REV           | ES, ELEC, HPK-B1307E-SC44AA |              |
| Allen-Bradley |                             | PART NO.     |
|               |                             | L13M5205ESE  |
| A SIZE        |                             | SHEET 4 OF 4 |