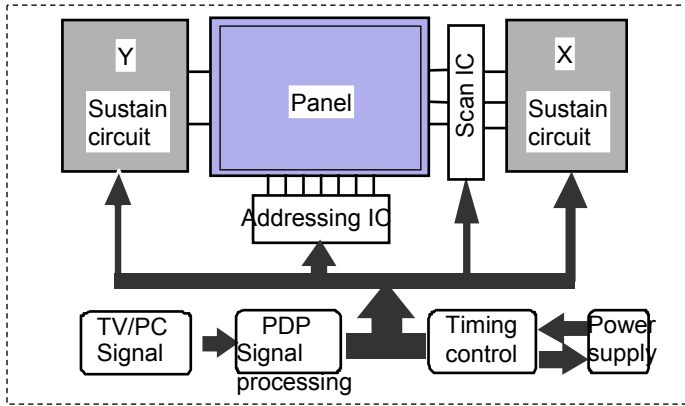


Power MOSFETs and IGBT for PDP

Merits

Power MOSFET	IGBT
Low ON resistance	Low $V_{CE(sat)}$
Low Q_g	High-speed switching
High avalanche tolerance	

PDP System



PDP trends

High Intensity

High pressure Gas

High Efficiency

Low Cost

Optimum FET

IGBT

Power device

High breakdown voltage

Low resistance
High speed switching

Wide MOSFET line-ups

High Speed IGBT

Product Lineup

Power MOSFET

P/N	Maximum Rating			Electrical Characteristics		Package
	V_{DSS} (V)	I_D (A)	V_{GS} (V)	$V_{GS(off)}$ typ(V)	$R_{DS(on)}$ typ(m Ω)	
H7N1005LS	100	15	± 20	2.0	85	LDBPAK
H7N1004LS	100	30	± 20	2.0	25	LDBPAK
H5N2301PF	230	25	± 30	3.5	65	TO-3PFM
H5N2306PF	230	30	± 30	3.5	48	TO-3PFM
H5N2305PF	230	35	± 30	3.5	30	TO-3PFM
H5N2509P	250	30	± 30	3.5	53	TO-3PFM
H5N2503P	250	50	± 30	3.5	40	TO-3P
H5N3004P	300	25	± 30	3.5	75	TO-3P
H5N3007LS	300	25	± 30	2.8	120	LDBPAK
H5N3003P	300	40	± 30	3.5	60	TO-3P
H5N3504P	350	20	± 30	3.5	100	TO-3P

IGBT (High-speed type)

P/N	Maximum Rating			Electrical Characteristics		Package
	V_{CES} (V)	I_C (A)	V_{GE} (V)	$V_{CE(sat)}$ (V) typ	t_f (μ S) typ	
GN4030V5AB	400	30	± 20	1.5	0.12	TO-220AB
GN6030V5AB	600	30	± 20	1.7	0.12	TO-220AB
RJP3053DPP	300	30	± 30	2.0	0.15	TO-220FN
RJP3063DPP	300	30	± 30	1.7	0.30	TO-220FN
RJP3054DPP	300	35	± 30	1.8	0.15	TO-220FN
RJP3064DPP	300	35	± 30	1.5	0.30	TO-220FN
RJP3055DPP	300	40	± 30	1.8	0.15	TO-220FN
RJP3065DPP	300	40	± 30	1.5	0.3	TO-220FN
RJP4065DPP	400	40	± 30	1.6	0.3	TO-220FN
RJP2557DPK	270	50	± 30	1.6	0.15	TO-3P
RJP3056DPK	300	45	± 30	1.6	0.15	TO-3P
RJP3057DPK	300	50	± 30	1.6	0.15	TO-3P
RJP3066DPK	300	45	± 30	1.4	0.3	TO-3P
RJP3067DPK	300	50	± 30	1.4	0.3	TO-3P
RJP4067DPK	400	50	± 30	1.7	0.35	TO-3P

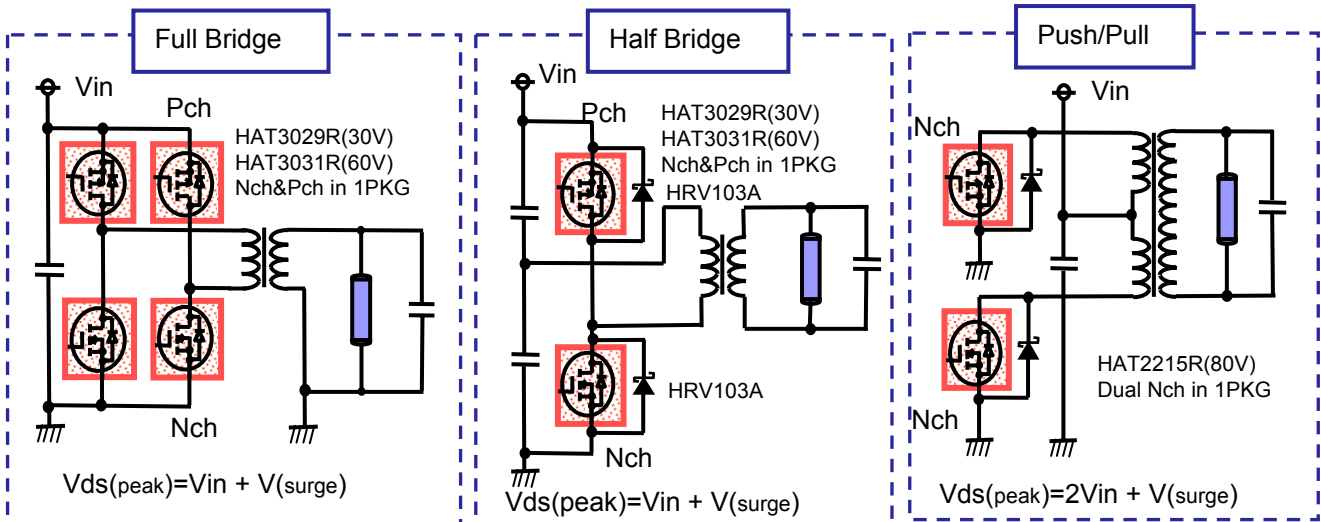
Power MOSFETs for Backlight Inverter

Achieve Miniaturization and Higher Efficiency

Features	Merits
Low on resistance, High-speed switching	High efficiency
Low Qg, Low Qgd	
Small package, Built-in 2 elements	Miniaturization



Example of Application Circuit (LCD TV, TFT Monitor, Note PC)



Product Lineup

No	Type No	Max.Ratings			RDS(on) (mΩ)				Qgd (nC)	Qg (nC)	
		VDSS	VGSS	ID	VGS=4.5v(8v)		VGS=10v				
		(V)	(V)	(A)	typ	max	typ	max			
1	HAT2199R	Single	30	±20	11	17	25	13	16.5	1.8	7.5
2	HAT2208R		30	±20	9	24	35	18	23	1.1	4.4
3	HAT2256R		60	±20	8	28	41	24	30	3.2	10
4	HAT1131R		-30	±20	-9	21.5	31	15	19	5.8	17
5	HAT1132R		-30	±20	-7	27.5	40	20	25	5.2	11.5
6	HAT2276R	Nch+Nch	30	±20	7.5	27	40	19	24	1.2	4.6
7	HAT2280R		30	±20	6	40	58	27	34	1.1	3
8	HAT2275R		60	±20	6.6	29	43	25	32	3.2	10
9	HAT2215R		80	±20	3.4	100	145	88	115	1.3	7.3
10	HAT1126R	Pch+Pch	-60	±20	6	60	85	40	50	8	37
11	HAT3029R	Nch+Pch	30	±20	6	40	58	27	34	1.1	3.1
12	HAT3037R		-30	+10/-20	-6	36	53	25	32	4.4	11.5
			45	±20	5	55	75	44	55	0.9	3.0
13	HAT3010R		-45	+10/-20	-3.8	95	130	75	95	1.5	4.9
			60	±20	6	32	45	25	32	8	18
14	HAT3031R		-60	±20	-5	90	130	60	76	8	18
			60	±20	6.6	29	43	25	32	2.8	10
15	HAT3038R		-60	+10/-20	-3.4	120	175	95	120	2.2	6.0
			60	±20	5	55	80	48	60	1.4	-
16	HAT3021R		-60	±20	-3.8	90	130	80	100	2.8	-
			80	±20	3.4	100	145	90	115	1.3	7.3
17	HAT3019R	-80	±20	-2.6	200	290	165	210	2.4	16	
		100	±20	3.5	120	160	90	115	3.2	15	
			-100	±20	-2.3	300	500	240	300	3.1	16