

SILICON PIN DIODES

Microwave applications



Fast switching silicon PIN diodes

Description

For fast switching, these passivated mesa diodes have a medium I layer (< 50 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
	\emptyset	V_{BR}	C_j		R_{SF}	τ_I	T_{CR}				R_{th}
TEST CONDITIONS		$I_R = 10 \mu\text{A}$	$V_R = 50 \text{ V}$ $f = 1 \text{ MHz}$		$I_F = 10 \text{ mA}$ $f = 120 \text{ MHz}$	$I_F = 10 \text{ mA}$ $I_R = 6 \text{ mA}$	$I_F = 20 \text{ mA}$ $V_R = 10 \text{ V}$ 50Ω				P_{diss} 1 W F27 d
TYPE	μm	V	pF		Ω	ns	ns	TYPE	STANDARD CASES (2)		°C/W
Case C2a (1)	typ.	min	typ.	max	max	typ.	typ.		$C_b =$ 0.18 pF (2)	$C_b =$ 0.12 pF (2)	max
EH50151	55	150	0.04	0.06	2.0	200	20	DH50151	F27d	M208	50
EH50152	60	150	0.06	0.08	1.7	230	23	DH50152	F27d	M208	50
EH50153	70	150	0.08	0.12	1.5	300	30	DH50153	F27d	M208	45
EH50154	90	150	0.12	0.17	1.4	500	50	DH50154	F27d	M208	40
EH50155	110	150	0.17	0.23	1.0	550	55	DH50155	F27d	M208	35
EH50156	130	150	0.23	0.40	0.8	800	80	DH50156	F27d	M208	30
EH50157	150	150	0.40	0.60	0.6	950	95	DH50157	F27d	M208	30
EH50201	60	200	0.04	0.06	2.3	300	30	DH50201	F27d	M208	45
EH50202	65	200	0.06	0.08	2.1	400	40	DH50202	F27d	M208	45
EH50203	75	200	0.08	0.12	1.5	500	50	DH50203	F27d	M208	40
EH50204	100	200	0.12	0.17	1.3	650	65	DH50204	F27d	M208	35
EH50205	120	200	0.17	0.23	1.0	800	80	DH50205	F27d	M208	30
EH50206	150	200	0.23	0.40	0.8	950	95	DH50206	F27d	M208	30
EH50207	170	200	0.40	0.60	0.7	1050	100	DH50207	F27d	M208	25
EH50251	65	250	0.04	0.06	2.4	330	33	DH50251	F27d	M208	40
EH50252	75	250	0.06	0.08	2.2	500	50	DH50252	F27d	M208	40
EH50253	100	250	0.08	0.12	2.0	900	90	DH50253	F27d	M208	35
EH50254	130	250	0.12	0.17	1.4	900	90	DH50254	F27d	M208	30
EH50255	160	250	0.17	0.23	0.9	1000	100	DH50255	F27d	M208	30
EH50256	180	250	0.23	0.40	0.8	1150	110	DH50256	F27d	BH142	25
EH50401	80	400	0.04	0.06	2.5	700	70	DH50401	F27d	M208	35
EH50402	90	400	0.06	0.08	2.3	800	80	DH50402	F27d	M208	35
EH50403	120	400	0.08	0.12	2.1	1000	100	DH50403	F27d	M208	30
EH50404	150	400	0.12	0.17	1.8	1500	150	DH50404	F27d	BH142	25
EH50405	200	400	0.17	0.23	1.6	2000	200	DH50405	F27d	BH142	20

- (1) Chip presentation C2a, except:
C2b for EH50256, EH50404 and EH50405
- (2) Custom cases available on request
- (3) $C_T = C_j + C_b$

Temperature ranges:

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

SALES OFFICES

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