


```

MM      MM      TTTTTTTTTT  HH      HH      DDDDDDDD  PPPPPPPP  RRRRRRRR  000000  DDDDDDDD
MM      MM      TTTTTTTTTT  HH      HH      DDDDDDDD  PPPPPPPP  RRRRRRRR  000000  DDDDDDDD
MMMM    MMMM      TT          HH      HH      DD          DD  PP          PP  RR          RR  00          00  DD          DD
MMMM    MMMM      TT          HH      HH      DD          DD  PP          PP  RR          RR  00          00  DD          DD
MM      MM      TT          HH      HH      DD          DD  PP          PP  RR          RR  00          00  DD          DD
MM      MM      TT          HH      HH      DD          DD  PP          PP  RR          RR  00          00  DD          DD
MM      MM      TT          HHHHHHHHHH  DD          DD  PPPPPPPP  RRRRRRRR  00          00  DD          DD
MM      MM      TT          HHHHHHHHHH  DD          DD  PPPPPPPP  RRRRRRRR  00          00  DD          DD
MM      MM      TT          HH          HH      DD          DD  PP          PP  RR          RR  00          00  DD          DD
MM      MM      TT          HH          HH      DD          DD  PP          PP  RR          RR  00          00  DD          DD
MM      MM      TT          HH          HH      DD          DD  PP          PP  RR          RR  00          00  DD          DD
MM      MM      TT          HH          HH      DD          DD  PP          PP  RR          RR  00          00  DD          DD
MM      MM      TT          HH          HH      DDDDDDDD  PP          PP  RR          RR  000000  DDDDDDDD
MM      MM      TT          HH          HH      DDDDDDDD  PP          PP  RR          RR  000000  DDDDDDDD

```

....
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```

LL      IIIIII  SSSSSSSS
LL      IIIIII  SSSSSSSS
LL      II      SS
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

```

(2) 50
(3) 59
(4) 91

HISTORY ; Detailed Current Edit History
DECLARATIONS
MTHSDPROD - return DOUBLE product of two FLOATING args

MTH
Syn
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MTH
NEC
NEC

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```
0000 1 .TITLE MTH$DPROD - DOUBLE PRECISION PRODUCT
0000 2 .IDENT /1-002/ ; File: MTHDPROD.MAR
0000 3
0000 4
0000 5 :*****
0000 6 :*
0000 7 :* COPYRIGHT (c) 1978, 1980, 1982, 1984 BY
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0000 23 :* SOFTWARE ON EQUIPMENT WHICH IS NOT SUPPLIED BY DIGITAL.
0000 24 :*
0000 25 :*
0000 26 :*****
0000 27 :
0000 28 :
0000 29 : FACILITY: MATH LIBRARY
0000 30 :++
0000 31 : ABSTRACT:
0000 32 : This module contains routine MTH$DPROD:
0000 33 : Return the product of two double-precision arguments.
0000 34 :
0000 35 :
0000 36 :--
0000 37 :
0000 38 : VERSION: 0
0000 39 :
0000 40 : HISTORY:
0000 41 :
0000 42 : AUTHOR:
0000 43 : Jonathan M. Taylor, 27-Jul-77: Version 0
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 0 of MTHSDPROD
0000 54 :
0000 55 : 0-3 - Remove MTH$FLAG_JACKET. TNH 5-July-78
0000 56 : 1-001 - Update version number and copyright notice. JBS 16-NOV-78
0000 57 : 1-002 - Add "_" to the PSECT directive. JBS 22-DEC-78
```

```
0000 59 .SBTTL DECLARATIONS
0000 60
0000 61 :
0000 62 : INCLUDE FILES:
0000 63 : oerr.mar
0000 64 :
0000 65 :
0000 66 :
0000 67 : EXTERNAL SYMBOLS:
0000 68 : NONE
0000 69 :
0000 70 :
0000 71 :
0000 72 :
0000 73 : MACROS:
0000 74 : NONE
0000 75 :
0000 76 :
0000 77 :
0000 78 : PSECT DECLARATIONS:
0000 79 : .PSECT _MTH$CODE PIC, SHR, EXE, NOWRT, LONG
0000 80
0000 81 :
0000 82 : EQUATED SYMBOLS:
0000 83 : NONE
0000 84 :
0000 85 :
0000 86 :
0000 87 : OWN STORAGE:
0000 88 : NONE
0000 89 :
```

```

0000 91      .SBTTL MTHSDPROD - return DOUBLE product of two FLOATING args
0000 92
0000 93 :++
0000 94 : FUNCTIONAL DESCRIPTION:
0000 95 :   Convert the two single-precision floating-point arguments to
0000 96 :   double-precision. Return the result of their multiplication
0000 97 :   in double-precision.
0000 98
0000 99
0000 100 : CALLING SEQUENCE:
0000 101 :   Double_product.wd.v = MTHSDPROD (arg1.rf.r, arg2.rf.r)
0000 102
0000 103
0000 104
0000 105 : INPUT PARAMETERS:
0000 106 :   The two input parameters are single-precision floating-point
0000 107 :   values 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 and Floating Overflow exceptions can occur.
0000 124
0000 125
0000 126 :--
0000 127
0000 128
0000 129
0000 130      .ENTRY MTHSDPROD,      ^M<R2, R3>      ; save R2 and R3
50   04 BC 000C 0000 131      CVTFD @4(AP), R0      ; R0/R1 = arg1
52   08 BC 56   0002 132      CVTFD @8(AP), R2      ; R2/R3 = arg2
    50 52 64 000A 133      MULD  R2, R0      ; R0/R1 = R0/R1 * R2/R3
    04 000D 134      RET
000E 135
000E 136
000E 137      .END

```

MTHSDPROD
Symbol table

- DOUBLE PRECISION PRODUCT

G 11

16-SEP-1984 01:19:56
6-SEP-1984 11:22:29

VAX/VMS Macro V04-00
[MTHRTL.SRC]MTHDPROD.MAR;1

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(4)

MT
2-

MTHSDPROD 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
_MTHSCODE	0000000E (14.)	01 (1.)	PIC USR CON REL LCL SHR EXE RD NOWRT NOVEC LONG

! Performance indicators !

Phase	Page faults	CPU Time	Elapsed Time
Initialization	31	00:00:00.09	00:00:00.75
Command processing	125	00:00:00.43	00:00:03.62
Pass 1	66	00:00:00.34	00:00:02.51
Symbol table sort	0	00:00:00.00	00:00:00.00
Pass 2	38	00:00:00.28	00:00:00.98
Symbol table output	1	00:00:00.01	00:00:00.01
Psect synopsis output	3	00:00:00.01	00:00:00.14
Cross-reference output	0	00:00:00.00	00:00:00.00
Assembler run totals	266	00:00:01.17	00:00:08.03

The working set limit was 900 pages.
1313 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.
137 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=LISS:MTHDPROD/OBJ=OBS:MTHDPROD MSRC\$:MTHDPROD/UPDATE=(ENHS:MTHDPROD)

MTHDCOSH LIS	MTHDMINI LIS	MTHDSINCO LIS	MTHDSORT LIS
MTHLOG LIS	MTHDSIGN LIS	MTHDSINH LIS	MTHDSQRT LIS
MTHDATANH LIS	MTHDMAXI LIS	MTHDINT LIS	MTHDINT LIS
MTHDCONJG LIS	MTHDMOD LIS	MTHDINT LIS	MTHDINT LIS
MTHDM LIS	MTHDPROD LIS	MTHDINT LIS	MTHDINT LIS
MTHDEXP LIS	MTHDINT LIS	MTHDINT LIS	MTHDINT LIS
MTHDFLOOR LIS	MTHDINT LIS	MTHDINT LIS	MTHDINT LIS