FILEID**MTHGPROD

```
MM     MM  TTTTTTTTTT  HH     HH    GGGGGGG   PPPPPPP   RRRRRRR    000000   DDDDDDD
MM     MM  TTTTTTTTTT  HH     HH   GGGGGGGG   PPPPPPP   RRRRRRR    000000   DDDDDDD
MMMM MMMM      TT      HH     HH  GG               PP PP  RR    RR 00    00 DD     DD
MMMM MMMM      TT      HH     HH  GG               PP PP  RR    RR 00    00 DD     DD
MM  MM  MM     TT      HH     HH  GG               PP PP  RR    RR 00    00 DD     DD
MM     MM      TT      HHHHHHHHHH GG          PPPPPPP   RRRRRRR    00    00 DD     DD
MM     MM      TT      HHHHHHHHHH GG          PPPPPPP   RRRRRRR    00    00 DD     DD
MM     MM      TT      HH     HH  GG   GGGGG  PP        RR  RR     00    00 DD     DD
MM     MM      TT      HH     HH  GG     GG   PP        RR    RR   00    00 DD     DD
MM     MM      TT      HH     HH  GG     GG   PP        RR    RR   00    00 DD     DD
MM     MM      TT      HH     HH   GGGGGG     PP        RR    RR   000000   DDDDDDD
MM     MM      TT      HH     HH   GGGGGG     PP        RR    RR   000000   DDDDDDD


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$GPROD - G Floating Product
0000      2              .IDENT  /1-001/         ; File: MTHGPROD.MAR
0000      3
0000      4  ;
0000      5  ;********************************************************************
0000      6  ;*                                                                  *
0000      7  ;*  COPYRIGHT (c) 1978, 1980, 1982, 1984 BY                         *
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0000     24  ;*                                                                  *
0000     25  ;*                                                                  *
0000     26  ;********************************************************************
0000     27  ;
0000     28  ;
0000     29  ; FACILITY: MATH LIBRARY
0000     30  ;++
0000     31  ; ABSTRACT:
0000     32  ;       This module contains routine MTH$GPROD:
0000     33  ;       Return the product of two G floating arguments.
0000     34  ;
0000     35  ;
0000     36  ;--
0000     37  ;
0000     38  ; VERSION: 1
0000     39  ;
0000     40  ; HISTORY:
0000     41  ;
0000     42  ; AUTHOR:
0000     43  ;       Steven B. Lionel, 26-Jan-79: Version 1
0000     44  ;
0000     45  ; MODIFIED BY:
0000     46  ;
0000     47  ;
0000     48  ;
```

```
0000    50              .SBTTL  HISTORY          ; Detailed Current Edit History
0000    51
0000    52
0000    53 ; Edit History for Version 1 of MTH$GPROD
0000    54 ;
0000    55 ; 1-001 - Adapted from MTH$DPROD version 1-001.  SBL 26-Jan-79
```

MTH$GPROD
1-001
                   L 1

- G Floating Product   16-SEP-1984 01:30:01 VAX/VMS Macro V04-00   Page 3
DECLARATIONS   6-SEP-1984 11:23:58 [MTHRTL.SRC]MTHGPROD.MAR;1   (3)

```
0000      57              .SBTTL  DECLARATIONS
0000      58
0000      59      ;
0000      60      ; INCLUDE FILES:
0000      61      ;     NONE
0000      62      ;
0000      63
0000      64      ;
0000      65      ; EXTERNAL SYMBOLS:
0000      66      ;     NONE
0000      67      ;
0000      68
0000      69      ;
0000      70
0000      71      ; MACROS:
0000      72      ;     NONE
0000      73      ;
0000      74
0000      75      ;
0000      76      ; PSECT DECLARATIONS:
00000000  77              .PSECT  _MTH$CODE       PIC, SHR, EXE, NOWRT, LONG
0000      78
0000      79      ;
0000      80      ; EQUATED SYMBOLS:
0000      81      ;     NONE
0000      82      ;
0000      83
0000      84      ;
0000      85      ; OWN STORAGE:
0000      86      ;     NONE
0000      87      ;
```

M 1

MTH$GPROD   - G Floating Product   16-SEP-1984 01:30:01 VAX/VMS Macro V04-00   Page 4
1-001   MTH$GPROD - return G product of two FLOA 6-SEP-1984 11:23:58 [MTHRTL.SRC]MTHGPROD.MAR;1   (4)

```
                    0000      89                   .SBTTL   MTH$GPROD - return G product of two FLOATING args
                    0000      90
                    0000      91    ;++
                    0000      92    ; FUNCTIONAL DESCRIPTION:
                    0000      93    ;     Convert the two single-precision floating-point arguments to
                    0000      94    ;     G double-precision.  Return the result of their multiplication
                    0000      95    ;     in G double-precision.
                    0000      96    ;
                    0000      97    ;
                    0000      98    ; CALLING SEQUENCE:
                    0000      99    ;     Double_product.wg.v = MTH$GPROD (arg1.rf.r, arg2.rf.r)
                    0000     100    ;
                    0000     101    ;
                    0000     102    ;
                    0000     103    ; INPUT PARAMETERS:
                    0000     104    ;     The two input parameters are single-precision floating-point
                    0000     105    ;     values and are call-by-reference.
                    0000     106    ;
                    0000     107    ;
                    0000     108    ; IMPLICIT INPUTS:
                    0000     109    ;     NONE
                    0000     110    ;
                    0000     111    ; OUTPUT PARAMETERS:
                    0000     112    ;     NONE
                    0000     113    ;
                    0000     114    ; IMPLICIT OUTPUTS:
                    0000     115    ;     NONE
                    0000     116    ;
                    0000     117    ; COMPLETION CODES:
                    0000     118    ;     NONE
                    0000     119    ;
                    0000     120    ; SIDE EFFECTS:
                    0000     121    ;     Reserved Operand and Floating Overflow exceptions can occur.
                    0000     122    ;
                    0000     123    ;
                    0000     124    ;--
                    0000     125
                    0000     126
                    0000     127
               000C 0000     128            .ENTRY   MTH$GPROD,         ^M<R2, R3>      ; save R2 and R3
     50   04 BC 99FD 0002    129            CVTFG    @4(AP), R0                         ; R0/R1 = arg1
     52   08 BC 99FD 0007    130            CVTFG    @8(AP), R2                         ; R2/R3 = arg2
        50 52 44FD 000C      131            MULG2    R2, R0                             ; R0/R1 = R0/R1 * R2/R3
                 04 0010     132            RET
                    0011     133
                    0011     134
                    0011     135            .END
```

MTH$GPROD   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                      00000011 (    17.)  01 (   1.)   PIC    USR   CON  REL   LCL  SHR    EXE    RD     NOWRT  NOVEC  LONG
```

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

Phase                    Page faults   CPU Time       Elapsed Time
-----                    -----------   --------       ------------
Initialization                    29   00:00:00.08    00:00:00.71
Command processing               103   00:00:00.39    00:00:02.90
Pass 1                            63   00:00:00.33    00:00:01.85
Symbol table sort                  0   00:00:00.00    00:00:00.00
Pass 2                            37   00:00:00.31    00:00:02.23
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             238   00:00:01.15    00:00:07.87
```

The working set limit was 900 pages.
1297 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 0 local symbols.
135 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
------------------                           --------------
_$255$DUA28:[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$:MTHGPROD/OBJ=OBJ$:MTHGPROD MSRC$:MTHGPROD/UPDATE=(ENH$:MTHGPROD)