

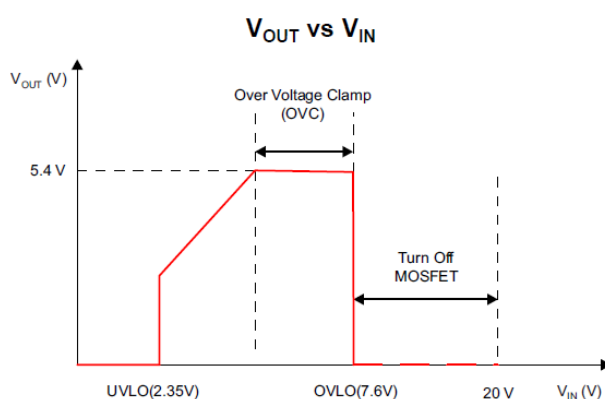
Comparison of Main source and 2nd source test Report

Hardware version	FW version	Main source P/N	2 ND source P/N
V025	BFX_AT100 userdebug 10 QTT5.200429.010 15.534.28-20220818-release keys	TPS25200DRVR	AW35019DNR

Main Source(TPS25200DRVR) spec:

OVP Specification:

VOLTAGE CLAMP, OUT					
$V_{(OVC)}$	OUT clamp voltage threshold	$C_L = 1 \mu F, R_L = 100 \Omega, V_{IN} = 6.5 V$	5.25	5.4	5.55



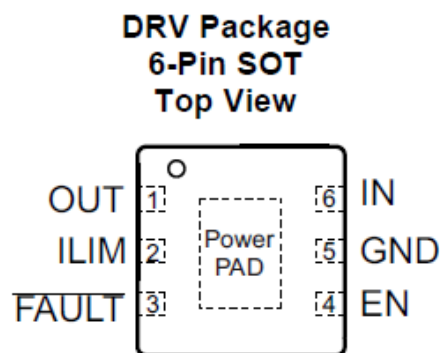
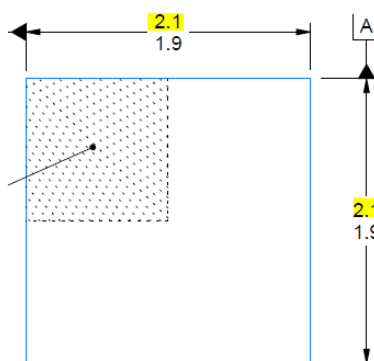
When $5.4V < V_{in} < 7.6V$, V_{out} will keep on 5.4V

When $V_{in} > 7.6V$, V_{out} will be clamp on 0V

OCP Specification:

I_{OS}	Current - limit, See Figure 12	$R_{ILIM} = 33 k\Omega$	2773	2952	3127	mA
		$R_{ILIM} = 40.2 k\Omega$	2270	2423	2570	
		$R_{ILIM} = 56 k\Omega$	1620	1740	1860	
		$R_{ILIM} = 80.6 k\Omega$	1110	1206	1300	
		$R_{ILIM} = 150 k\Omega$	590	647	710	
		$R_{ILIM} = 1100 k\Omega$	40	83	130	

Dimensions:



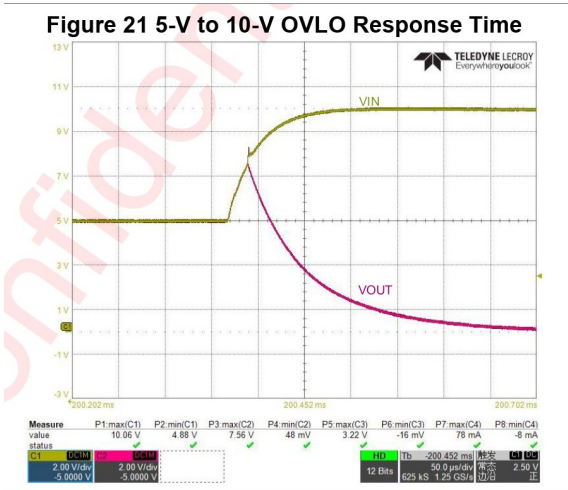
2nd Source(AW35019DNR) spec:

OVP Specification:

Voltage Clamp, OUT						
Vovc	OUT clamp voltage threshold	C _{OUT} =1μF, R _L =100Ω, V _{IN} =6.5V	5.0	5.4	5.9	V

Output-voltage clamp (OVC)

When 5.4V<VIN<7.5V, the output-voltage clamp (OVC) circuit clamps the output voltage to 5.4V. Within this VIN range, the over-current protection remains active, but current limit is I_{LIM_ST}.



When 5.4V<Vin<7.5V, Vout will keep on 5.4V
When Vin > 7.5V, Vout will be clamp on 0V

OCP Specification:

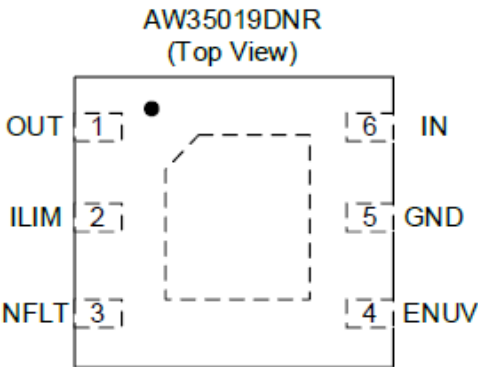
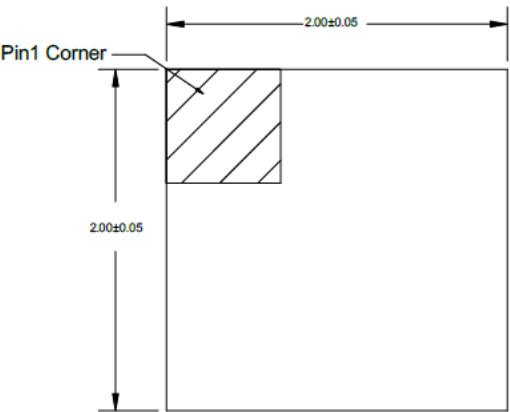
Over-load and short-circuit protection

Load current is monitored by sensing voltage across an internal sense resistor. Current limit threshold is programmed by connecting external resistor R_{LIM} to GND.

$$I_{LIM} = 1.0 * 10^5 / R_{LIM}$$

When R_{lim} = 40.2K, OCP=2487mA

Dimensions:

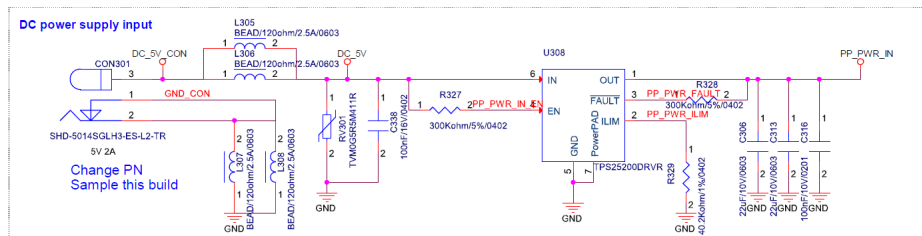


T99X171T00 2nd source introduce AW35019DNR

Test Item

If want to introduce 2nd source, still need to test the following items:

- OVP
- OCF
- 12V adapter plug-in



Kaon 12V adaptor

1. Result and Picture

Power Rail	Power IC / MOSFET P/N	Spec	Location	Result	Picture	Result Pass/Fail
Main_OVP	TPS25200DRVR	$\leq 7.6V$	L305	7.435V	Fig. 1	Pass
Main_OCP	TPS25200DRVR	2270-2570mA	C313	2560mA	Fig. 2	Pass

Power Rail	Power IC / MOSFET P/N	Spec	Location	Result	Picture	Result Pass/Fail
2 nd _OVP	AW35019DNR	$\leq 7.5V$	L305	7.5V	Fig. 3	Pass
2 nd _OCP	AW35019DNR	2270-2570mA	C313	2440mA	Fig. 4 Fig. 5	Pass

Power Rail	Power IC / MOSFET P/N	Spec	Location	Picture	Result Pass/Fail
Main_12V adapter plug-in	TPS25200DRVR	-	L305 C313	Fig. 6	Pass
2nd_12V adapter plug-in	AW35019DNR	-	L305 C313	Fig. 7	Pass

T99X171T00 2nd source introduce AW35019DNR

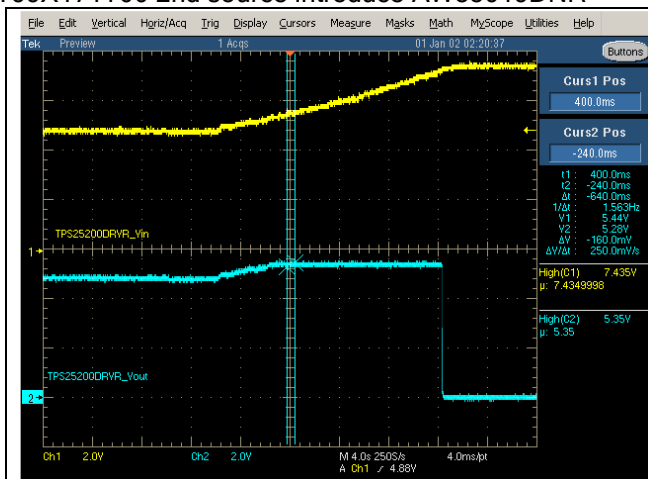


Fig. 1: Main_OVP

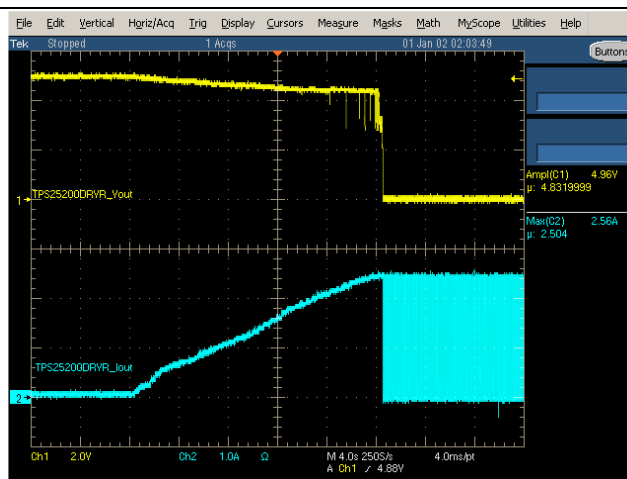


Fig. 2: Main_OCP



Fig.3: 2nd_OVP



Fig. 4: 2nd_OCP

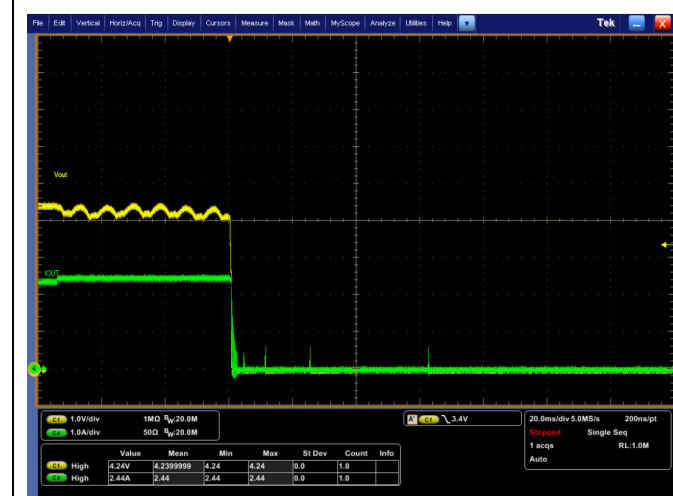


Fig.5: 2nd_OVP(Zoom in)

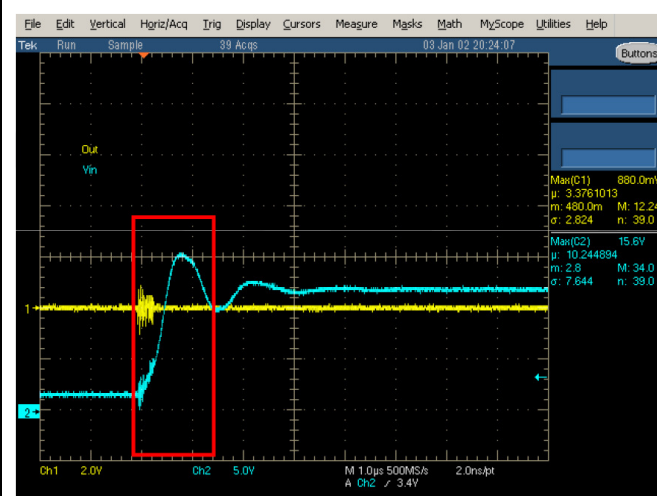


Fig.6: Main_12V adapter plug-in

T99X171T00 2nd source introduce AW35019DNR

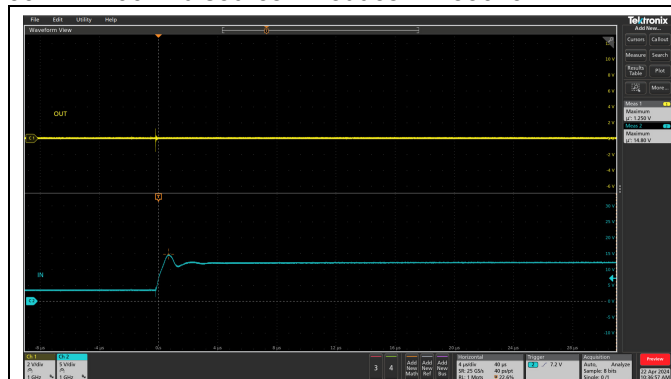


Fig.7: 2nd_12V adapter plug-in

12V adapter plug-in test:

- The following table is the test result by using different kinds of 12V adaptor.

✧ Adaptor: Kaon adaptor.

✧ AC source: Office 110V and 220V socket

✧ Test step:

1. Plug in/out the 12V adaptor by 110V AC 20 times (use office AC source).
2. Verify the PCBA status and see if it can be power on normally by 5V adaptor in each 5 times insertion.
3. Plug in/out the 12V adaptor by 220V AC 20 times (use office AC source).
4. Verify the PCBA status and see if it can be power on normally by 5V adaptor in each 5 times insertion.

Adapter	AC Source	Plug side	Result
Kaon 12V Adaptor	110V	AC side	Pass
		DC side	Pass
	220V	AC side	Pass
		DC side	Pass



5V adater plugged back result : workable

T99X171T00 2nd source introduce AW35019DNR

2. Conclusion

	TPS25200DRVR (main)	AW35019DNR (2nd)
Total test Results	Pass	
Can it be introduced?	Pass	