

Fast Recovery Epitaxial Diodes FRED Chips

Type	V_{RSM} mm	I_{FS} $T_J = 25^\circ\text{C}$ $V_A = 0.8 \cdot V_{RSM}$ μA	I_{FS} $T_J = 25^\circ\text{C}$ $V_A = V_{RSM}$ mA	I_{FS} $T_J = 125^\circ\text{C}$ $V_A = 0.8 \cdot V_{RSM}$ mA	I_{FS} rectangular $d = 0.5$ A	T_c $^\circ\text{C}$	R_{thJC} (TO-247) K/W
$T_{J,AL} = 150^\circ\text{C}$							
DWEP 27 - 02	200	100	0.2	5	54	85	1.0
DWEP 37 - 02		150	0.35	11	91	70	0.8
DWEP 77 - 02		500	0.65	20	244	70	0.26
DWEP 8 - 06	600	12	0.025	1.5	TBD	-	-
DWEP 12 - 06		10	0.02	1.5	8	115	2.5
DWEP 15 - 06		25	0.05	3	12	100	2.0
DWEP 23 - 06		50	0.1	7	30	85	1.0
DWEP 25 - 06		50	0.1	7	30	85	1.0
DWEP 35 - 06		100	0.2	14	60	70	0.8
DWEP 55 - 06		500	3.0	17	80	70	0.4
DWEP 75 - 06		750	5.0	20	162	70	0.26
DWEP 3 - 10	1000	75	0.5	2	TBD	-	-
DWEP 10 - 10		150	1.0	4	12	100	1.6
DWEP 18 - 10		250	1.5	7	30	85	0.9
DWEP 20 - 10		250	1.5	7	30	85	0.9
DWEP 30 - 10		500	3.0	14	60	60	0.7
DWEP 50 - 10		500	3.0	17	82	70	0.4
DWEP 70 - 10		750	5.0	20	129	70	0.26
DWEP 6 - 12	1200	100	0.15	2	TBD	-	-
DWEP 9 - 12		150	1.0	4	12	100	1.6
DWEP 17 - 12		250	1.5	7	30	85	0.9
DWEP 19 - 12		250	1.5	7	30	85	0.9
DWEP 29 - 12		500	3.0	14	60	60	0.7
DWEP 49 - 12		500	2.1	17	77	70	0.4
DWEP 69 - 12		750	3.4	22	123	70	0.26

① Specified values refer to chip only, assembly parts are not included.

② Specified values can only be obtained in void-free assemblies according to our assembly recommendations.

Dimensions in mm

Type	Si-thick. mm	A mm	B mm	C mm	D mm	E mm
DWEP 27 - 02	0.390	4.45	4.45	3.45	3.45	0.200
DWEP 37 - 02		6.20	6.20	5.20	5.20	0.200
DWEP 77 - 02		8.31	7.22	7.31	6.22	0.200
DWEP 8 - 06	0.415	3.60	1.80	2.70	0.30	0.250
DWEP 12 - 06		2.40	2.40	1.46	1.46	0.230
DWEP 15 - 06		3.25	3.25	2.25	2.25	0.200
DWEP 23 - 06		5.50	3.50	4.50	2.50	
DWEP 25 - 06		4.45	4.45	3.45	3.45	
DWEP 35 - 06		6.20	6.20	5.20	5.20	
DWEP 55 - 06		8.65	4.95	7.65	3.95	
DWEP 75 - 06		8.91	7.22	7.91	6.22	
DWEP 3 - 10	0.455	3.60	1.80	2.70	0.90	0.250
DWEP 10 - 10		3.25	3.25	2.25	2.25	0.200
DWEP 18 - 10		5.50	3.50	4.50	2.50	
DWEP 20 - 10		4.45	4.45	3.45	3.45	
DWEP 30 - 10		6.20	6.20	5.20	5.20	
DWEP 50 - 10		8.65	4.95	7.65	3.95	
DWEP 70 - 10		8.91	7.22	7.91	6.22	
DWEP 6 - 12	0.475	2.40	2.40	1.46	1.46	0.230
DWEP 9 - 12		3.25	3.25	2.25	2.25	0.200
DWEP 17 - 12		5.50	3.50	4.50	2.50	
DWEP 19 - 12		4.45	4.45	3.45	3.45	
DWEP 29 - 12		6.20	6.20	5.20	5.20	
DWEP 49 - 12		8.65	4.95	7.65	3.95	
DWEP 69 - 12		8.91	7.22	7.91	6.22	
Tolerance	± 0.05	-0.1	-0.1	+0.1	+0.1	+0.1

Anode metalization Al *

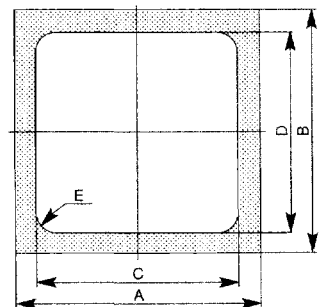


Cathode metalization Ti/Ni/Ag

* alternative on request Ti/Ni/Ag

Example: DWEP 25-06S

S = solderable topside





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V_F @ $T_J = 25^\circ\text{C}$		I_F @ $T_J = 25^\circ\text{C}, V_R = 100\text{ V}$	I_{RRM} @ $T_J = 25^\circ\text{C}, V_R = 100\text{ V}$	I_{FSM} @ $T_J = 25^\circ\text{C}, V_R = 100\text{ V}$	dI/dt	t_{rr} @ $T_J = 25^\circ\text{C}, V_R = 100\text{ V}$	dI/dt	Chips per Wafer 100 mm $\varnothing$
V	A	typ.	max.	A	A/ μs	ns	A/ μs	
1.15	32	2	4	50	100	TBD	-	320
1.10	100			100				162
1.20	125			125				92
1.7	8	3.5	5	12	100	TBD	-	1026
1.50	8			25		35	50	1184
1.70	16			25			50	626
1.55	30			50			100	340
1.60	43			50			100	320
1.80	70			100			200	162
1.60	75			100			200	142
1.55	75		10	100			350	92
2.70	6	5	7	12	100	TBD	-	1026
2.70	12			25		35	50	626
2.45	30			50			100	340
2.40	36			50			100	320
2.30	60			100			200	162
2.10	50			100			200	142
2.00	75			100			350	92
2.60	5	5	10	10	100	TBD	-	1184
2.60	12			25		50	50	626
2.60	30			50		40	100	340
2.55	30			50		40	100	320
2.35	60			100		40	200	162
2.35	60			100		40	200	142
2.00	75			100		40	350	92

① Can only be tested in assembled status

② $I_F = 1\text{ A}$, $V_R = 30\text{ V}$, $T_J = 25^\circ\text{C}$

Dimensions in inch

Type	Si-thick. inch	A inch	B inch	C inch	D inch	E inch
DWEP 27 - 02	0.015	0.175	0.175	0.136	0.136	0.008
DWEP 55 - 06		0.244	0.244	0.205	0.205	
DWEP 75 - 06		0.351	0.284	0.311	0.245	
DWEP 8 - 06	0.016	0.142	0.071	0.106	0.035	0.010
DWEP 12 - 06		0.094	0.094	0.057	0.057	0.009
DWEP 15 - 06		0.128	0.128	0.089	0.089	0.008
DWEP 23 - 06		0.217	0.138	0.177	0.098	
DWEP 25 - 06		0.175	0.175	0.136	0.136	
DWEP 35 - 06		0.244	0.244	0.205	0.205	
DWEP 55 - 06		0.341	0.195	0.301	0.301	
DWEP 75 - 06		0.351	0.284	0.311	0.245	
DWEP 3 - 10	0.018	0.142	0.071	0.106	0.035	0.010
DWEP 10 - 10		0.128	0.128	0.089	0.089	0.008
DWEP 18 - 10		0.217	0.138	0.177	0.098	
DWEP 20 - 10		0.175	0.175	0.136	0.136	
DWEP 30 - 10		0.244	0.244	0.205	0.205	
DWEP 50 - 10		0.341	0.195	0.301	0.301	
DWEP 70 - 10		0.351	0.284	0.311	0.245	
DWEP 6 - 12	0.019	0.014	0.094	0.057	0.057	0.009
DWEP 9 - 12		0.128	0.128	0.089	0.089	0.008
DWEP 17 - 12		0.217	0.138	0.177	0.098	
DWEP 19 - 12		0.175	0.175	0.136	0.136	
DWEP 29 - 12		0.244	0.244	0.205	0.205	
DWEP 49 - 12		0.341	0.195	0.301	0.301	
DWEP 69 - 12		0.351	0.284	0.311	0.245	
Tolerance	± 0.002	-0.004	-0.004	+0.004	+0.004	+0.004

IXYS reserves the right to change limits, test conditions and dimensions.