SILICON PIN DIODES FOR SWITCHING & PHASE SHIFTING APPLICATIONS (MEDIUM & HIGH POWER)

Description

This series of high power, high voltage PIN diodes incorporates ceramic-glass passivated mesa technology. A broad range of products is available, in terms of breakdown voltages, junction capacitances and series resistances, to suit a large variety of applications, from 1 MHz to several GHz. These diodes are available in non-magnetic packages.

Electrical characteristics

CHIP DIODES					CHIP AND PACKAGED DIODES				
Characteristics at 25°C	Chip dimensions		Applicable voltage V_R	Break-down V_{BR}	Junction capacitance C_j (1)		Forward series resistance R_{SF}		Minority carrier lifetime τ_l
Test conditions	N/A		I<10µA	I<10µA	V_R = 50 V f = 1 MHz		f=120 MHz I_F AS SHOWN		I_F=10 mA I_R=6mA
TYPE	mm typ.		V	V	pF		Ω MAX		µs
PIN	Gold dia	per side	min.	typ.	typ.	max	I_F = 100 mA	I_F = 200 mA	min.
EH80050	0.13	0.6	500	550	0.15	0.20	0.70	0.65	1.1
EH80051	0.15	0.6	500	550	0.30	0.40	0.60	0.55	1.5
EH80052	0.25	0.8	500	550	0.60	0.70	0.40	0.30	2.0
EH80053	0.27	0.8	500	550	0.80	0.90	0.30	0.25	2.5
EH80055	0.34	0.9	500	550	1.2	1.3	0.25	0.22	3.0
EH80080	0.13	0.8	800	850	0.15	0.35	0.80	0.70	2.0
EH80083	0.27	0.9	800	850	0.80	0.90	0.40	0.30	3.0
EH80086	0.55	1.4	800	850	1.4	1.7	0.35	0.28	5.0
EH80100	0.23	0.9	1000	1100	0.30	0.40	0.70	0.60	3.0
EH80102	0.30	0.9	1000	1100	0.60	0.75	0.40	0.35	4.0
EH80106	0.55	1.4	1000	1100	1.40	1.70	0.35	0.30	7.0
					V_R = 100V		I_F = 200 mA	I_F = 300 mA	
EH80120	0.25	0.9	1200	1300	0.30	0.40	0.60	0.55	6.0
EH80124	0.65	1.5 H (2)	1200	1300	1.00	1.20	0.45	0.35	10.0
EH80126	0.75	1.7 H (2)	1200	1300	1.40	1.70	0.40	0.30	12.0
EH80129	1.25	2.2	1200	1300	2.00	2.30	0.30	0.25	15.0
EH80154	0.65	1.5	1500	1600	1.00	1.20	0.45	0.35	10.0
EH80159	1.25	2.2	1500	1600	2.00	2.30	0.30	0.25	15.0
					V_R = 200V		I_F = 200 mA	I_F = 300 mA	
EH80182	0.75	1.5	1800	1900	0.60	0.80	0.60	0.50	12.0
EH80189	1.4	2.6 H (2)	1800	1900	2.00	2.40	0.35	0.30	18.0
EH80204	0.85	1.7	2000	2100	1.00	1.30	0.50	0.40	14.0
EH80209	1.4	2.6 H (2)	2000	2100	2.00	2.40	0.35	0.30	18.0
EH80210	1.5	3 H (2)	2000	2100	3.00	3.40	0.20	0.15	25.0

(1) Other capacitance values available on request

(2) Hexagonal chips (between opposite flats)

	PACKAGED DIODES					
Type	**Standard case (3)**			**Thermal resistance R_{TH} (4)** P_{DISS} = 1 W	**Typical operating conditions** VSWR < 1.5 Z_0 = 50 Ω Chip configuration	
				°C/W	Frequency	Power
PIN	**Shunt**	**Isolated stud**	**Flat mounted**	**max**	**MHz**	**W**
DH80050	F 27d	BH301	BH202N	20.0	50 - 20000	50
DH80051	F 27d	BH301	BH202N	18.0	30 - 15000	80
DH80052	F 27d	BH301	BH202N	15.0	20 - 10000	100
DH80053	F 27d	BH301	BH202N	12.0	20 - 3000	100
DH80055	F 27d	BH301	BH202N	10.0	10 - 1000	250
DH80080	F 27d	BH301	BH202N	18.0	50 - 20000	60
DH80083	F 27d	BH301	BH202N	12.0	20 - 10000	80
DH80086	BH35	BH301	BH202N	8.0	10 - 500	200
DH80100	F 27d	BH301	BH202N	15.0	20 - 10000	80
DH80102	F 27d	BH301	BH202N	12.0	20 - 3000	100
DH80106	BH35	BH300	BH202N	5.5	10 - 500	500
DH80120	F 27d	BH301	BH202N	15.0	10 - 8000	100
DH80124	BH35	BH300	BH200	8.0	10 - 2000	250
DH80126	BH35	BH300	BH200	6.0	10 - 500	500
DH80129	BH141	BH300	BH200	4.5	5 - 200	1000
DH80154	BH141	BH300	BH200	8.0	10 - 2000	250
DH80159	BH141	BH300	BH200	4.5	5 - 200	1000
DH80182	BH35	BH300	BH200	10	10 - 50	
DH80189	BH141	BH300	BH200	4.5	15 - 200	1000
DH80204	BH141	BH300	BH200	8.0	10 - 1000	250
DH80209	BH141	BH300	BH200	4.5	1.5 - 200	1000
DH80210	BH141	BH300	BH200	2.5	1.5 - 50	1000

(3)Custom cases available on request (4) R_{TH} is measured in a standard shunt case, grounded on an infinite heatsink

Temperature ranges: Operating junction (T_j): -55° C to +175° C Storage: -65° C to +200° C