PCP4/5 series : FP series(1)

High performance composite type devices suitable for surface mounting which make the sets smaller and lighter.

In these times the advantage of new products is to make sets smaller and lighter.
Thus, the main market need is that discrete devices are "high performance" as well as being able to realize lighter, thinner, shorter and smaller sets. We have developed a new product PCP4/5 series to meet these needs.
This PCP4/5 series has curtailed a surface mounting area compared with conventional products by 30~50% and has decreased the number of assembling parts. This is the most suitable for making DC-DC converters smaller and lighter.

＊Features : This PCP4/5 series can curtail a mounting area by 30~50% and can decrease the number of assembling parts by half.

note:Marking is the figures of Type No.

※:When mounted on ceramic board(250mm²×0.8mm) (1 unit)

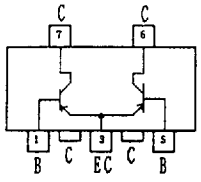
☆ High frequency differential amplifier Transistors

(PNP×PNP, NPN+NPN)
For PNP, (-) sign is omitted.

Type No.	Package	Absolute Maximum Ratings /Ta=25℃ V_{CBO} (V)	V_{CEO} (V)	I_C (A)	※P_C 1unit (W)	※P_T (W)	Electrical characteristics/Ta=25℃ V_{CE}/I_C (V/mA)	h_{FE}	V_{CE}/I_C (V/mA)	f_T typ (GHz)	V_{CB} (V)	Cob typ (pF)	Related Type No. (Chips used)
FP201	PCP5	30	20	0.3	0.75	1	5/50	60~200	5/50	2.2	10	2.9	C4504X2
FP215		30	20	0.3	0.75	1	5/50	15~100	5/50	1.5	10	4.9	A1724X2

Electrical connection (Top view)

(PNP+PNP)



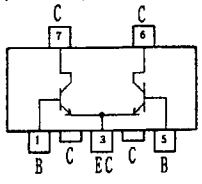
FP208 FP210 FP213 FP215 FP218

☆ Push-pull circuit Transistors (PNP+NPN)

For PNP, (-) sign is omitted.

Type No.	Package	Absolute Maximum Ratings /Ta=25℃ V_{CBO} (V)	V_{CEO} (V)	I_C (A)	i_{cp} (A)	※P_C 1unit (W)	※P_T (W)	Electrical characteristics/Ta=25℃ V_{CE}/I_C (V/mA)	h_{FE}	I_C/I_B (A/mA)	$V_{CE(sat)}$ typ PNP(V)	NPN	Related Type No. (Chips used)
FP202	PCP5	60	50	0.5	0.8	0.75	1	5/10	140~400	0.1/10	0.1/0.07		A1338+C3392
FP203		60	50	1	2	0.75	1	2/100	140~400	0.5/50	0.18/0.12		B1122+D1622
FP204		60	50	2	4	0.8	1.1	2/100	140~400	1/50	0.25/0.15		B1123+D1623
FP205		120	100	1	2	0.8	1.1	5/100	140~400	0.4/40	0.2/0.1		A1416+C3646
FP206		50	40	0.5	1	0.75	1	2/50	100~400	0.2/10	0.2/0.15		A1728+C4519
FP207		50	40	1.5	3	0.8	1.1	2/100	100~280/100~400	0.8/40	0.3/0.25		A1729+C4520

(NPN+NPN)



FP201 FP209 FP211 FP214 FP216

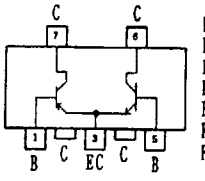
C:Collector
B:Base
EC:Emitter Common

☆ High-current switchig Transistors (PNP×PNP, NPN×NPN)

For PNP, (-) sign is omitted.

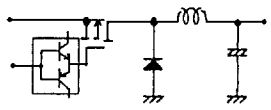
FP208	PCP5	30	25	2	5	0.8	1.1	2/100	140~400	1.5/75	0.35		2SB1121X2
FP209		30	25	2	5			2/100	140~400	1.5/75	0.18		2SD1621X2
FP210		60	50	2	4			2/100	140~400	1/50	0.3		2SB1123X2
FP211		60	50	2	4			2/100	140~400	1/50	0.15		2SD1623X2
FP213		25	20	2	4			2/500	min 70	1/50	0.25		2SB1397X2
FP214		25	20	2	4			2/500	(RBE=1.6KΩ)	1/50	0.25		2SD2100X2
FP216		120	100	1	2			5/100	140~400	0.4/40	0.1		2SC3646X2
FP218		120	100	1	2			5/100	140~400	0.4/40	0.1		2SA1416X2

(PNP+NPN)

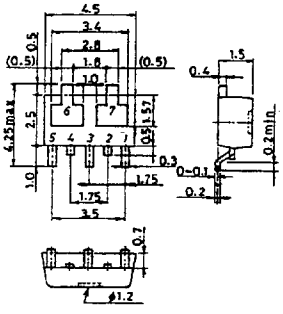


FP202 FP203 FP204 FP205 FP206 FP207 FP212

Applicatication circuites
DC-DC converter(FP202~FP207)



SANYO:PCP5 (Bottom view)



☆ High-voltage driver Transistors (PNP+NPN)

For PNP, (-) sign is omitted.

Type No.	Package	Absolute Maximum Ratings /Ta=25℃ V_{CBO} (V)	V_{CEO} (V)	I_C (A)	※P_C 1unit (W)	※P_T (W)	Electrical characteristics/Ta=25℃ V_{CE}/I_C (V/mA)	h_{FE}	V_{CE}/I_C (V/mA)	f_T typ (MHz)	V_{CB} (V)	Cob typ (pF)	Cre typ (pF)	I_C/I_B (mA)	$V_{CE(sat)}$ max (V)	Related Type No. (Chips used)
FP212	PCP5	200	200	0.1	0.75	1	10/10	60~200	30/10	150	30	2.6/1.7	1.7/1.2	20/2	0.6	A1370+C3467