

# NPN SILICON RF POWER TRANSISTOR

## DESCRIPTION:

The **ASI SD1542-42** is a Common Base Device Designed for, IFF and DME Pulse Applications.

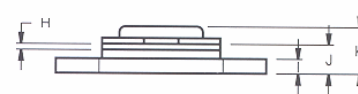
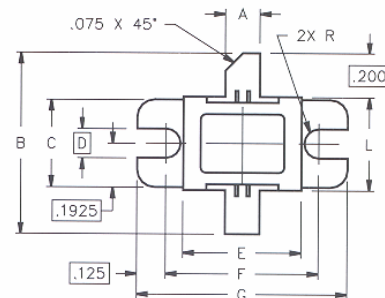
## FEATURES INCLUDE:

- Gold Metalization
- Input/Output Matching
- Hermetically Sealed

## MAXIMUM RATINGS

|                         |                                 |
|-------------------------|---------------------------------|
| <b>I<sub>C</sub></b>    | 45 A                            |
| <b>V<sub>CC</sub></b>   | 55 V                            |
| <b>P<sub>DISS</sub></b> | 1670 W @ T <sub>C</sub> = 25 °C |
| <b>T<sub>J</sub></b>    | -65 °C to +200 °C               |
| <b>T<sub>STG</sub></b>  | -65 °C to +200 °C               |
| <b>θ<sub>JC</sub></b>   | 0.06 °C/W                       |

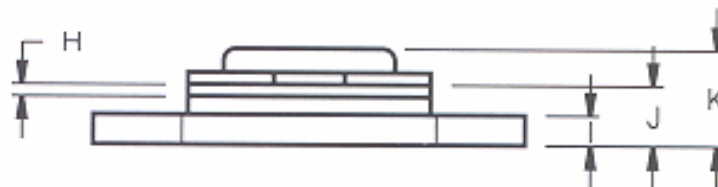
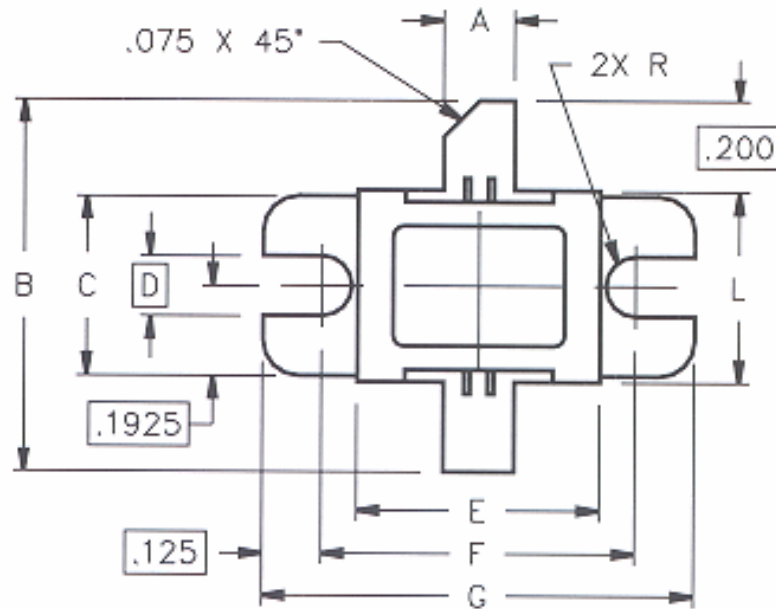
## PACKAGE STYLE .400 X 500 2L FLG



|   | MINIMUM<br>INCHES/MM | MAXIMUM<br>INCHES/MM |   | MINIMUM<br>INCHES/MM | MAXIMUM<br>INCHES/MM |
|---|----------------------|----------------------|---|----------------------|----------------------|
| A | .145/3,68            | .155/3,93            | I | .055/1,40            | .065/1,65            |
| B | .750/19,05           |                      | J | .115/2,92            | .135/3,43            |
| C | .380/9,65            | .390/9,91            | K |                      | .230/5,64            |
| D | .130/3,30            |                      | L | .395/10,03           | .410/10,41           |
| E | .495/12,57           | .505/12,83           |   |                      |                      |
| F | .640/16,26           | .655/16,64           |   |                      |                      |
| G | .890/22,61           | .910/23,11           |   |                      |                      |
| H | .002/0,05            | .006/0,15            |   |                      |                      |

## CHARACTERISTICS T<sub>C</sub> = 25 °C

| SYMBOL                  | TEST CONDITIONS                                                   | MINIMUM | TYPICAL | MAXIMUM | UNITS |
|-------------------------|-------------------------------------------------------------------|---------|---------|---------|-------|
| <b>BV<sub>CBO</sub></b> | I <sub>C</sub> = 25 mA                                            | 65      |         |         | V     |
| <b>BV<sub>CER</sub></b> | I <sub>C</sub> = 25 mA R <sub>BE</sub> = 10 Ω                     | 65      |         |         | V     |
| <b>BV<sub>EBO</sub></b> | I <sub>E</sub> = 10 mA                                            | 3.5     |         |         | V     |
| <b>I<sub>CES</sub></b>  | V <sub>CE</sub> = 50 V                                            |         |         | 60      | mA    |
| <b>h<sub>FE</sub></b>   | V <sub>CE</sub> = 5.0 V I <sub>C</sub> = 2.0 A                    | 10      |         | 250     | ---   |
| <b>P<sub>G</sub></b>    | V <sub>CC</sub> = 50 V P <sub>IN</sub> = 150 W f = 1090 MHz PULSE | 6.0     | 6.6     |         | dB    |
| <b>η<sub>C</sub></b>    | WIDTH = 10 μS DUTY CYCLE = 1.0%                                   | 35      | 40      |         | %     |
| <b>P<sub>OUT</sub></b>  |                                                                   | 600     | 680     |         | W     |



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