

## ULTRAFAST SWITCHING SILICON PIN DIODES

### Description

For ultrafast switching, these passivated mesa diodes have a thin I layer (< 10 μm).

### Electrical characteristics

CHIP DIODES		CHIP AND PACKAGED DIODES						PACKAGED DIODES			
Characteristics at 25°C	Gold dia	Breakdown voltage	Junction capacitance		Series resistance	Minority carrier lifetime	Reverse switching time			Thermal resistance	
	∅	V <sub>BR</sub>	C <sub>j</sub>		R <sub>SF</sub>	τ <sub>I</sub>	T <sub>CR</sub>			R <sub>th</sub>	
Test conditions		I <sub>R</sub> = 10 μA	V <sub>R</sub> = 6 V f = 1 MHz		I <sub>F</sub> = 10 mA f = 120 MHz	I <sub>F</sub> = 10 mA I <sub>R</sub> = 6 mA	I <sub>F</sub> = 20 mA V <sub>R</sub> = 10 V 50 Ω			P <sub>diss</sub> 1 W F 27 d	
Type	μm	V	pF		Ω	ns	ns	Type	Standard cases (1)		°C/W
Case C2a (1)	typ.	min.	typ.	max	max	typ.	typ.		C <sub>b</sub> = 0.18 pF (2)	C <sub>b</sub> = 0.12 pF (2)	max
EH50033	25	30	0.08	0.12	1.8	20	2.0	DH50033	F27d	M208	80
EH50034	30	30	0.12	0.17	1.5	20	2.0	DH50034	F27d	M208	80
EH50035	35	30	0.17	0.23	1.0	25	2.5	DH50035	F27d	M208	70
EH50036	55	30	0.23	0.40	0.9	30	3.0	DH50036	F27d	M208	60
EH50037	65	30	0.40	0.60	0.7	40	4.0	DH50037	F27d	M208	50
EH50052	30	50	0.06	0.08	1.6	30	3.0	DH50052	F27d	M208	80
EH50053	35	50	0.08	0.12	1.4	30	3.0	DH50053	F27d	M208	70
EH50054	40	50	0.12	0.17	1.1	35	4.0	DH50054	F27d	M208	60
EH50055	50	50	0.17	0.23	1.0	40	4.0	DH50055	F27d	M208	50
EH50056	65	50	0.23	0.40	0.9	50	5.0	DH50056	F27d	M208	45
EH50057	80	50	0.40	0.60	0.7	60	6.0	DH50057	F27d	M208	45
EH50071	35	70	0.04	0.06	2.0	50	5.0	DH50071	F27d	M208	70
EH50072	40	70	0.06	0.08	1.7	50	5.0	DH50072	F27d	M208	70
EH50073	45	70	0.08	0.12	1.6	60	6.0	DH50073	F27d	M208	60
EH50074	50	70	0.12	0.17	1.4	60	6.0	DH50074	F27d	M208	50
EH50075	60	70	0.17	0.23	1.0	100	10.0	DH50075	F27d	M208	45
EH50076	80	70	0.23	0.40	0.9	100	10.0	DH50076	F27d	M208	40
EH50077	100	70	0.40	0.60	0.7	150	15.0	DH50077	F27d	M208	40
EH50101	45	100	0.04	0.06	1.9	150	15.0	DH50101	F27d	M208	60
EH50102	50	100	0.06	0.08	1.7	150	15.0	DH50102	F27d	M208	60
EH50103	60	100	0.08	0.12	1.4	200	20.0	DH50103	F27d	M208	55
EH50104	70	100	0.12	0.17	1.2	250	25.0	DH50104	F27d	M208	50
EH50105	90	100	0.17	0.23	1.0	300	30.0	DH50105	F27d	M208	40
EH50106	110	100	0.23	0.40	0.8	400	40.0	DH50106	F27d	M208	35
EH50107	130	100	0.40	0.60	0.6	500	50.0	DH50107	F27d	M208	35

(1) Custom cases available on request

(2) C<sub>T</sub> = C<sub>j</sub> + C<sub>b</sub>

#### Temperature ranges:

Operating Junction (T<sub>j</sub>) : -55° C to +175° C

Storage : -65° C to +200° C