

REV.  
B

AS27640

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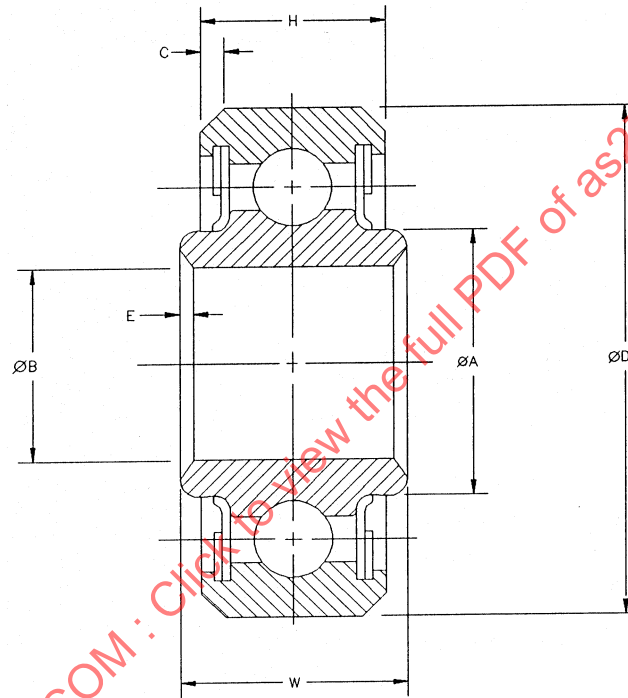


FIGURE 1

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ISSUED 1998-04 REVISED 2002-09

PREPARED BY AIRFRAME CONTROL BEARINGS GROUP (ACBG)

**SAE Aerospace**  
An SAE International Group**AEROSPACE STANDARD**  
(R) BEARING, BALL, AIRFRAME,  
ANTI-FRICTION, HEAVY DUTY**AS27640**  
SHEET 1 OF 3**REV.  
B**

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TABLE 1 - DIMENSIONS AND LOADS

| MS<br>DASH<br>NO. | BEARING<br>PART NO.<br>REF. ONLY | øB<br>2/<br>BORE<br>DIAMETER<br>1/ 2/<br>RING | øD<br>OUTSIDE<br>DIAMETER<br>1/ 2/<br>RING | W<br>WIDTH<br>INNER<br>RING<br>1/ | H<br>WIDTH<br>OUTER<br>RING<br>1/ | øA<br>SHOULDER<br>DIAMETER<br>INNER<br>RING<br>(APPROX) | E<br>4/<br>INNER<br>RING<br>CORNER<br>CHAMFER | C<br>3/<br>OUTER<br>RING<br>CORNER<br>CHAMFER | RADIAL<br>LIMIT<br>LOAD<br>RATING<br>LB | THRUST<br>LIMIT<br>LOAD<br>RATING<br>LB | 5/<br>RADIAL LOAD<br>RATING (LB)<br>FOR AVERAGE LIFE<br>OF 10,000 COMPLETE<br>90° CYCLES |         | 6/<br>RADIAL LOAD<br>RATING (LB)<br>FOR AVERAGE LIFE<br>OF 10,000 COMPLETE<br>90° CYCLES | WEIGHT<br>POUNDS<br>(APPROX) | 7/<br>MAXIMUM<br>STARTING<br>TORQUE<br>(IN-OZ) |   |
|-------------------|----------------------------------|-----------------------------------------------|--------------------------------------------|-----------------------------------|-----------------------------------|---------------------------------------------------------|-----------------------------------------------|-----------------------------------------------|-----------------------------------------|-----------------------------------------|------------------------------------------------------------------------------------------|---------|------------------------------------------------------------------------------------------|------------------------------|------------------------------------------------|---|
|                   |                                  |                                               |                                            |                                   |                                   |                                                         |                                               |                                               |                                         |                                         | CASE I                                                                                   | CASE II |                                                                                          |                              |                                                |   |
|                   |                                  |                                               |                                            |                                   |                                   |                                                         |                                               |                                               |                                         |                                         |                                                                                          |         |                                                                                          |                              |                                                |   |
| -3A               | KP3L                             | .1900                                         | .6250                                      | .245                              | .203                              | .280                                                    | .005                                          | .010                                          | 1560                                    | 700                                     | 1520                                                                                     | 1260    | .01                                                                                      |                              | 1                                              |   |
| -3                | KP3                              | .1900                                         | .7774                                      | .297                              | .270                              | .331                                                    |                                               | .022                                          |                                         | 1880                                    | 900                                                                                      | 1700    | 1450                                                                                     | .03                          |                                                | 1 |
| -4                | KP4                              | .2500                                         | .9014                                      | .484                              | .335                              | .390                                                    |                                               |                                               |                                         | 2680                                    | 1200                                                                                     | 2410    | 2030                                                                                     | .04                          |                                                | 1 |
| -5                | KP5                              | .3125                                         | 1.2500                                     | .558                              | .375                              | .469                                                    | .015                                          | .032                                          | 5620                                    | 2500                                    | 4900                                                                                     | 3970    | .09                                                                                      |                              | 1                                              |   |
| -6                | KP6                              | .3750                                         | 1.4375                                     | .620                              | .469                              | .591                                                    |                                               |                                               |                                         | 7910                                    | 3500                                                                                     | 6540    | 5410                                                                                     | .15                          |                                                | 2 |
| -8                | KP8                              | .5000                                         | 1.6875                                     | .620                              | .500                              | .768                                                    |                                               |                                               |                                         | 11800                                   | 5200                                                                                     | 9320    | 7700                                                                                     | .21                          |                                                | 3 |
| -10               | KP10                             | .6250                                         | 1.9375                                     | .620                              | .500                              | .850                                                    |                                               | .044                                          | 14100                                   | 6200                                    | 11000                                                                                    | 9060    | .28                                                                                      |                              | 4                                              |   |

1/ DIMENSIONS TO BE MET AFTER PLATING.

2/ OUT-OF-ROUND TOLERANCES: BORE: +.0002, -.0007; OUTER DIA: +.0005, -.0010.

3/ 45° CHAMFER OR A RADIUS GIVING APPROXIMATELY THE SAME GRIP FOR STAKING THE BEARING IN THE HOUSING WILL BE ACCEPTABLE.

4/ 45° CHAMFER OR A RADIUS GIVING APPROXIMATELY THE SAME FILLET CLEARANCE WILL BE ACCEPTABLE.

5/ CASE I - LOAD FIXED WITH RESPECT TO OUTER RING.

6/ CASE II - LOAD FIXED WITH RESPECT TO INNER RING.

7/ THESE RATINGS ARE FOR BEARINGS LUBRICATED WITH MIL-PRF-81322 GREASE. FOR BEARINGS LUBRICATED WITH MIL-PRF-23827 GREASE, THE TORQUE LIMIT SHALL BE THE SPECIFIED VALUE IN THE TABLE MULTIPLIED BY 1.2.