

40W High-Integration, High-Efficiency PMIC for Wireless Power Transmitter

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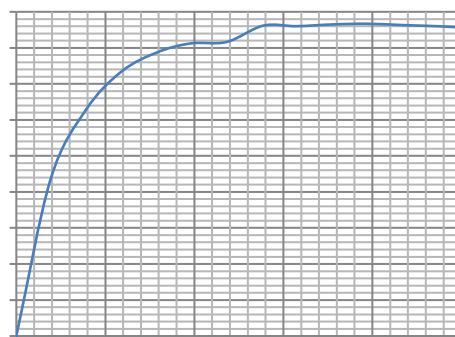
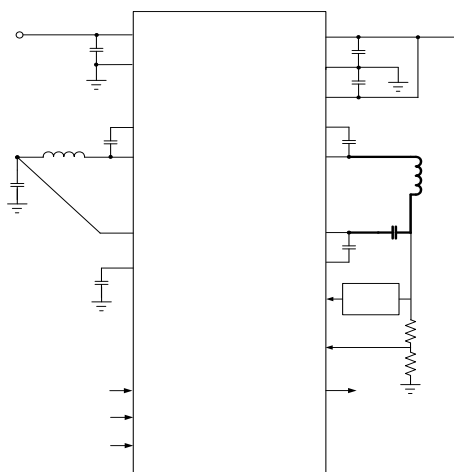
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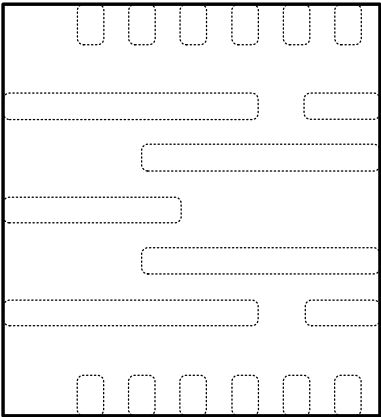
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ORDERABLE DEVICE	PACKAGING TYPE	STANDARD PACK QTY	PACKAGE MARKING	PINS	PACKAGE DESCRIPTION	MSL

DESCRIPTION	MIN	MAX	UNIT



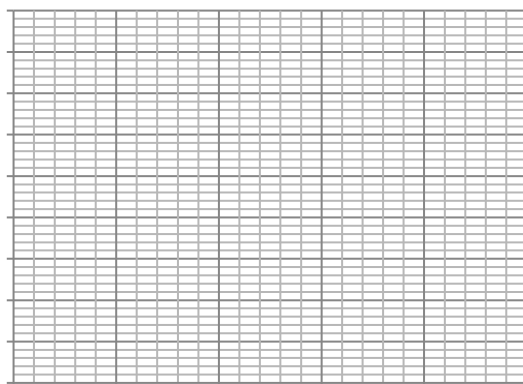
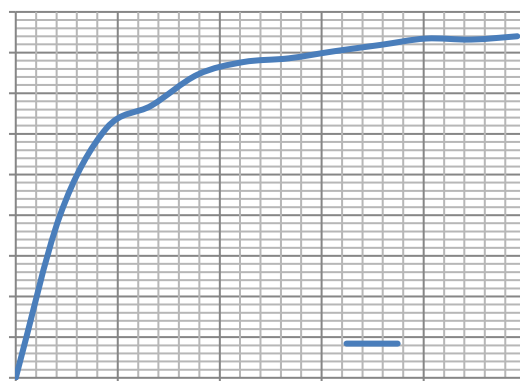
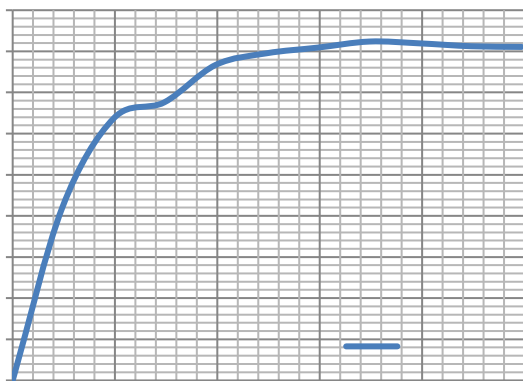
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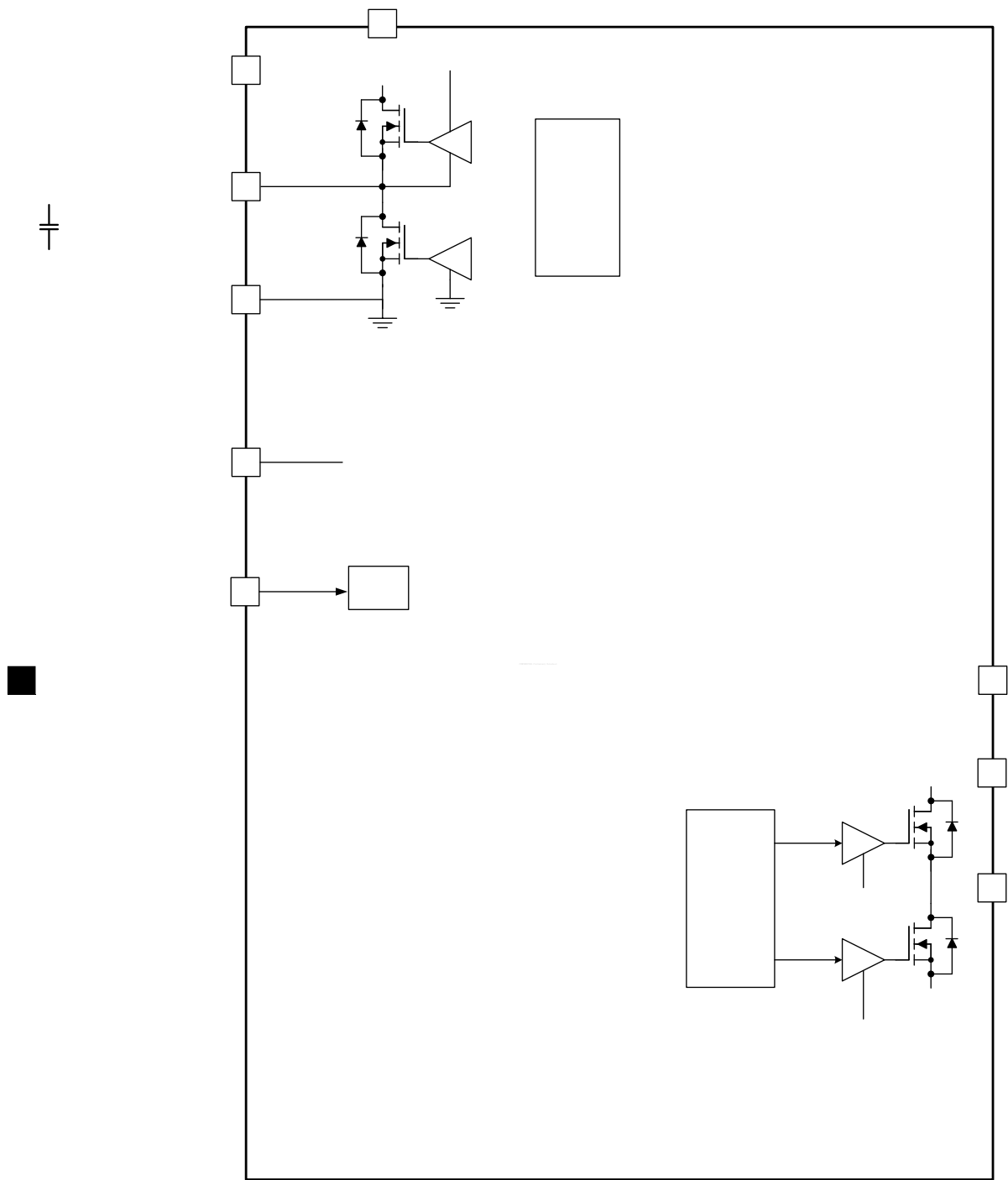
PARAMETER	DEFINITION	MIN	MAX	UNIT

SCT63340

PARAMETER	THERMAL METRIC	FCTQFN4X4-22L	UNIT

SYMBOL	PARAMETER	TEST CONDITION	MIN	TYP	MAX	UNIT
Input supplies and UVLO						
ENABLE INPUTS and PWM logic						
Power Stage						
Buck converter						



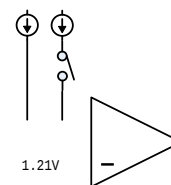


Overview

Enable and Start up Sequence

$$V_{\text{rise}} = 1.19 * \left(1 + \frac{R1}{R2}\right) - 1.5\mu\text{A} * R1$$

$$V_{\text{fall}} = 1.1 * \left(1 + \frac{R1}{R2}\right) - 5.5\mu\text{A} * R1$$



5V Output Buck Converter

Full Bridge Power Stage and PWM Control

Full Bridge Over Current Protection

Current Sense

$$V_{ISNS} = 600\text{mV} + I_{PGND} * 1\text{V/A}$$

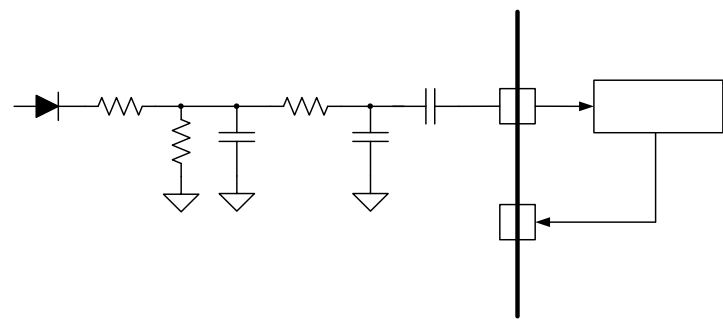
3.3V LDO

Q Factor Detection

$$Q = \frac{\Delta T * \pi}{10 * \ln \frac{V_{TH_HIGH}}{V_{TH_LOW}}}$$

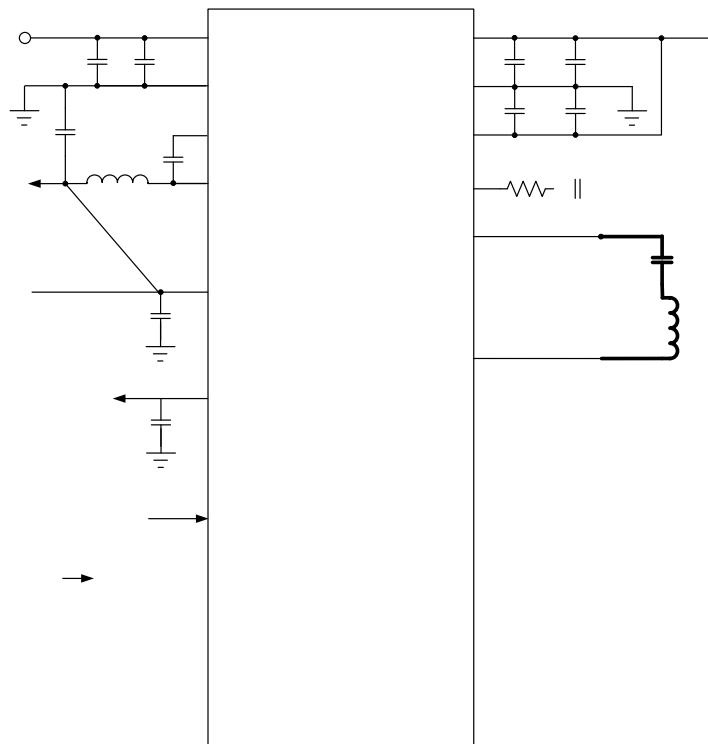
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Voltage and Current Demodulation

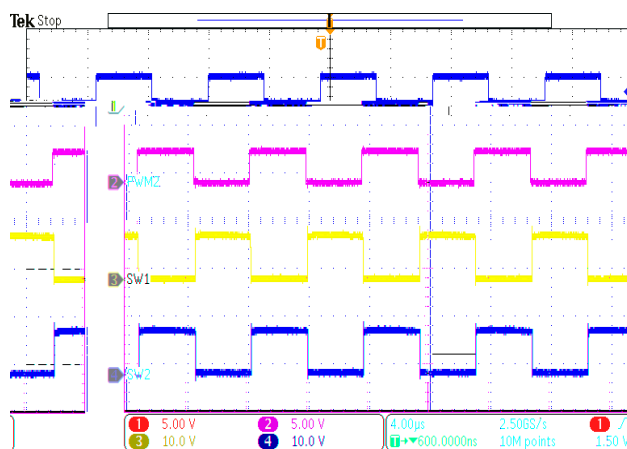
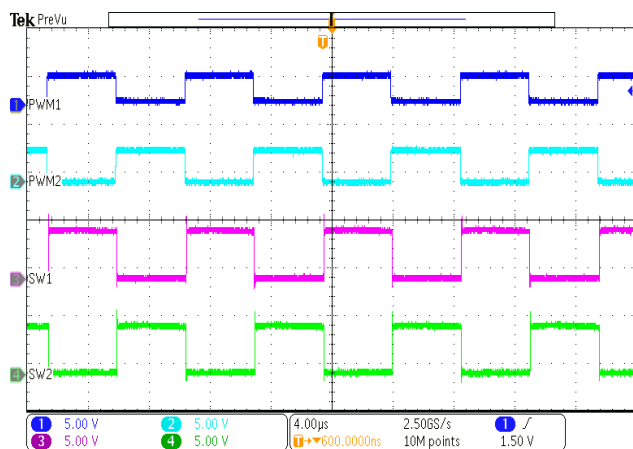
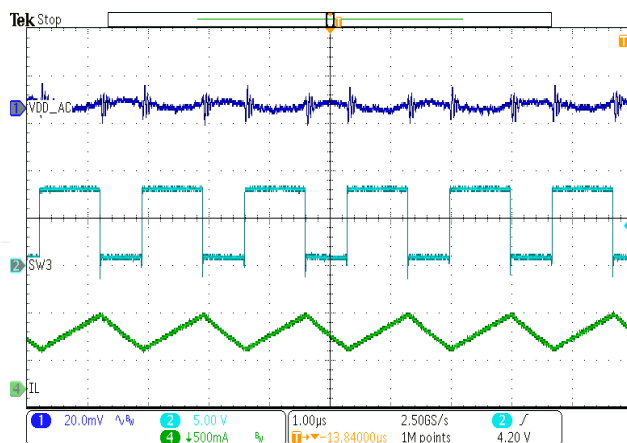
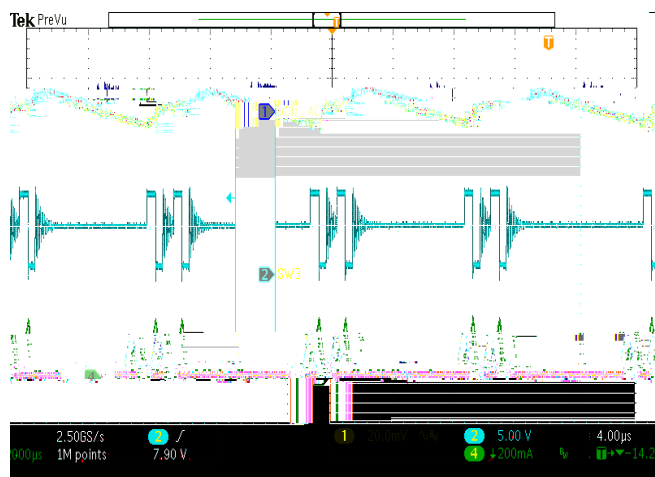
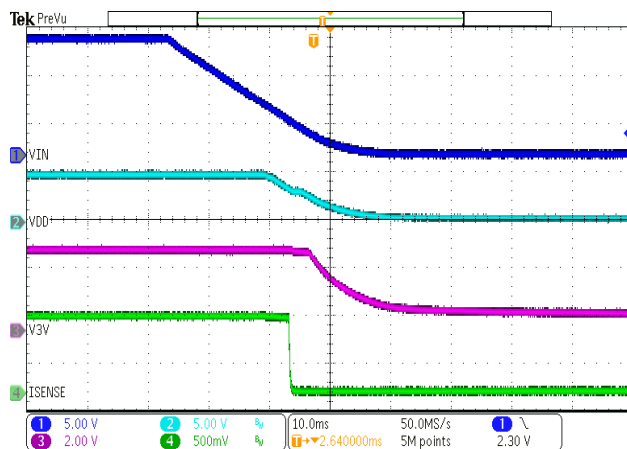
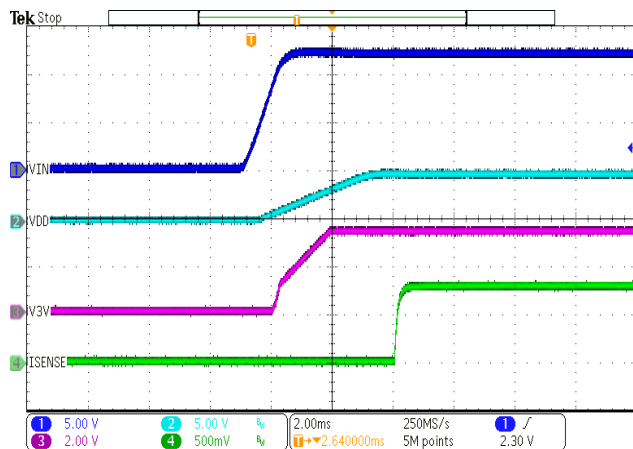


Thermal Shutdown

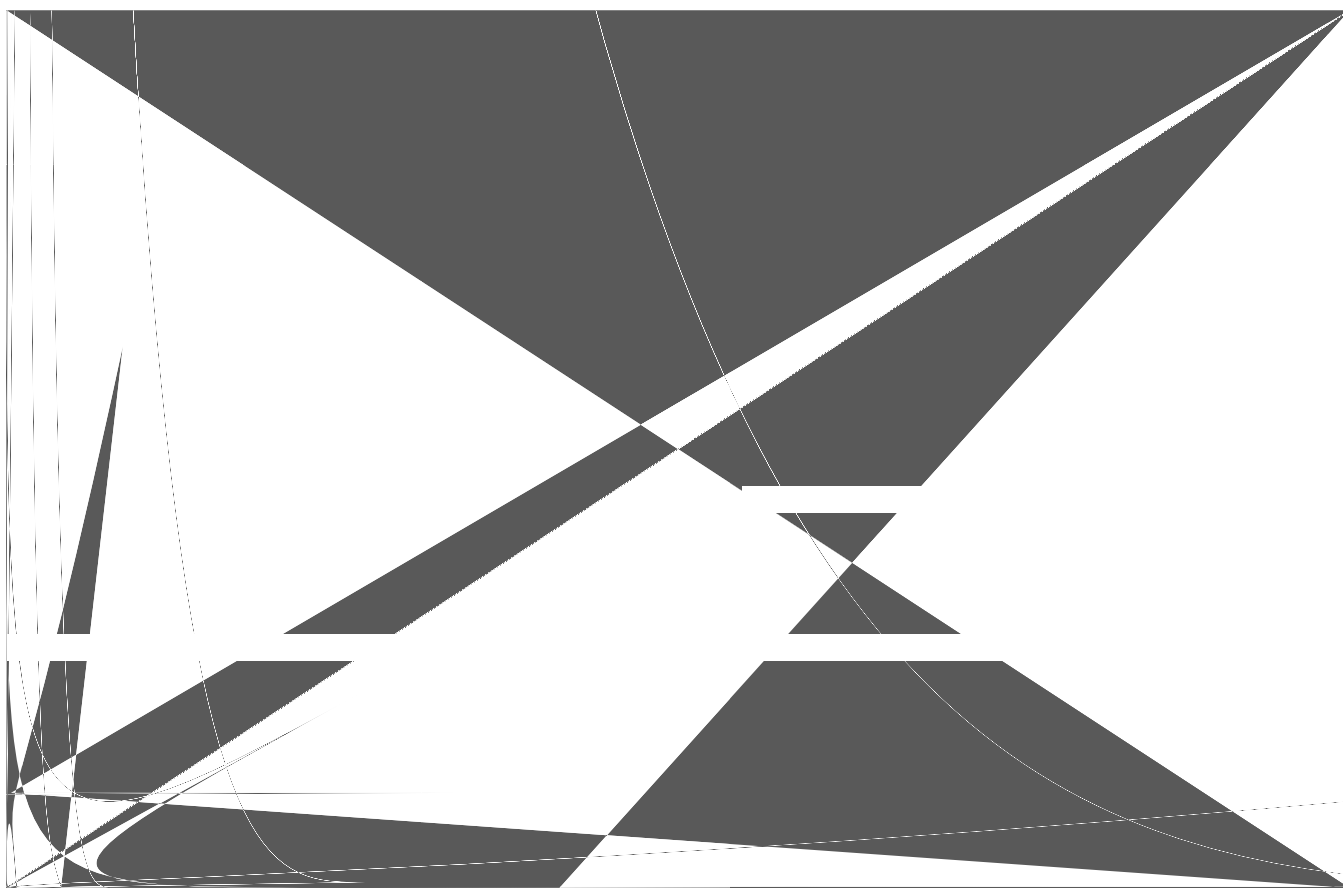
Typical Application

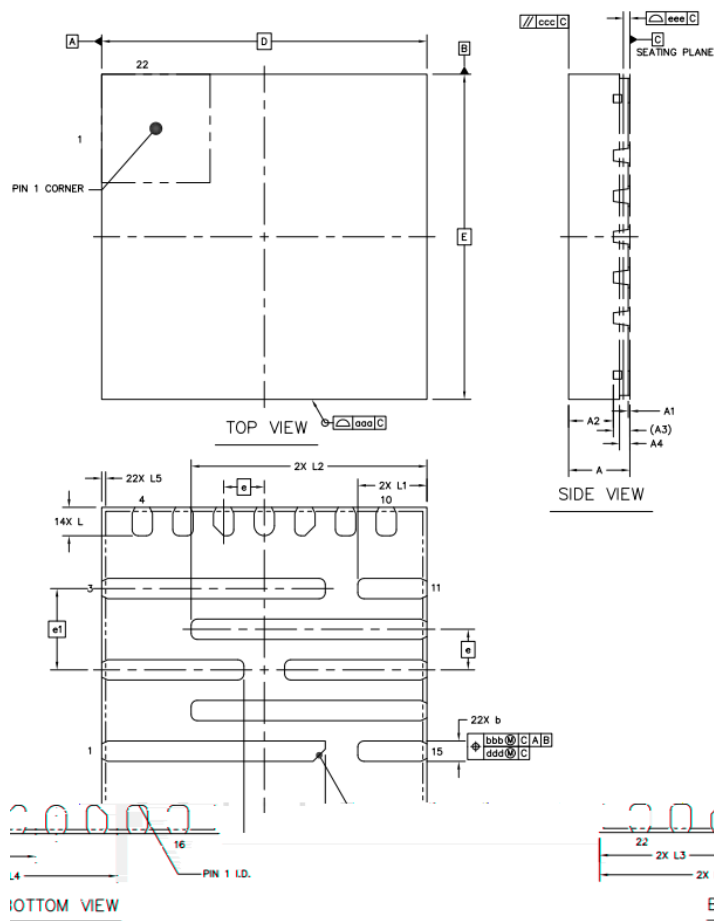


Application Waveforms



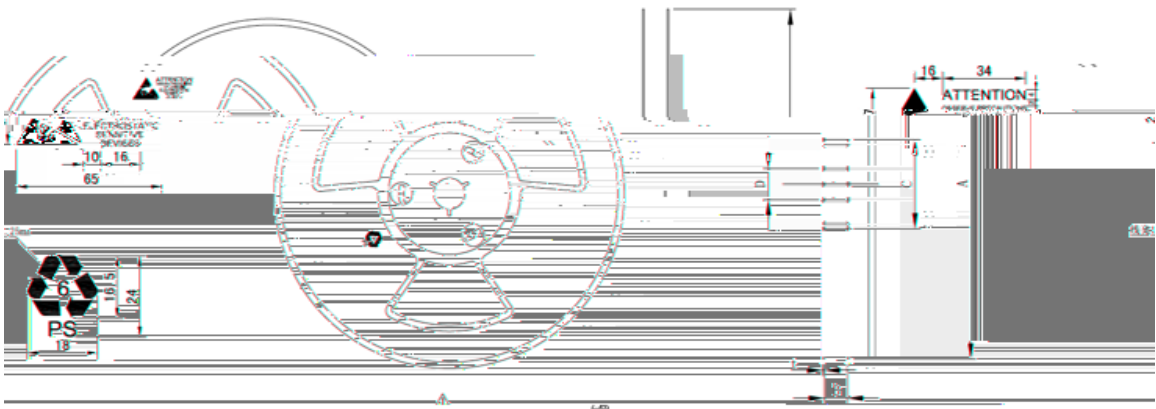
Layout Guideline





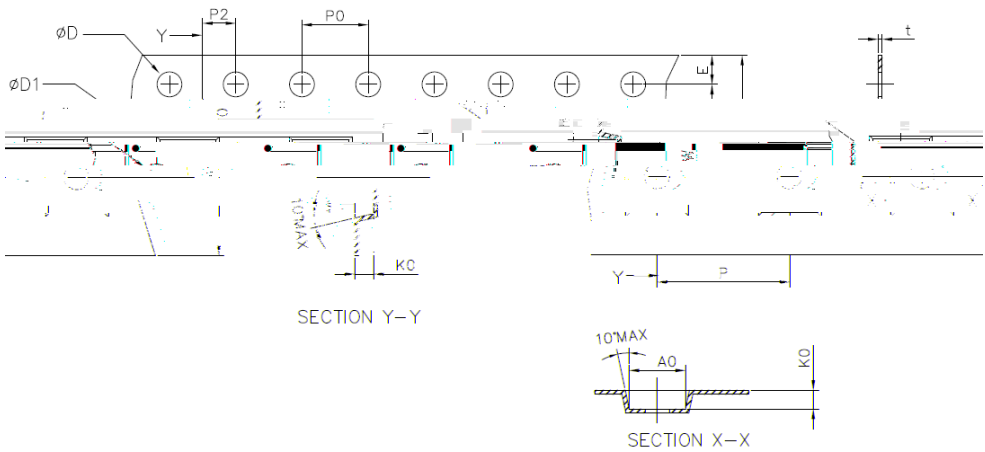
	SYMBOL	MIN	NOM	MAX
0.02	STAND OFF		A11.1	0.3
0.05	MOLD THICKNESS		A20.3	
0.3 REF	L/F THICKNESS		A33.3	0.2
0.18	SIDE WETTABLE DEPTH		A6.1	0.075
0.25	WETTABLE DEPTH			0.1
4 BSC	BODY SIZE	X		D 1.1
4 BSC		Y		E 1.1
0.5 BSC	LEAD PITCH			1.1
1 BSC				1.1
0.3				1.1
0.6				1.1
2.85	LEAD LENGTH			2.7
1.7				1.7
2.7				2.7
0.05	SIDE WETTABLE WIDTH			0.1
	PACKAGE EDGE TOLERANCE	cca		0.1
	MOLD FLATNESS	ccc		0.1
	COPLANARITY	see	0.08	
		see	0.1	
	LEAD OFFSET	see	0.05	

NOTE:



SCALE: 1 : 1

SECTION A-A



+0.30 -0.10					

			+0.10 0	+0.25 0	

PN	DESCRIPTION	COMMENTS
SCT63240		• • • • • • • • •
SCT63140		• • • • • • • •

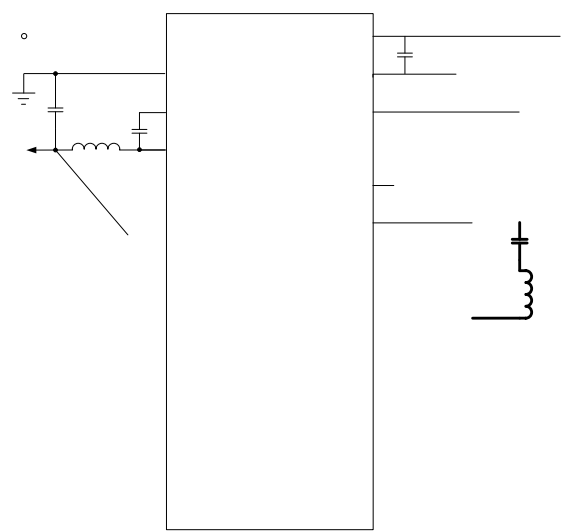


Figure 25. SCT63240 Typical Application

NOTICE: