SQUARE CERAMIC SURFACE MOUNTABLE PIN DIODES

Description

These PIN diodes are manufactured in a square package (SMD) for surface mount applications. These packages utilize ceramic package technology with low inductance and axial terminations. This design simplifies automatic pick and place indexing and assembly. The termination contacts are tin lead plated for vapor or reflow circuit board soldering on Printed Circuit Boards.

These diodes are particularly suited for applications in frequency hopping radios, low loss, low distortion, and filters in HF, VHF and UHF frequencies.

Packages

Packages	SMD4	SMD4AM	SMD6	SMD8
DH50107	-06		-20	
DH50205	-06		-20	
DH50206	-06		-20	
DH50209	-06		-20	
DH80050	-06	-40	-20	
DH80051	-06	-40	-20	
DH80052	-06	-40	-20	
DH80053	-06	-40	-20	-24
DH80054	-06	-40	-20	-24
DH80055			-22	-24
DH80082	-06	-40	-20	-24
DH80100				-24
DH80102			-06	-24
DH80106				-24

How to order

DH50103	-	06	T3
Diode type		**Package information**	**Conditioning**
		-06: SMD4 -40: SMD4AM -20: SDM6 (except for DH80055:-22) -24: SMD8	T1: 1000 pieces tape & reel T3: 3000 pieces tape & reel blank: bulk

Electrical characteristics

Low voltage PIN diodes

	Breakdown V_{br} (V)	Total capacitance Ct (pF)		Forward series resistance R_{sf} (Ω)	Minority carrier t l (µs)	Max. power dissipation 25°C	
Test conditions	Ir = 10 µA	Vr = 6 V f = 1 MHz		If = 10 mA f = 120 MHz	If = 10 mA Ir = 6 mA	Contact surface	Free air
Type	min.	typ.	max.	max.	min.	W (2)	W (3)
DH50107	100	0.64	0.84	0.60	0.50	TBD	TBD
DH50205	200	0.41	0.47	1.00	0.80	TBD	TBD
DH50206	200	0.47	0.64	0.80	0.95	TBD	TBD
DH50207	200	0.64	0.84	0.70	1.00	TBD	TBD
DH50209	200	1.00	1.20	0.25 (1)	2.00	TBD	TBD

(1) Rsf at If = 50 mA
(2) Diode brazed on infinite copper heat sink
(3) Diode brazed on Epoxy circuit (PCB)

Medium voltage PIN diodes

	Applicable voltage V (V)	Breakdown Vbr (V)	Total capacitance Ct (pF)		Forward series resistance Rsf (Ω)		Minority carrier τl (µs)	Max. power dissipation 25° C	
Test conditions	I < 10 µA	Ir = 10 µA	Vr = 50 V f = 1MHz		I= 100mA f= 120MHz	I= 200 mA f= 120 MHz	If= 10mA Ir= 6mA	Contact surface	Free air
Type	max.	typ.	typ.	max.	max.		min.	W (1)	W (2)
DH80050	500	550	0.40	0.45	0.70	0.65	1.1	3.0	1.2
DH80051	500	550	0.55	0.65	0.60	0.55	1.5	3.5	1.2
DH80052	500	550	0.85	1.05	0.40	0.35	2.0	4.0	1.2
DH80053	500	550	1.05	1.20	0.35	0.30	2.5	4.0	1.5
DH80054	500	550	1.25	1.35	0.30	0.27	3.0	4.5	1.5
DH80055	500	550	1.45	1.55	0.25	0.22	3.5	4.5	1.5

(1) Diode brazed on infinite copper heat sink
(2) Diode brazed on Epoxy circuit (PCB)

Medium voltage PIN diodes

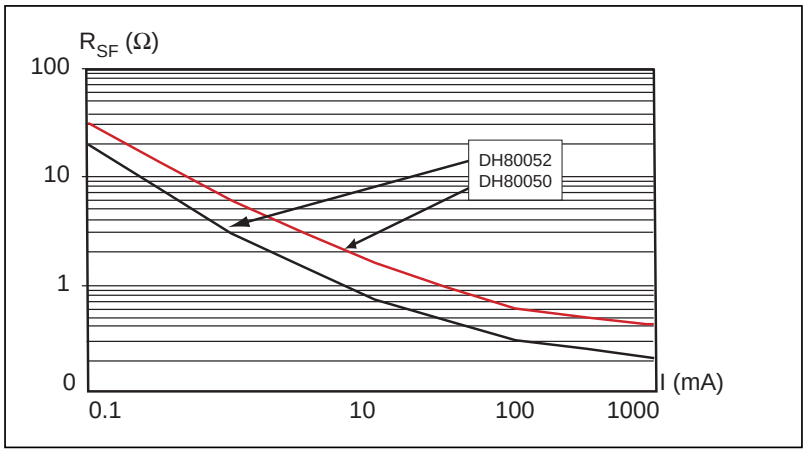
	Applicable voltage V (V)	Breakdown Vbr (V)	Total capacitance Ct (pF)		Forward series resistance Rsf (Ω)		Minority carrier τ (μs)	Max. power dissipation 25° C	
Test conditions	I < 10 μA	Ir = 10 μA	Vr = 50 V f = 1MHz		I=100mA f=120MHz	I=200 mA f=120 MHz	If=10mA Ir=6mA	Contact surface	Free air
Type	max.	typ.	typ.	max.	max.		min.	W (1)	W (2)
DH80082	800	850	0.90	1.00	0.40	0.35	3.00	TBD	TBD
DH80100	1000	1100	0.55	0.65	0.70	0.60	3.00	TBD	TBD
DH80102	1000	1100	0.85	1.30	0.50	0.35	4.00	TBD	TBD
DH80106	1000	1100	1.25	2.00	0.35	0.30	7.00	TBD	TBD

(1) Diode brazed on infinite copper heat sink
(2) Diode brazed on Epoxy circuit (PCB)

Temperature ranges

Operating junction (T_j) : -55° C to +150° C
Storage : -65° C to +150° C

Series Resistance vs. Forward Current



Series Resistance vs. Forward Current