

1.5.2 DII-Series

DII-Series MOSFETs are the second generation products for Hitachi switching devices. These devices incorporate built-in gate to source back to back zener diode protection to increased ESD ruggedness.

DII-Series presents :

- higher t_{yfs1} between 2 & 3 times.
- lower $R_{DS(ON)}$ between 30-50% based on the same chip size then DI-Series.

Table 5 : DII-Series Typical Characteristics

Package	Type Number		Absolute Maximum Ratings				Electrical Characteristics (typ.)					
	N-Ch	P-Ch	V _{DSS} (V)	V _{GSS} (V)	I _D (A)	P _{ch} * (W)	R _{DS(on)} (Ω)		t _{yfs1} (S) **	t _{on} (ns)	t _{off} (ns)	C _{iss} (pF)
							typ.	max.				
UPAK	2SK1334	2SJ186	200	± 20/15	1/0.5	1	2.5/8.0	3.8/12.0	0.6/0.3	13/12	17/32	80/75
DPAK	-	2SJ130	300	± 20	-1	20	6	8.5	0.4	35	60	235
	2SK479	-	450		1.5	20	3.5	5.5	1	28	48	260
	2SK580	-	500		3	20	4	6	2.3	37	50	380
	2SK1335	-	200		1/0.5	20	6.5/15	9/25	0.9/0.45	20/27	50/70	260/220
	2SK1327	2SJ181	600		± 20/15	1/0.5	20	6.5/15	9/25	0.9/0.45	20/27	50/70
LDBAK	2SK1620	-	150	± 20	10	50	0.12	0.15	7	70	110	1200
	2SK1621	-	250		7	50	0.4	0.55	4.5	50	120	820
TO-220AB	-	2SJ169	-60	± 20	-12	50	0.3	0.35	3.8	122	100	500
	-	2SJ170	-80		-9.7	40	0.2	0.28	3.5	212	70	480
	-	2SJ171	-50		10	50	0.15/0.2	0.2/0.25	5/5	55/110	100/240	730/1450
	2SK551	2SJ127	120		10	50	0.12	0.15	7	70	110	1200
	2SK740	-	150		7	50	0.4	0.55	4.5	50	120	820
	2SK741	-	250		5	50	1	1.4	4	45	115	820
	2SK552	-	450		7	60	1.2	1.5	6.5	65	155	1300
	2SK553	-	500		7	60	0.6	0.85	6.5	65	155	1300
	2SK554	-	450		7	60	0.7	1	6.5	65	155	1300
	2SK555	-	500		2	50	5	7	1	70	115	490
TO-220FM	2SK1230	-	120	± 20	10	25	0.15	0.2	5	55	100	730
	2SK1957	-	200		7	30	0.33	0.45	4.5	65	85	700
	2SK1231	-	450		5	30	1	1.4	4	45	115	820
	2SK1232	-	500		2	30	1.2	1.5	4	45	115	820
	2SK1275	-	900		2	30	5	7	1	70	115	490
TO-3P	2SK622	-	150	± 20	20	120	0.06	0.075	15	225	360	2200
	2SK1135	-	250		15	100	0.16	0.22	8.5	155	190	1600
	2SK623	-	250		20	120	0.12	0.15	12	225	360	2000
	2SK641	-	450		10	100	0.6	0.8	7	65	155	1300
	2SK642	-	500		10	100	0.7	1	7	65	155	1300
	2SK556	-	450		12	100	0.4	0.55	10	110	230	2050
	2SK557	-	500		12	100	0.45	0.6	10	110	230	2050
	2SK682	-	450		12	100	0.4	0.55	10	110	230	2050
	2SK683	-	500		12	100	0.45	0.6	10	110	230	2050
	2SK559	-	450		15	100	0.25	0.36	13	145	320	2950
	2SK560	-	500		15	100	0.3	0.4	13	145	320	2950
	2SK695	-	800		5	100	2	3	2.5	175	240	1150
	2SK684	-	800		7	100	1	1.5	4	250	440	1830
	2SK1200	-	900		3	80	5	7	1	80	120	490
	2SK1201	-	900		4	80	4	5.5	1.7	95	160	650
	2SK1202	-	900		5	100	3	4	2.4	125	220	900
	2SK1203	-	900		6	100	2	3	2.5	165	250	1150
	2SK1204	-	900		8	120	1.2	1.6	3.5	270	410	1800
	2SK696	-	1000		3	100	3	4	2.4	145	250	1170
	2SK685	-	1000		5	100	1.5	2	3.5	265	450	1900
2SK1205	-	1000	5	100	1.5	2	3.5	260	430	1800		
TO-3P-FM	2SK1225	-	450	± 20	12	60	0.4	0.55	10	110	230	2050
	2SK1206	-	500		12	60	0.45	0.6	10	110	230	2050
	2SK1268	-	450		15	60	0.25	0.36	13	145	320	2950
	2SK1269	-	500		15	60	0.3	0.4	13	145	320	2950
	2SK1774	-	800		7	60	1	1.5	4	240	440	1830
	2SK1770	-	1000		5	60	1.5	2	3.5	260	430	1800
TO-3	2SK1063	-	450	± 20	15	125	0.25	0.36	13	145	320	2950
	2SK1064	-	500		15	125	0.3	0.4	13	145	320	2950

Notes :

* : Value at T_c = 25°C

** : Test conditions : V_{DS} > I_DR_{DS(on)}, I_D = 1/2 I_D max (DC)

□ : Built in high speed diode version