

1. LCD Backlight Phase/Gain margin NG

* Summary

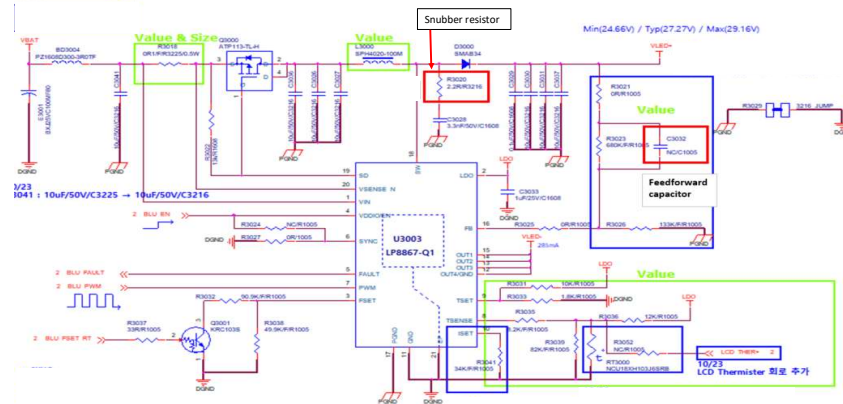
Mounting snubber resistor (R3020)

Feedforward Cap	N.M (CAPX)	2.2pF	4.7pF	6.8pF	10pF	18pF
Phase margin (deg)	30.74	41.94	53.53	61	58.1	38.8
SPEC: 40deg ↑						
Gain margin (dB)	6.958	11.609	11.321	9.985	7.625	4.417
SPEC: 10dB ↑						
Result	NG	NG	OK	NG	NG	NG

No mounting snubber resistor (R3020)

Feedforward Cap	N.M (CAPX)	2.2pF	4.7pF	6.8pF	10pF	18pF
Phase margin (deg)	3.06	15.71	26.82	36.08	27.84	15.39
SPEC: 40deg ↑						
Gain margin (dB)	0.929	4.9	6.997	7.046	4.174	1.787
SPEC: 10dB ↑						
Result	NG	NG	NG	NG	NG	NG

LCD Back Light



* Measurement data

Mounting Snubber Resistor (R3020)

Feedforward Cap: N.M / Mounting snubber resistor(R3020)		
	Phase margin	Gain margin
[LCD Backlight]		
14.4[V]		
Temp. 25°C		
Phase margin (deg)	30.74 deg	
SPEC: 40deg ↑		
Gain margin (dB)	6.958 dB	
SPEC: 10dB ↑		
Result	NG	

Feedforward Cap: 2.2pF / Mounting snubber resistor(R3020)		
	Phase margin	Gain margin
[LCD Backlight]		
14.4[V]		
Temp. 25°C		
Phase margin (deg)	41.94 deg	
SPEC: 40deg ↑		
Gain margin (dB)	11.609 dB	
SPEC: 10dB ↑		
Result	NC	

Feedforward Cap: 4.7pF / Mounting snubber resistor(R3020)		
	Phase margin	Gain margin
[LCD Backlight]		
14.4[V]		
Temp. 25°C		
Phase margin (deg)	53.53 deg	
SPEC: 40deg ↑		
Gain margin (dB)	11.321 dB	
SPEC: 10dB ↑		
Result	OK	

Feedforward Cap: 6.8pF / Mounting snubber resistor(R3020)		
	Phase margin	Gain margin
[LCD Backlight]		
14.4[V]		
Temp. 25°C		
Phase margin (deg)	61.0 deg	
SPEC: 40deg ↑		
Gain margin (dB)	9.985 dB	
SPEC: 10dB ↑		
Result	NC	

Feedforward Cap: 10pF / Mounting snubber resistor(R3020)		
	Phase margin	Gain margin
[LCD Backlight]		
14.4[V]		
Temp. 25°C		
Phase margin (deg)	58.10 deg	
SPEC: 40deg ↑		
Gain margin (dB)	7.625 dB	
SPEC: 10dB ↑		
Result	NC	

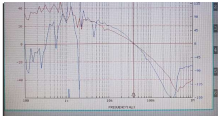
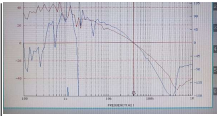
Feedforward Cap: 18pF / Mounting snubber resistor(R3020)		
	Phase margin	Gain margin
[LCD Backlight]		
14.4[V]		
Temp. 25°C		
Phase margin (deg)	38.80 deg	
SPEC: 40deg ↑		
Gain margin (dB)	4.417 dB	
SPEC: 10dB ↑		
Result	NC	

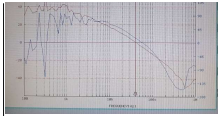
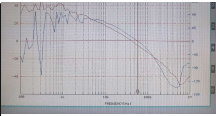
No mounting snubber resistor (R3020)

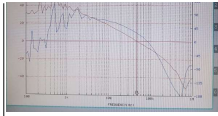
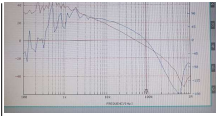
Feedforward Cap: N.M / No mounting snubber resistor(R3020)		
	Phase margin	Gain margin
[LCD Backlight]		

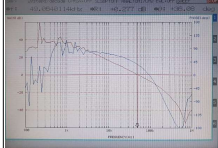
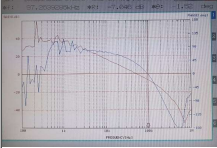
Feedforward Cap: 2.2pF / No mounting snubber resistor(R3020)		
	Phase margin	Gain margin
[LCD Backlight]		

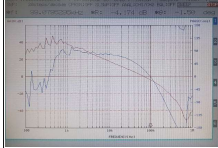
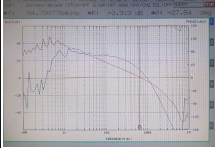
Feedforward Cap: 4.7pF / No mounting snubber resistor(R3020)		
	Phase margin	Gain margin
[LCD Backlight]		

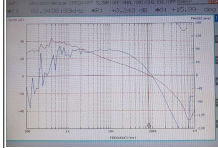
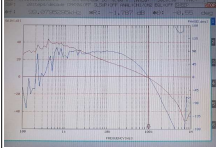
14.4[V] Temp. 25°C		
Phase margin (deg) SPEC: 40deg ↑	3.06 deg	
Gain margin (dB) SPEC: 10dB ↑	0.929 dB	
Result	NC	

14.4[V] Temp. 25°C		
Phase margin (deg) SPEC: 40deg ↑	15.71 deg	
Gain margin (dB) SPEC: 10dB ↑	4.905 dB	
Result	NC	

14.4[V] Temp. 25°C		
Phase margin (deg) SPEC: 40deg ↑	26.82 deg	
Gain margin (dB) SPEC: 10dB ↑	6.997 dB	
Result	NC	

Feedforward Cap: 6.8pF / No mounting snubber resistor(R3020)		
	Phase margin	Gain margin
[LCD Backlight] 14.4[V] Temp. 25°C		
Phase margin (deg) SPEC: 40deg ↑	36.08 deg	
Gain margin (dB) SPEC: 10dB ↑	7.046 dB	
Result	NC	

Feedforward Cap: 10pF / No mounting snubber resistor(R3020)		
	Phase margin	Gain margin
[LCD Backlight] 14.4[V] Temp. 25°C		
Phase margin (deg) SPEC: 40deg ↑	27.84 deg	
Gain margin (dB) SPEC: 10dB ↑	4.174 dB	
Result	NC	

Feedforward Cap: 18pF / No mounting snubber resistor(R3020)		
	Phase margin	Gain margin
[LCD Backlight] 14.4[V] Temp. 25°C		
Phase margin (deg) SPEC: 40deg ↑	15.39 deg	
Gain margin (dB) SPEC: 10dB ↑	1.787 dB	
Result	NC	