

# MICRO ELECTRONICS

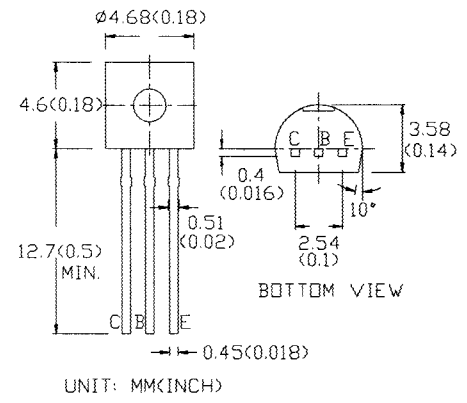
MPS6512S

**NPN  
SILICON  
TRANSISTOR**

TO-92A

**DESCRIPTION**

MPS6512S is NPN silicon planar transistors designed for general purpose amplifier applications.



**ABSOLUTE MAXIMUM RATINGS**

|  |          |               |
|--|----------|---------------|
| Collector-Base Voltage                   | VCBO     | 40V           |
| Collector-Emitter Voltage                | VCEO     | 30V           |
| Emitter-Base Voltage                     | VEBO     | 4V            |
| Collector Current                        | IC       | 100mA         |
| Continuous Power Dissipation             | Pd       | 350mW         |
| Operating & Storage Junction Temperature | Tj, Tstg | -55 to +150°C |

**ELECTRO-OPTICAL CHARACTERISTICS (Ta=25°C)**

| PARAMETER                            | SYMBOL   | MIN | MAX | UNIT | CONDITIONS       |
|--------------------------------------|----------|-----|-----|------|------------------|
| Collector-Emitter Breakdown Voltage  | BVCEO    | 30  |     | V    | IC=0.5mA IB=0    |
| Emttter-Base Breakdown Voltage       | BVEBO    | 4   |     | V    | IE=10μA IC=0     |
| Collector Cutoff Current             | ICBO     |     | 50  | nA   | VCB=30V IE=0     |
| D.C. Current Gain                    | HFE*     | 50  | 120 |      | IC=2mA VCE=10V   |
|                                      |          | 30  |     |      | IC=100mA VCE=10V |
| Collector-Emitter Saturation Voltage | VCE(sat) |     | 0.5 | V    | IC=50mA IB=5mA   |
| Current Gain Bandwidth Product       | fT       | 150 | TYP | MHz  | IC=2mA VCE=10V   |
|                                      |          |     |     |      | f=20MHz          |
| Output Capacitance                   | Cob      |     | 3.5 | pF   | VCB=10V f=1MHz   |
| Noise Figure                         | NF       | 2   | TYP | dB   | IC=10μA VCE=5V   |
|                                      |          |     |     |      | Rs=10Kohm f=1kHz |

\* Pulse test : pulse width <300μS, duty cycle < 2%.