

## SURFACE MOUNT STEP RECOVERY DIODE

### DESCRIPTION:

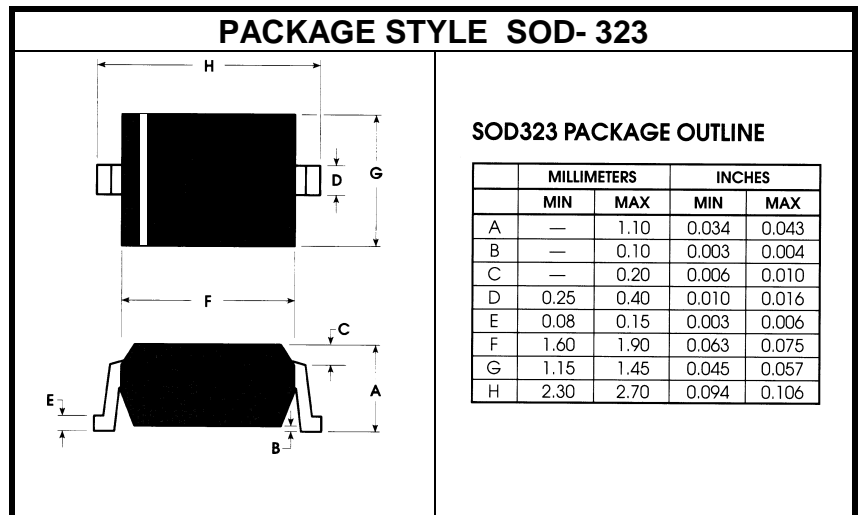
The **ASRD 800** Series of Step Recovery Diodes are Designed for Synthesiser and Sampler Applications Requiring a High Performance to Cost Ratio.

### FEATURES INCLUDE:

- Transition Time as Low as **70 pS**
- Surface Mount **SOD323** Package

### MAXIMUM RATINGS

|                         |                             |
|-------------------------|-----------------------------|
| <b>I<sub>F</sub></b>    | 50 mA                       |
| <b>V<sub>R</sub></b>    | UP TO RATED V <sub>BR</sub> |
| <b>P<sub>DISS</sub></b> | 100 mW                      |
| <b>T<sub>J</sub></b>    | -55 to +150 °C              |
| <b>T<sub>STG</sub></b>  | -55 to +150 °C              |
| <b>θ<sub>JC</sub></b>   | 1.25 °C /mW                 |



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

| SYMBOL                | TEST CONDITIONS        |           |          | MINIMUM | TYPICAL | MAXIMUM | UNITS     |
|-----------------------|------------------------|-----------|----------|---------|---------|---------|-----------|
| <b>V<sub>BR</sub></b> | I <sub>R</sub> = 10 μA | ASRD 803  |          | 15      |         |         | <b>V</b>  |
|                       |                        | ASRD 806  |          | 20      |         |         |           |
|                       |                        | ASRD 808  |          | 25      |         |         |           |
|                       |                        | ASRD 814  |          | 40      |         |         |           |
|                       |                        | ASRD 820  |          | 50      |         |         |           |
|                       |                        | ASRD 830  |          | 60      |         |         |           |
| <b>C<sub>J6</sub></b> | V <sub>R</sub> = 6 V   | f = 1 MHz | ASRD 803 | 0.2     |         | 0.4     | <b>pF</b> |
|                       |                        |           | ASRD 806 | 0.4     |         | 0.8     |           |
|                       |                        |           | ASRD 808 | 0.5     |         | 1.0     |           |
|                       |                        |           | ASRD 814 | 1.0     |         | 1.7     |           |
|                       |                        |           | ASRD 820 | 1.5     |         | 2.5     |           |
|                       |                        |           | ASRD 830 | 2.5     |         | 3.5     |           |



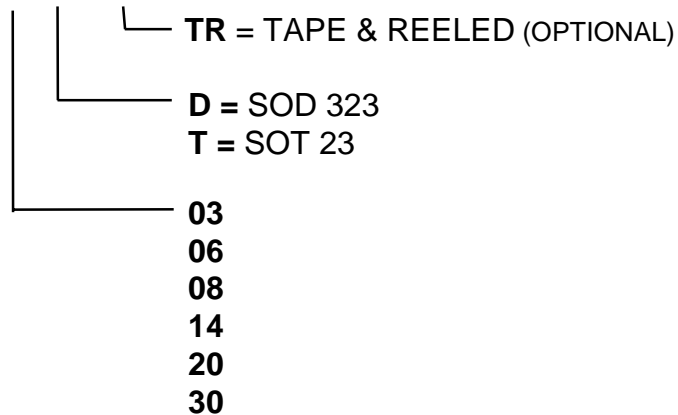
## SURFACE MOUNT STEP RECOVERY DIODE

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

| SYMBOL   | TEST CONDITIONS      |                     |          | MINIMUM            | TYPICAL             | MAXIMUM  | UNITS |
|----------|----------------------|---------------------|----------|--------------------|---------------------|----------|-------|
| $\tau$   | $I_F = 10\text{ mA}$ | $I_R = 6\text{ mA}$ | ASRD 803 | 8                  | 10                  |          | nS    |
|          |                      |                     | ASRD 806 | 10                 | 12                  |          |       |
|          |                      |                     | ASRD 808 | 25                 | 30                  |          |       |
|          |                      |                     | ASRD 814 | 45                 | 60                  |          |       |
|          |                      |                     | ASRD 820 | 55                 | 70                  |          |       |
|          |                      |                     | ASRD 830 | 80                 | 100                 |          |       |
|          |                      |                     | $T_t$    | $V_R = 7\text{ V}$ | $I_F = 3\text{ mA}$ | ASRD 803 |       |
| ASRD 806 |                      | 85                  |          |                    |                     | 100      |       |
| ASRD 808 |                      | 90                  |          |                    |                     | 110      |       |
| ASRD 814 |                      | 110                 |          |                    |                     | 135      |       |
| ASRD 820 |                      | 200                 |          |                    |                     | 250      |       |
| ASRD 830 |                      | 250                 |          |                    |                     | 300      |       |

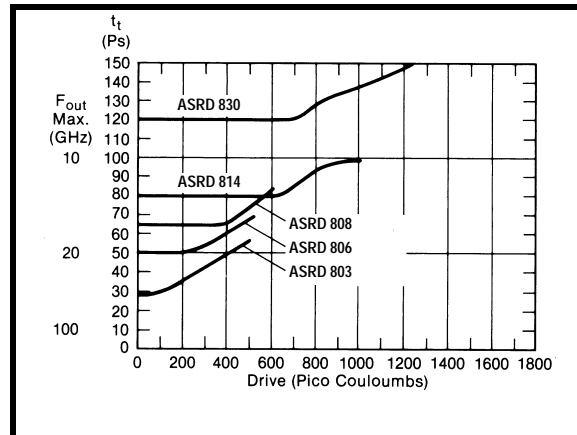
### ORDERING INFORMATION:

### ASRD 8XXX-XX





## SURFACE MOUNT STEP RECOVERY DIODE



**PACKAGE STYLE SOT-23**

1 = Anode 2 = NC 3 = Cathode

**SOT23 PACKAGE OUTLINE**

|                | MILLIMETERS |      | INCHES |       |
|----------------|-------------|------|--------|-------|
|                | MIN         | MAX  | MIN    | MAX   |
| A              | 0.79        | 1.02 | .031   | .040  |
| A <sub>1</sub> | 0.02        | 0.10 | .001   | .004  |
| C              | 2.67        | 3.05 | .105   | .120  |
| E              | 1.80        | 2.00 | .071   | .079  |
| F              | 0.38        | 0.54 | .01    | .021  |
| G              | 2.10        | 2.50 | .083   | .098  |
| H              | 1.20        | 1.40 | .047   | .055  |
| I              | 0.13        | 0.25 | .005   | .010  |
| J              | 0.089       | 0.15 | .0035  | .0059 |
| K              | 0.44        | 0.55 | .017   | .022  |
| ∅              | 0           | 8    | 0      | 0     |