

E-LINE DIODE SPECIFICATIONS

SCHOTTKY BARRIER DIODES

These devices have a high breakdown voltage and ultra fast switching capabilities. R.F. applications include low noise mixers, large and small signal detectors, limiters and discriminators. Applications under pulsed conditions include ultra high speed switching, clamping, sampling gates and pulse shaping.

CHARACTERISTICS (at 25°C ambient temperature)

Type	V_{BR} at $I_R=10\mu A$ min. (volts)	V_F at $I_F=1mA$ max. (mV)	I_R max. nA at V_R (volts)		I_F at $V_F=1V$ min. (mA)	C_T at $V_R=0V$ $f=1MHz$ max. (pF)	P_{tot}^* mW
	70	410	200	50	15	2.0	
ZC2800	70	410	200	50	15	2.0	250
ZC2811	15	410	100	10	20	1.2	250
ZC5800	50	410	200	35	15	2.0	250

*Power Dissipation derate to zero at 200°C and measured using an infinite heat sink.

Operating Temperature T_{amb} - 65 to +200°C.

Storage Temperature T_{stg} - 65 to +200°C

Note: Matched pairs or Quads of diodes can be supplied on request.

STANDARD MATCHING SPECIFICATIONS:

ZC2800-ZC5800

Max. $\Delta V=20mV$, $I_F=0.5$ to 5.0mA

Max. $\Delta C=0.2pF$, $V_R=0V$

ZC2811

Max. $\Delta V=20mV$, $I_F=1$ to 10mA

Max. $\Delta C=0.2pF$, $V_R=0V$

HYPERABRUPT VARIABLE CAPACITANCE TUNER DIODES

Hyperabrupt tuning diodes may be used in any electronic tuning system to replace conventional tuning diodes.

Remote tuning control, automatic frequency control and octave tuning in mobile, airborne and other systems in which limited voltages are available or desirable are typical applications.

ZC820 SERIES CHARACTERISTICS (at 25°C ambient temperature).

Type	Ratings		Nominal Capacitance in pF $V_R=2V$, $f=1MHz$			Minimum Q at $V_R=3V$ $f=50MHz$	Capacitance Ratio C_2/C_{20} , $f=1MHz$		P_D^* at $T_{amb}=25^\circ C$ mW
	V_R Volts	I_F mA	Min.	Nom.	Max.		Min.	Max.	
ZC820	25	200	8	10	12	300	4.5	6.0	300
ZC821	25	200	12	15	18	300	4.5	6.0	300
ZC822	25	200	17.6	22	26.4	200	5.0	6.5	300
ZC823	25	200	26.4	33	39.6	200	5.0	6.5	300
ZC824	25	200	37.6	47	56.4	200	5.0	6.5	300
ZC825	25	200	54.4	68	81.6	100	5.0	6.5	300
ZC826	25	200	80.0	100	120.0	100	5.0	6.5	300

*Power dissipation is calculated assuming that the device is mounted on a ceramic substrate measuring $10 \times 8 \times 0.6mm$.

Maximum Junction Temperature T_j 125°C

Storage Temperature Range T_{stg} - 65 to +200°C

To order devices with 2V nominal capacity $\pm 10\%$ add suffix A, $\pm 5\%$ add suffix B.

N.B. Tighter tolerance on diode capacitance ratio can be supplied on request. Such devices can be supplied in matched sets with or without a specified tracking tolerance as required.