

# KNOX SEMICONDUCTOR, INC.

## GENERAL PURPOSE ABRUPT TUNING DIODES 1N4786 - 1N4815

| TYPE<br>NUMBER                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | CAPACITANCE<br>@ - 4 Vdc<br>1MHz (pF) | CAPACITANCE RATIO<br>0.1 V TO 4 V |      | CAPACITANCE RATIO<br>MWV TO 4 V |       | MAX WORKING<br>VOLTAGE<br>(Vdc) | MIN BREAKDOWN<br>VOLTAGE Ir = 100µA<br>(Vdc) |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------|-----------------------------------|------|---------------------------------|-------|---------------------------------|----------------------------------------------|
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                       | MIN                               | MAX  | MIN                             | MAX   |                                 |                                              |
| 1N4786                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | 6.8                                   | 2.40                              | 2.56 | 0.462                           | 0.482 | 25                              | 28                                           |
| 1N4787                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | 8.2                                   | 2.42                              | 2.58 | 0.455                           | 0.473 | 25                              | 28                                           |
| 1N4788                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | 10.0                                  | 2.34                              | 2.50 | 0.443                           | 0.461 | 25                              | 28                                           |
| 1N4789                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | 12.0                                  | 2.35                              | 2.49 | 0.441                           | 0.457 | 25                              | 28                                           |
| 1N4790                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | 15.0                                  | 2.37                              | 2.49 | 0.438                           | 0.448 | 25                              | 28                                           |
| 1N4791                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | 18.0                                  | 2.36                              | 2.48 | 0.487                           | 0.497 | 20                              | 22                                           |
| 1N4792                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | 22.0                                  | 2.35                              | 2.46 | 0.487                           | 0.497 | 20                              | 22                                           |
| 1N4793                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | 27.0                                  | 2.35                              | 2.46 | 0.486                           | 0.496 | 20                              | 22                                           |
| 1N4794                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | 33.0                                  | 2.35                              | 2.46 | 0.485                           | 0.495 | 20                              | 22                                           |
| 1N4795                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | 39.0                                  | 2.34                              | 2.46 | 0.483                           | 0.494 | 20                              | 22                                           |
| 1N4796                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | 47.0                                  | 2.33                              | 2.43 | 0.483                           | 0.492 | 20                              | 22                                           |
| 1N4797                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | 56.0                                  | 2.32                              | 2.42 | 0.551                           | 0.561 | 15                              | 17                                           |
| 1N4798                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | 68.0                                  | 2.30                              | 2.40 | 0.551                           | 0.561 | 15                              | 17                                           |
| 1N4799                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | 82.0                                  | 2.26                              | 2.36 | 0.549                           | 0.558 | 15                              | 17                                           |
| 1N4800                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | 100.0                                 | 2.24                              | 2.33 | 0.547                           | 0.553 | 15                              | 17                                           |
| 1N4801                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | 6.8                                   | 2.40                              | 2.56 | 0.260                           | 0.285 | 100                             | 110                                          |
| 1N4802                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | 8.2                                   | 2.42                              | 2.58 | 0.263                           | 0.283 | 100                             | 110                                          |
| 1N4803                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | 10.0                                  | 2.34                              | 2.50 | 0.242                           | 0.262 | 100                             | 110                                          |
| 1N4804                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | 12.0                                  | 2.35                              | 2.49 | 0.242                           | 0.259 | 100                             | 110                                          |
| 1N4805                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | 15.0                                  | 2.37                              | 2.49 | 0.242                           | 0.256 | 100                             | 110                                          |
| 1N4806                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | 18.0                                  | 2.36                              | 2.48 | 0.242                           | 0.254 | 90                              | 99                                           |
| 1N4807                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | 22.0                                  | 2.35                              | 2.46 | 0.241                           | 0.252 | 90                              | 99                                           |
| 1N4808                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | 27.0                                  | 2.35                              | 2.46 | 0.276                           | 0.285 | 65                              | 72                                           |
| 1N4809                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | 33.0                                  | 2.35                              | 2.46 | 0.287                           | 0.295 | 60                              | 66                                           |
| 1N4810                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | 39.0                                  | 2.34                              | 2.44 | 0.300                           | 0.306 | 55                              | 61                                           |
| 1N4811                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | 47.0                                  | 2.33                              | 2.43 | 0.313                           | 0.320 | 50                              | 55                                           |
| 1N4812                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | 56.0                                  | 2.32                              | 2.42 | 0.348                           | 0.354 | 40                              | 44                                           |
| 1N4813                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | 68.0                                  | 2.30                              | 2.40 | 0.398                           | 0.404 | 30                              | 33                                           |
| 1N4814                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | 82.0                                  | 2.26                              | 2.36 | 0.477                           | 0.483 | 20                              | 22                                           |
| 1N4815                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | 100.0                                 | 2.24                              | 2.33 | 0.478                           | 0.484 | 20                              | 22                                           |
| <div> <div> Package Style<br/>DC Power Dissipation (Pd)<br/>Forward Voltage Drop<br/>Quality Factor (Q)<br/><br/>Reverse Current (Ir)<br/>Operating Temperature (Topr)<br/>Storage Temperature (Tstg)<br/>Capacitance Tolerance: </div> <div> @Ta = 25°C<br/>@If = 100 mA<br/>Vr = 4 Vdc; f = 1mhz<br/>Vr =4 Vdc; f = 50 Mhz<br/>@MWV<br/><br/>-65 to + 150°C<br/><br/>Standard </div> <div> DO-7<br/>500 mW<br/>1.0 Vdc<br/>750 min<br/>15 min<br/>5nA<br/><br/>-65 to + 150°C<br/>±20% </div> </div> |                                       |                                   |      |                                 |       |                                 |                                              |