

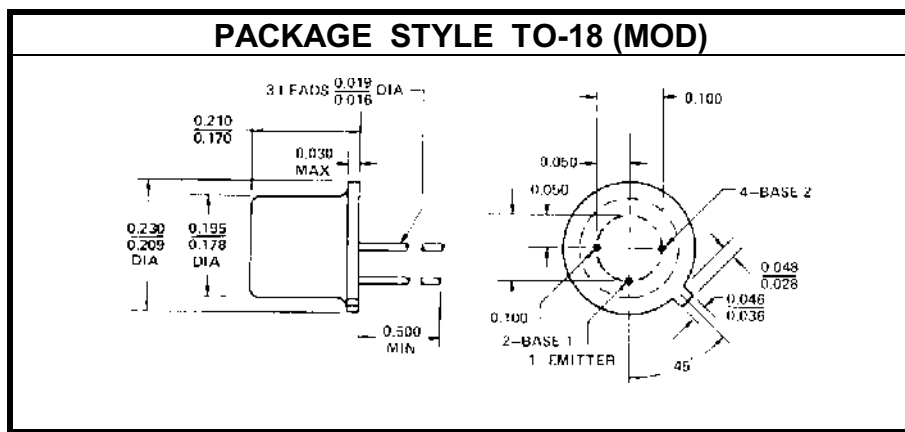
# SILICON PN UNIJUNCTION TRANSISTOR

## DESCRIPTION:

The **2N2646** is a Unijunction Transistor Used in General Purpose Pulse, Timing, Sense and Trigger Applications.

## MAXIMUM RATINGS

|               |                                             |
|---------------|---------------------------------------------|
| $I_C$         | 2.0 A (PULSED)                              |
| $V_{CE}$      | 30 V                                        |
| $P_{DISS}$    | 300 mW @ $T_C = 25^\circ\text{C}$           |
| $T_J$         | $-65^\circ\text{C}$ to $+125^\circ\text{C}$ |
| $T_{STG}$     | $-65^\circ\text{C}$ to $+150^\circ\text{C}$ |
| $\theta_{JC}$ | $33^\circ\text{C/W}$                        |



## CHARACTERISTICS $T_C = 25^\circ\text{C}$

| SYMBOL         | TEST CONDITIONS                                              | MINIMUM | TYPICAL | MAXIMUM | UNITS               |
|----------------|--------------------------------------------------------------|---------|---------|---------|---------------------|
| $\eta$         | $V_{B2B1} = 10\text{ V}$                                     | 0.56    |         | 0.75    | --                  |
| $r_{BB}$       | $V_{B2B1} = 3.0\text{ V}$                                    | 4.7     |         | 9.1     | $K\Omega$           |
| $\alpha_{rBB}$ | $V_{B2B1} = 3.0\text{ V}$ $T_A = -55$ to $125^\circ\text{C}$ | 0.1     |         | 0.9     | $\%/^\circ\text{C}$ |
| $V_{EB1(SAT)}$ | $V_{B2B1} = 10\text{ V}$ $I_E = 50\text{ mA}$                |         | 3.0     |         | V                   |
| $I_{B2(MOD)}$  | $V_{B2B1} = 10\text{ V}$ $I_E = 50\text{ mA}$                |         | 20      |         | mA                  |
| $I_{B2EO}$     | $V_{B2E} = 30\text{ V}$ $I_{B1} = 0$                         |         |         | 12      | $\mu\text{A}$       |
| $I_P$          | $V_{B2B1} = 25\text{ V}$                                     |         |         | 5.0     | $\mu\text{A}$       |
| $I_V$          | $V_{B2B1} = 20\text{ V}$ $R_{B2} = 100\Omega$                | 4.0     |         |         | mA                  |
| $V_{OB1}$      | $V_{B2B1} = 20\text{ V}$ $R_{B1} = 20\Omega$                 | 3.0     | 5.0     |         | V                   |