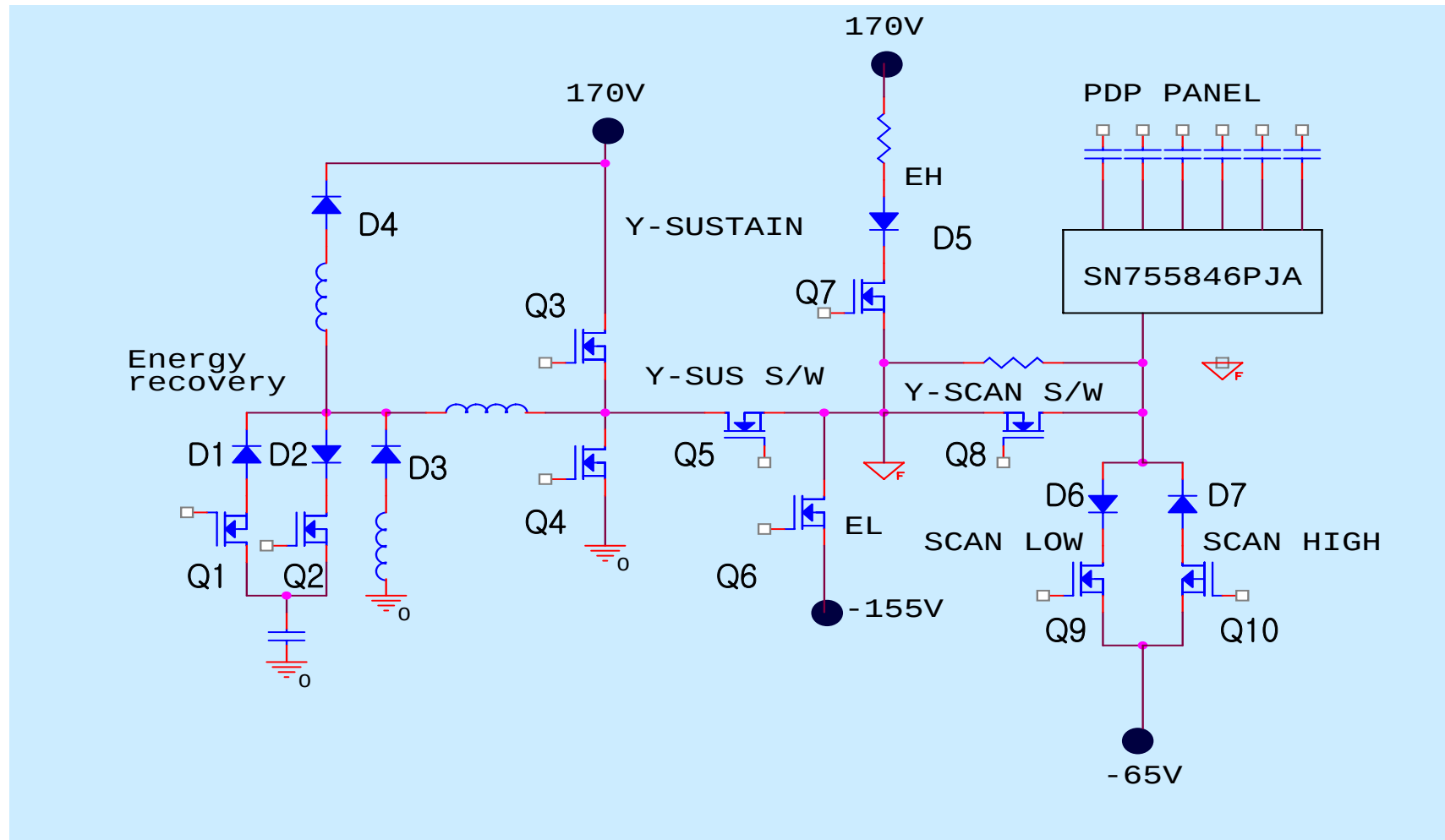


Plasma Display Panel (PDP)

- ➡ Energy Recovery Block
- ➡ Sustain Voltage Clamping Block



Y SUSTAIN CIRCUIT



Part List of The Sustain

	REAL SET NUMBER	DEVICE	Part Number	Ratings
Q1	QY1, QY2	MOSFET	FQA24N50 (Fairchild)	500V / 24A TO-3P
Q2	QY3, QY4	MOSFET	FQA24N50 (Fairchild)	500V 24A TO-3P
Q3	QY5, QY6, QY7, QY8	MOSFET	SSH25N40A (Fairchild)	400V / 25A TO-3P
Q4	QY9, QY10, QY11, QY12	MOSFET	SSH25N40A (Fairchild)	400V / 25A TO-3P
Q5	QY20, QY21, QY22, QY23	MOSFET	SPW47N60S5 (INFINEON)	600V/ 47A TO-247
Q6	QY15, QY16	MOSFET	SSH25N40A (Fairchild)	400V / 25A TO-3P
Q7	QY19	MOSFET	SSH25N40A (Fairchild)	400V / 25A TO-3P
Q8	QY25, QY26, QY27, QY28	MOSFET	SSH25N40A (Fairchild)	400V / 25A TO-3P
Q9	QY13	P channel MOSFET	FQP5P20 (Fairchild)	-200V / -5A TO-220
Q10	QY14	MOSFET	SSH25N40A (Fairchild)	400V / 25A TO-3P
D1	DY1, DY2	FRD	FFPF10U30DN (Fairchild)	300V / 10A (DN) TO-220F
D2	DY3, DY4	FRD	FFPF10U30DN (Fairchild)	300V / 10A (DN) TO-220F
D3	DY6	FRD	FFPF10U30DN (Fairchild)	300V / 10A (DN) TO-220F
D4	DY5	FRD	FFPF10U30DN (Fairchild)	300V / 10A (DN) TO-220F
D5	DCY54	FRD	NSF03A40 (NIHON INTER)	400V / 3A SMC
D6	DY10	FRD	FFPF10U30DN (Fairchild)	400V / 10A (DN) TO-247
D7	DY11	FRD	FFPF10U30DN (Fairchild)	300V / 10A (DN) TO-220F

Energy Recovery Circuit (ERC)

Operation Characteristics

❶ Main Operation

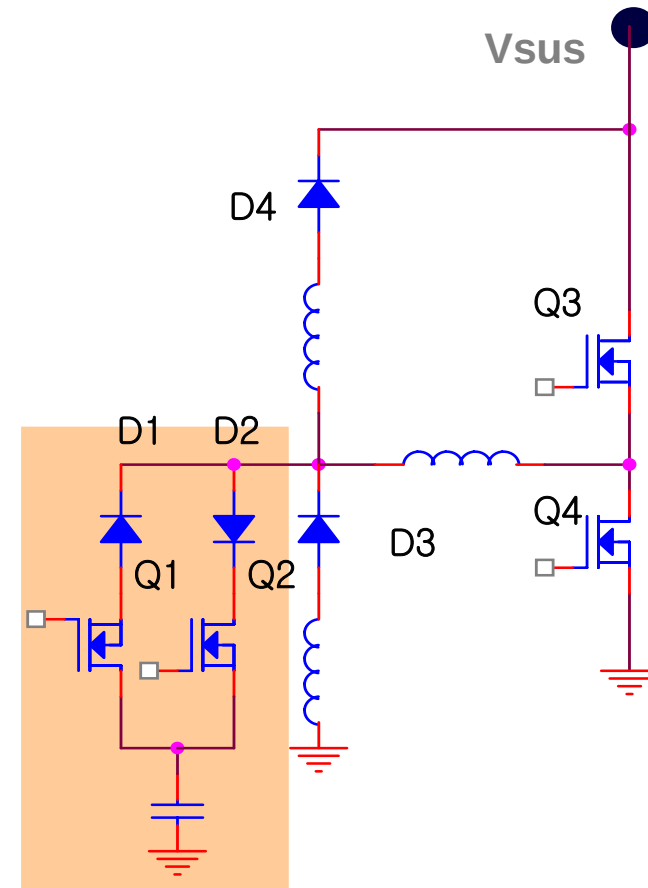
- Energy Recovery in Sustain Period
- Operation Frequency : 200~250kHz

Key Parameters

- ❶ Very fast Reverse Recovery ($t_{rr} < 50\text{ns}$)
- ❷ Low Forward Voltage Drop

Products

- ❶ Ultra-fast Recovery Rectifier
- ❷ Voltage Range : 200~300V
 - FSC P/N : FFPF10U30DN



Energy Recovery Circuit

Clamping Circuit

Operation Characteristics

❶ Clamping circuit :

→ Voltage Clamping (V_{sus})

→ Operation Frequency : 200~250kHz

Key Parameters

❶ Very fast Reverse Recovery ($t_{rr} < 50\text{ns}$)

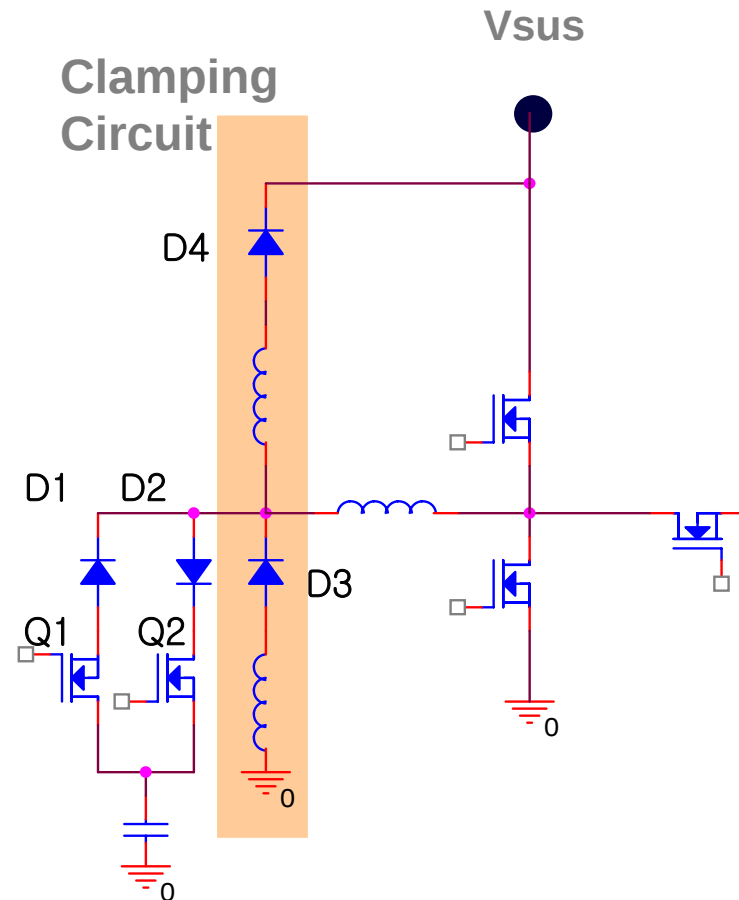
❷ Low Forward Voltage Drop

Products

❶ Ultra-fast Recovery Rectifier

❷ Voltage Range : 300V

→ FSC P/N : FFPF10U30DN



Cross Reference

300V Ultra – Fast Recovery Rectifier

	SF20 LC30	FFPF10U30DN
V_{RRM} [V]	300	300
Package	TO-220F	
Configuration	Common Cathode	
$I_{F(AV)}$ [A]	10 per chip	10 per chip
V_{FM} [V]	1.3	1.2
trr [ns]	30	60

