

REV.  
A

AS17107

FEDERAL SUPPLY CLASS  
3110

# RATIONALE

AS17107 REV A IS A FIVE YEAR REVIEW AND UPDATE OF THIS SPECIFICATION, TABLES AND FIGURES HAVE BEEN REDONE, BEARING CONFIGURATION & IDENT ADDED, %LUBRICATION REVISED, GREASE OPTIONS ADDED, MATERIALS FOR CLOSURES AND RETAINERS ADDED, ABEC 5 TOLERANCE REQUIREMENTS ADDED, TITLE CLARIFIED.

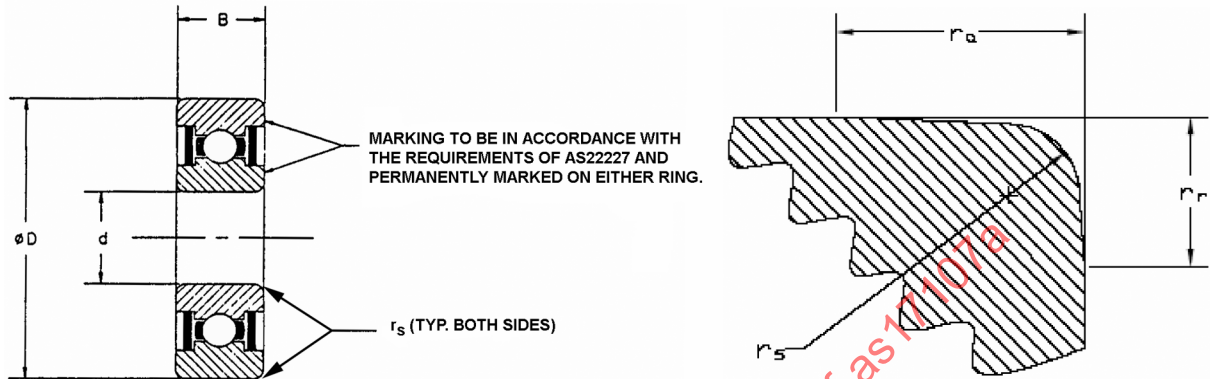


FIGURE 1

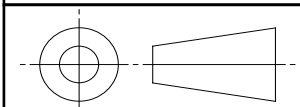
TABLE 1

| DASH NO. | BORE d |        | D OUTSIDE DIA |        | WIDTH B |       | CORNER BREAK |       |         |       |         |       | CAPACITY     |            | LIMIT CONTINUOUS RPM @ 325 °F MAX |        |
|----------|--------|--------|---------------|--------|---------|-------|--------------|-------|---------|-------|---------|-------|--------------|------------|-----------------------------------|--------|
|          | MM     | INCH   | MM            | INCH   | MM      | INCH  | r_s (4)      |       | r_s MAX |       | r_r MAX |       | (1) C_o (LB) | (2) C (LB) | GREASE                            | OIL    |
|          |        |        |               |        |         |       | MM           | INCH  | MM      | INCH  | MM      | INCH  |              |            |                                   |        |
| 1        | 10     | .3937  | 30            | 1.1811 | 9       | .3543 | 0.6          | 0.024 | 2.0     | 0.079 | 1.0     | 0.039 | 480          | 805        | 16,000                            | 30,000 |
| 2        | 12     | .4724  | 32            | 1.2598 | 10      | .3937 | 0.6          | 0.024 | 2.0     | 0.079 | 1.0     | 0.039 | 595          | 1050       | 15,100                            | 25,000 |
| 3        | 15     | .5906  | 35            | 1.3780 | 11      | .4331 | 0.6          | 0.024 | 2.0     | 0.079 | 1.0     | 0.039 | 680          | 1180       | 13,700                            | 20,000 |
| 4        | 17     | .6693  | 40            | 1.5748 | 12      | .4724 | 1.0          | 0.039 | 3.0     | 0.118 | 1.5     | 0.059 | 765          | 1280       | 11,400                            | 17,600 |
| 5        | 20     | .7874  | 47            | 1.8504 | 14      | .5512 | 1.0          | 0.039 | 3.0     | 0.118 | 1.5     | 0.059 | 1370         | 2210       | 10,000                            | 15,000 |
| 6        | 25     | .9843  | 52            | 2.0472 | 15      | .5906 | 1.0          | 0.039 | 3.0     | 0.118 | 1.5     | 0.059 | 1560         | 2420       | 8,200                             | 12,000 |
| 7        | 30     | 1.1811 | 62            | 2.4409 | 16      | .6299 | 1.1          | 0.043 | 3.5     | 0.138 | 2.0     | 0.079 | 2230         | 3350       | 7,700                             | 10,000 |
| 8        | 35     | 1.3780 | 72            | 2.8346 | 17      | .6693 | 1.1          | 0.043 | 3.5     | 0.138 | 2.0     | 0.079 | 3050         | 4450       | 6,700                             | 8,600  |

TABLE 2

| RADIAL INTERNAL CLEARANCE (MFG. LIMITS) |       |                          |
|-----------------------------------------|-------|--------------------------|
| BORE (d) MM                             |       | RADIAL PLAY (.0001 INCH) |
| OVER                                    | INCL. |                          |
| 10                                      | 18    | 5 - 9                    |
| 18                                      | 30    | 6 - 10                   |
| 30                                      | 50    | 7 - 12                   |

THIRD ANGLE PROJECTION



CUSTODIAN: SAE AIRFRAME CONTROL BEARINGS GROUP

PROCUREMENT SPECIFICATION: AS22227

**SAE Aerospace**  
An SAE International Group

**AEROSPACE STANDARD**  
(R) BEARING, BALL, ANNULAR, PRIMARILY FOR  
AIRCRAFT GENERATORS AND MOTOR-GENERATORS,  
STANDARD LIGHT, TYPE I

**AS17107**  
SHEET 1 OF 3

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## NOTES:

1. STATIC LOAD RATING IN POUNDS = THAT STATIC LOAD WHICH CORRESPONDS TO A TOTAL PERMANENT DEFORMATION OF BALL AND RACE AT THE MOST HEAVILY LOADED CONTACT OF .0001 INCH OF THE BALL DIAMETER.
2. BASIC LOAD RATING IN POUNDS AT 33-1/3 RPM USING  $10^6$  REVOLUTIONS  $L_{10}$  LIFE; AT OTHER SPEEDS INVERSE CUBE ROOT OF SPEED RATIO.
3. RATED LOADS ARE BASED UPON GREASE LUBRICATION AND UPON BEARING OPERATING TEMPERATURE NOT EXCEEDING 325 °F.
4. CORNER BREAKS:  $r_s$  = MAXIMUM HOUSING OR FILLET RADIUS THAT BEARING CORNERS WILL CLEAR.
5. EDGE BREAK: UNLESS OTHERWISE SPECIFIED .003 INCH/.015 INCH.
6. PART NUMBERS -1 THROUGH -4 SHALL HAVE PRESSED STEEL RETAINERS, PART NUMBERS -5 THROUGH -8 SHALL HAVE PHENOLIC RETAINERS.
7. MATERIALS: RINGS AND BALLS: 52100 PER AMS 6440 OR AMS 6444; OR 440C PER AMS 5618 OR AMS 5880.  
CLOSURES: NITRILE BUTADIENE RUBBER (NBR) PER ASTM D 2000, HARDNESS 60 - 70 DUROMETER A OR FLUOROELASTOMER.  
RETAINERS: PART NUMBERS -1 THROUGH -4, PRESSED STEEL; PART NUMBERS -5 THROUGH -8 PHENOLIC.
8. LUBRICATION/PRESERVATION: PACK 30 TO 50% FULL WITH MIL-PRF-27617D, TYPE III, MIL-PRF-81322, OR PRESERVE WITH MIL-C-11796, CLASS 3.
9. TOLERANCES: ABEC 5 PER ABMA STANDARD 20 EXCEPT BORE AND OUTER DIAMETER TOLERANCES SHALL BE +.0000/-.0002 INCH.
10. BEARING CONFIGURATION AND IDENTIFICATION:

