MTHRTL

```
MM      MM  TTTTTTTTTT  HH      HH  DDDDDDD     MM      MM   IIIIII    NN        NN        11
MM      MM  TTTTTTTTTT  HH      HH  DDDDDDD     MM      MM   IIIIII    NN        NN        11
MMMM  MMMM      TT      HH      HH  DD     DD   MMMM  MMMM     II      NN        NN      1111
MMMM  MMMM      TT      HH      HH  DD     DD   MMMM  MMMM     II      NN        NN      1111
MM  MM  MM      TT      HH      HH  DD     DD   MM  MM  MM     II      NNNN      NN        11
MM  MM  MM      TT      HHHHHHHHHH  DD     DD   MM      MM     II      NNNN      NN        11
MM      MM      TT      HHHHHHHHHH  DD     DD   MM      MM     II      NN  NN    NN        11
MM      MM      TT      HH      HH  DD     DD   MM      MM     II      NN    NNNN          11
MM      MM      TT      HH      HH  DD     DD   MM      MM     II      NN    NNNN          11
MM      MM      TT      HH      HH  DD     DD   MM      MM     II      NN        NN        11
MM      MM      TT      HH      HH  DDDDDDD     MM      MM   IIIIII    NN        NN      111111
MM      MM      TT      HH      HH  DDDDDDD     MM      MM   IIIIII    NN        NN      111111
```

```
LL              IIIIII      SSSSSSSS
LL              IIIIII      SSSSSSSS
LL                II      SS
LL                II      SS
LL                II      SS
LL                II        SSSSSS
LL                II        SSSSSS
LL                II              SS
LL                II              SS
LL                II              SS
LL                II              SS
LLLLLLLLLL      IIIIII      SSSSSSSS
LLLLLLLLLL      IIIIII      SSSSSSSS
```

```
0000    1          .TITLE  MTH$DMIN1       DMIN1 function
0000    2          .IDENT  /1-002/         ; File: MTHDMIM1.MAR
0000    3
0000    4
0000    5  ;***********************************************************************
0000    6  ;*                                                                     *
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0000   24  ;*                                                                     *
0000   25  ;*                                                                     *
0000   26  ;***********************************************************************
0000   27
0000   28
0000   29  ; FACILITY: MATH LIBRARY
0000   30  ;++
0000   31  ; ABSTRACT:
0000   32  ;       This module contains routine MTH$DMIN1:
0000   33  ;       Return the smaller of n double-precision floating-point
0000   34  ;       numbers.
0000   35  ;
0000   36  ;
0000   37  ;
0000   38  ;--
0000   39  ;
0000   40  ; VERSION: 0
0000   41  ;
0000   42  ; HISTORY:
0000   43  ;
0000   44  ; AUTHOR:
0000   45  ;       Jonathan M. Taylor, 14-JUL-77: Version 0
0000   46  ;
0000   47  ; MODIFIED BY:
0000   48  ;
0000   49  ;
0000   50  ;
```

```
0000    52              .SBTTL  HISTORY            ; Detailed Current Edit History
0000    53
0000    54
0000    55  ; Edit History for Version 0 of MTH$DMIN1
0000    56  ;
0000    57  ; 0-4   - Remove MTH$FLAG_JACKET.   TNH 26-July-78
0000    58  ; 1-001 - Update version number and copyright notice.  JBS 16-NOV-78
0000    59  ; 1-002 - Add "_" to the PSECT directive.  JBS 22-DEC-78
```

MTH
Sym

DIV
DIV
DON
ERR
EXP
HIG
MTH
MTH
MTH
MTH
NO
RET
SF$
SF$
STE
STE
STE
STE
TES
TWO
UND

PSE

$AB
_MT

Pha

Ini
Com
Pas
Sym
Pas
Sym
Pse
Cro
Ass

The
654
The
331
8 p

```
              0000        61                .SBTTL  DECLARATIONS
              0000        62
              0000        63        ;
              0000        64        ;  INCLUDE FILES:
              0000        65        ;       oerr.mar
              0000        66        ;
              0000        67
              0000        68        ;
              0000        69        ;  EXTERNAL SYMBOLS:
              0000        70        ;       NONE
              0000        71        ;
              0000        72
              0000        73        ;
              0000        74        ;  MACROS:
              0000        75        ;       NONE
              0000        76        ;
              0000        77
              0000        78        ;
              0000        79        ;  PSECT DECLARATIONS:
          00000000        80                .PSECT  _MTH$CODE       PIC, SHR, LONG, EXE, NOWRT
              0000        81
              0000        82        ;
              0000        83        ;  EQUATED SYMBOLS:
              0000        84        ;       NONE
              0000        85        ;
              0000        86
              0000        87        ;
              0000        88        ;  OWN STORAGE:
              0000        89        ;       NONE
              0000        90        ;
```

```
                              0000       92                    .SBTTL  MTH$DMIN1
                              0000       93
                              0000       94   ;++
                              0000       95   ; FUNCTIONAL DESCRIPTION:
                              0000       96   ;     Return the minimum of n arguments, n is greater than or equal
                              0000       97   ;     to 1.
                              0000       98   ;
                              0000       99   ;
                              0000      100   ; CALLING SEQUENCE:
                              0000      101   ;     Minimum.wd.v = MTH$DMIN1 ({arg.rd.r})
                              0000      102   ;
                              0000      103   ;
                              0000      104   ;
                              0000      105   ; INPUT PARAMETERS:
                              0000      106   ;     The n parameters are double-precision floating point values
                              0000      107   ;     and are call-by-reference.
                              0000      108   ;
                              0000      109   ;
                              0000      110   ; IMPLICIT INPUTS:
                              0000      111   ;     NONE
                              0000      112   ;
                              0000      113   ; OUTPUT PARAMETERS:
                              0000      114   ;     NONE
                              0000      115   ;
                              0000      116   ; IMPLICIT OUTPUTS:
                              0000      117   ;     NONE
                              0000      118   ;
                              0000      119   ; COMPLETION CODES:
                              0000      120   ;     NONE
                              0000      121   ;
                              0000      122   ; SIDE EFFECTS:
                              0000      123   ;     Reserved Operand exception can occur.
                              0000      124   ;
                              0000      125   ;
                              0000      126   ;--
                              0000      127
                    0004      0000      128            .ENTRY  MTH$DMIN1,        ^M<R2>
         52   6C     9A       0002      129            MOVZBL  (AP), R2          ; R2 = arg count
              8C     D5       0005      130            TSTL    (AP)+             ; AP -> first arg
         50   9C     70       0007      131   1$:      MOVD    @(AP)+, R0        ; R0/R1 = trial min
              08     11       000A      132            BRB     3$                ; check arg count
    50   00  BC     71       000C      133   2$:      CMPD    @0(AP), R0        ; if this arg is less than trial min
              F5     19       0010      134            BLSS    1$                ; then it becomes new trial min
              8C     D5       0012      135            TSTL    (AP)+             ; else ignore it
         F5 52     F5       0014      136   3$:      SOBGTR  R2, 2$            ; return if arg count exausted
              04              0017      137            RET                       ; with min in R0/R1
                              0018      138
                              0018      139
                              0018      140            .END
```

MTH$DMIN1   00000000 RG   01

```
                              +-------------------+
                              ! Psect synopsis !
                              +-------------------+
```

PSECT name	Allocation	PSECT No.	Attributes								
----------	----------	---------	----------	---	---	---	---	-----	-----	----	----- ----- ----
. ABS .	00000000 (0.)	00 (0.)	NOPIC	USR	CON	ABS	LCL	NOSHR	NOEXE	NORD	NOWRT NOVEC BYTE
_MTH$CODE	00000018 (24.)	01 (1.)	PIC	USR	CON	REL	LCL	SHR	EXE	RD	NOWRT NOVEC LONG

```
                        +--------------------------+
                        ! Performance indicators !
                        +--------------------------+
```

Phase	Page faults	CPU Time	Elapsed Time
Initialization	31	00:00:00.05	00:00:00.94
Command processing	124	00:00:00.43	00:00:03.64
Pass 1	69	00:00:00.33	00:00:01.79
Symbol table sort	0	00:00:00.00	00:00:00.00
Pass 2	38	00:00:00.31	00:00:01.32
Symbol table output	2	00:00:00.01	00:00:00.01
Psect synopsis output	2	00:00:00.02	00:00:00.02
Cross-reference output	0	00:00:00.00	00:00:00.00
Assembler run totals	268	00:00:01.17	00:00:07.73

The working set limit was 900 pages.
1403 bytes (3 pages) of virtual memory were used to buffer the intermediate code.
There were 10 pages of symbol table space allocated to hold 1 non-local and 3 local symbols.
140 source lines were read in Pass 1, producing 10 object records in Pass 2.
0 pages of virtual memory were used to define 0 macros.

```
                    +-----------------------------+
                    ! Macro library statistics !
                    +-----------------------------+
```

Macro library name	Macros defined
_255DUA28:[SYSLIB]STARLET.MLB;2	0

0 GETS were required to define 0 macros.

There were no errors, warnings or information messages.

MACRO/ENABLE=SUPPRESSION/DISABLE=(GLOBAL,TRACEBACK)/LIS=LIS$:MTHDMIN1/OBJ=OBJ$:MTHDMIN1 MSRC$:MTHDMIN1/UPDATE=(ENH$:MTHDMIN1)

MTHDCOSH
LIS

MTHDMIN1
LIS

MTHDLOG
LIS

MTHDSINCO
LIS

MTHDATANH
LIS

MTHDNINT
LIS

MTHDSQRT
LIS

MTHDCONJG
LIS

MTHDINT
LIS

MTHDMAX1
LIS

MTHDSIGN
LIS

MTHDIM
LIS

MTHDMOD
LIS

MTHDSINH
LIS

MTHDEXP
LIS

MTHDFLOOR
LIS

MTHDPROD
LIS