```
PPPPPPPPPPPP        AAAAAAAAA        SSSSSSSSSSSS    RRRRRRRRRRR    TTTTTTTTTTTTTTT  LLL
PPPPPPPPPPPP        AAAAAAAAA        SSSSSSSSSSSS    RRRRRRRRRRR    TTTTTTTTTTTTTTT  LLL
PPPPPPPPPPPP        AAAAAAAAA        SSSSSSSSSSSS    RRRRRRRRRRR    TTTTTTTTTTTTTTT  LLL
PPP         PPP  AAA         AAA  SSS              RRR         RRR        TTT        LLL
PPP         PPP  AAA         AAA  SSS              RRR         RRR        TTT        LLL
PPP         PPP  AAA         AAA  SSS              RRR         RRR        TTT        LLL
PPP         PPP  AAA         AAA  SSS              RRR         RRR        TTT        LLL
PPP         PPP  AAA         AAA  SSS              RRR         RRR        TTT        LLL
PPP         PPP  AAA         AAA  SSS              RRR         RRR        TTT        LLL
PPPPPPPPPPPP     AAA         AAA        SSSSSSSSS  RRRRRRRRRRRR         TTT        LLL
PPPPPPPPPPPP     AAA         AAA        SSSSSSSSS  RRRRRRRRRRRR         TTT        LLL
PPPPPPPPPPPP     AAA         AAA        SSSSSSSSS  RRRRRRRRRRRR         TTT        LLL
PPP              AAAAAAAAAAAAAAA              SSS  RRR   RRR             TTT        LLL
PPP              AAAAAAAAAAAAAAA              SSS  RRR   RRR             TTT        LLL
PPP              AAAAAAAAAAAAAAA              SSS  RRR   RRR             TTT        LLL
PPP              AAA         AAA              SSS  RRR         RRR       TTT        LLL
PPP              AAA         AAA              SSS  RRR         RRR       TTT        LLL
PPP              AAA         AAA              SSS  RRR         RRR       TTT        LLL
PPP              AAA         AAA  SSSSSSSSSSSS    RRR         RRR       TTT  LLLLLLLLLLLLLLLLL
PPP              AAA         AAA  SSSSSSSSSSSS    RRR         RRR       TTT  LLLLLLLLLLLLLLLLL
PPP              AAA         AAA  SSSSSSSSSSSS    RRR         RRR       TTT  LLLLLLLLLLLLLLLLL
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PPPPPPPP      AAAAAA      SSSSSSSS    AAAAAA   BBBBBBBB     SSSSSSSS  LL
PPPPPPPP      AAAAAA      SSSSSSSS    AAAAAA   BBBBBBBB     SSSSSSSS  LL
PP      PP  AA      AA  SS          AA      AA  BB      BB  SS        LL
PP      PP  AA      AA  SS          AA      AA  BB      BB  SS        LL
PP      PP  AA      AA  SS          AA      AA  BB      BB  SS        LL
PPPPPPPP    AA      AA    SSSSSS     AA      AA  BBBBBBBB     SSSSSS   LL
PPPPPPPP    AA      AA    SSSSSS     AA      AA  BBBBBBBB     SSSSSS   LL
PP          AAAAAAAAAA        SS   AAAAAAAAAA  BB      BB        SS  LL
PP          AAAAAAAAAA        SS   AAAAAAAAAA  BB      BB        SS  LL
PP          AA      AA        SS   AA      AA  BB      BB        SS  LL
PP          AA      AA        SS   AA      AA  BB      BB        SS  LL         ....
PP          AA      AA  SSSSSSSS   AA      AA  BBBBBBBB     SSSSSSSS  LLLLLLLLLL ....
PP          AA      AA  SSSSSSSS   AA      AA  BBBBBBBB     SSSSSSSS  LLLLLLLLLL ....


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
```

H 12

```
0000      1              .TITLE  PAS$ABS_L - Return absolute value
0000      2              .IDENT  /1-001/                   ; File: PASABSL.MAR Edit: SBL1001
0000      3      ;
0000      4      ;
0000      5      ;*****************************************************************************
0000      6      ;*                                                                           *
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0000     24      ;*                                                                           *
0000     25      ;*                                                                           *
0000     26      ;*****************************************************************************
0000     27      ;
0000     28
0000     29      ;++
0000     30      ; FACILITY: Pascal Language Support
0000     31      ;
0000     32      ; ABSTRACT:
0000     33      ;
0000     34      ;       This module contains PAS$ABS_L, which returns the absolute value
0000     35      ;       of a longword without checking for overflow.
0000     36      ;
0000     37      ; ENVIRONMENT: Runs at any access mode, AST Reentrant
0000     38      ;
0000     39      ; AUTHOR: Steven B. Lionel, CREATION DATE: 4-Nov-1980
0000     40      ;
0000     41      ; MODIFIED BY:
0000     42      ;
0000     43      ; 1-001 - Original. SBL 4-Nov-1980
0000     44      ;--
```

PASSABS_L — Return absolute value   16-SEP-1984 01:21:44   VAX/VMS Macro V04-00   Page 2
1-001   DECLARATIONS   6-SEP-1984 11:29:58   [PASRTL.SRC]PASABSL.MAR;1   (2)

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```
         0000    46              .SBTTL  DECLARATIONS
         0000    47 ;
         0000    48 ; LIBRARY MACRO CALLS:
         0000    49 ;
         0000    50 ;       NONE                    .,
         0000    51 ;
         0000    52 ; EXTERNAL DECLARATIONS:
         0000    53 ;
         0000    54         .DSABL  GBL             ; Force all external symbols to be declared
         0000    55 ;       NONE
         0000    56 ;
         0000    57 ; MACROS:
         0000    58 ;
         0000    59 ;       NONE
         0000    60 ;
         0000    61 ; EQUATED SYMBOLS:
         0000    62 ;
         0000    63 ;       NONE
         0000    64 ;
         0000    65 ; OWN STORAGE:
         0000    66 ;
         0000    67 ;       NONE
         0000    68 ;
         0000    69 ; PSECT DECLARATIONS:
         0000    70 ;
     00000000    71         .PSECT _PAS$CODE PIC, USR, CON, REL, LCL, SHR, -
         0000    72                 EXE, RD, NOWRT, LONG
         0000    73
```

```
              0000      75              .SBTTL   PAS$ABS_L - Take absolute value unchecked
              0000      76  ;++
              0000      77  ; FUNCTIONAL DESCRIPTION:
              0000      78  ;
              0000      79  ;       This routine returns the absolute value of a signed longword
              0000      80  ;       integer without checking for overflow.  If the argument is
              0000      81  ;       -2**31, the result returned is -2**31.
              0000      82  ;
              0000      83  ; CALLING SEQUENCE:
              0000      84  ;
              0000      85  ;       Result.wl.v = PAS$ABS_L (Long.rl.r)
              0000      86  ;
              0000      87  ; FORMAL PARAMETERS:
              0000      88  ;
              0000      89  ;       Long    - Signed longword argument
              0000      90  ;
              0000      91  ; IMPLICIT INPUTS:
              0000      92  ;
              0000      93  ;       NONE
              0000      94  ;
              0000      95  ; IMPLICIT OUTPUTS:
              0000      96  ;
              0000      97  ;       NONE
              0000      98  ;
              0000      99  ; ROUTINE VALUE:
              0000     100  ;
              0000     101  ;       The absolute value of the argument unless the argument is -2**31
              0000     102  ;       in which case -2**31 is returned.
              0000     103  ;
              0000     104  ; SIDE EFFECTS:
              0000     105  ;
              0000     106  ;       NONE
              0000     107  ;
              0000     108  ;--
              0000     109
      0000    0000     110              .ENTRY   PAS$ABS_L, ^M<>            ; Integer overflow must be disabled
              0002     111
50  04 BC  D0 0002     112              MOVL     @4(AP), R0                ; Fetch argument
      03  18 0006     113              BGEQ     10$                       ; Done if not negative
   50  50  CE 0008     114              MNEGL    R0, R0                    ; Take absolute value
         04 000B     115  10$:         RET                                ; End of routine PAS$ABS_L
              000C     116
              000C     117              .END                               ; End of module PAS$ABS_L
```

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PAS$ABS_L   - Return absolute value   16-SEP-1984 01:21:44 VAX/VMS Macro V04-00   Page 4   PA'
Symbol table   6-SEP-1984 11:29:58 [PASRTL.SRC]PASABSL.MAR;1   (3)   1-(

PAS$ABS_L   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
_PAS$CODE                     0000000C (   12.)   01 (  1.)    PIC   USR   CON   REL   LCL   SHR   EXE   RD  NOWRT NOVEC LONG

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

Phase                  Page faults   CPU Time      Elapsed Time
-----                  -----------   --------      ------------
Initialization                  10   00:00:00.06   00:00:01.29
Command processing              81   00:00:00.65   00:00:03.62
Pass 1                          59   00:00:00.31   00:00:01.91
Symbol table sort                0   00:00:00.00   00:00:00.00
Pass 2                          37   00:00:00.25   00:00:01.27
Symbol table output              2   00:00:00.01   00:00:00.63
Psect synopsis output            1   00:00:00.02   00:00:00.02
Cross-reference output           0   00:00:00.00   00:00:00.00
Assembler run totals           192   00:00:01.31   00:00:08.75
```

The working set limit was 750 pages.
1105 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 1 local symbols.
117 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$:PASABSL/OBJ=OBJ$:PASABSL MSRC$:PASABSL/UPDATE=(ENH$:PASABSL)

PASRT1
LIS

PASMACROS
REQ

PASFCB
SDL

PASPROLOG
REQ

PASOPEDEF
REQ

PASABSL
LIS

PASCARD2
LIS

PASRTL

PASBUGCOD
REQ

PASCLOSE2
LIS

PASRT2
LIS

PASRT3
LIS

PASRTL
MAP

PASIO4
LIS

PASEXTERN
REQ

PASKDB
REQ

PASPFD
REQ

PASCONVER
LIS

PASLIB
REQ

PASPFU
REQ

PASBIN
LIS

PASCLOCK2
LIS

PASRT4
LIS