3.6V-36V Vin, 3A, High Efficiency Synchronous Step-down DCDC Converter

FEATURES

DESCRIPTION

APPLICATIONS

REVISION HISTORY

DEVICE ORDER INFORMATION

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

ABSOLUTE MAXIMUM RATINGS

DESCRIPTION	MIN	MAX	UNIT

PIN CONFIGURATION

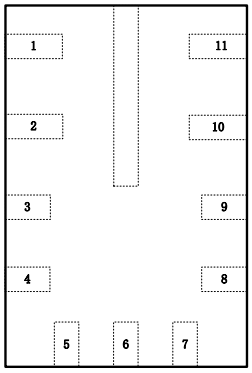


Figure 1. 12-Lead QFN 2mm×3mm

PIN FUNCTIONS

NAME	NO.	PIN FUNCTION
		.

RECOMMENDED OPERATING CONDITIONS

PARAMETER	DEFINITION	MIN	MAX	UNIT

ESD RATINGS

PARAMETER	DEFINITION	MIN	MAX	UNIT

THERMAL INFORMATION

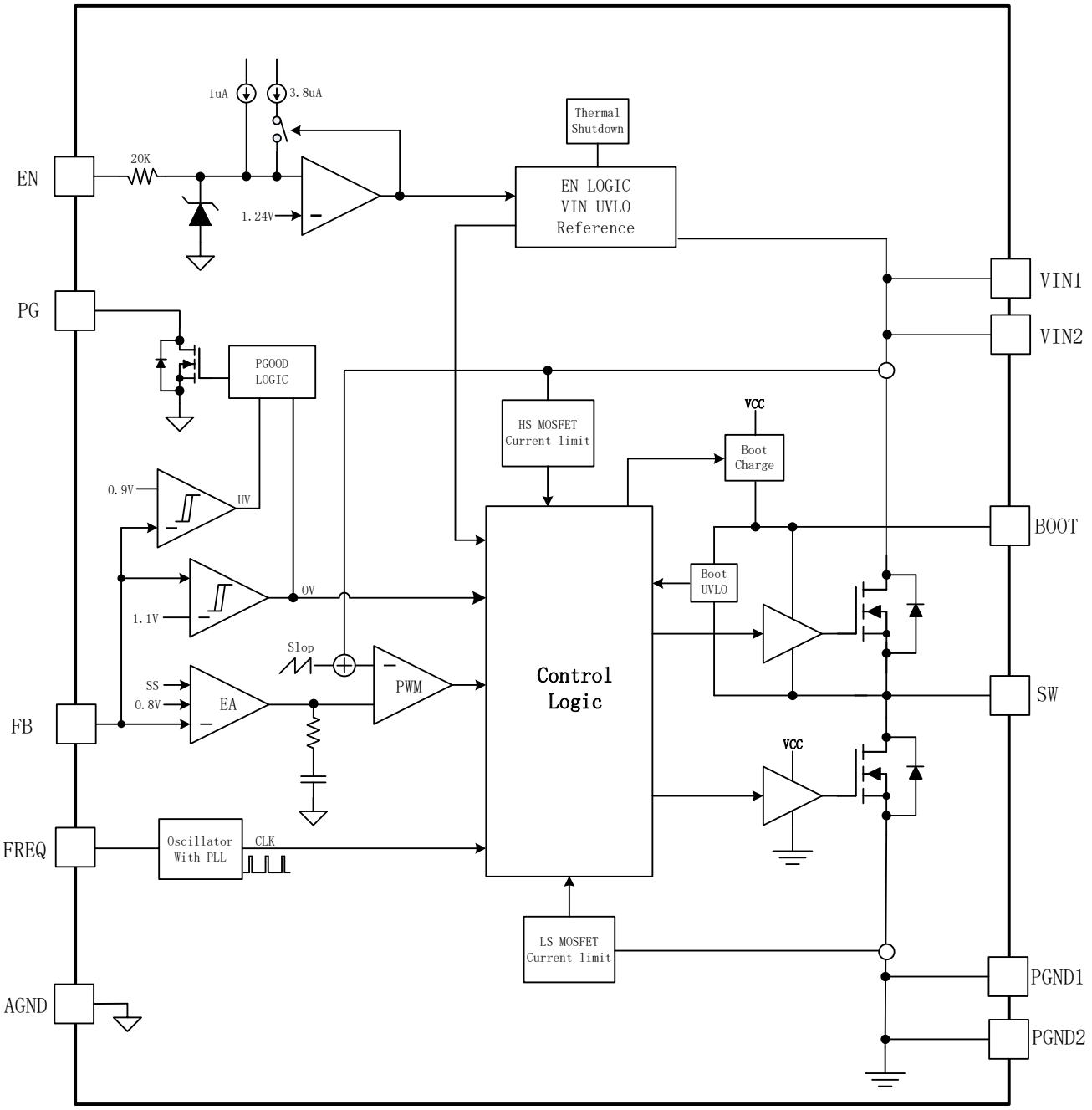
PARAMETER	THERMAL METRIC	QFN-12L

ELECTRICAL CHARACTERISTICS

SYMBOL	PARAMETER	TEST CONDITION	MIN	TYP	MAX	UNIT
Power Supply						
Power MOSFETs						
Reference						
Current Limit and Over Current Protection						
Enable and Soft Startup						
Switching Frequency and External Clock Synchronization						
Power Good						

SYMBOL	PARAMETER	TEST CONDITION	MIN	TYP	MAX	UNIT
)						
Protection						

FUNCTIONAL BLOCK DIAGRAM

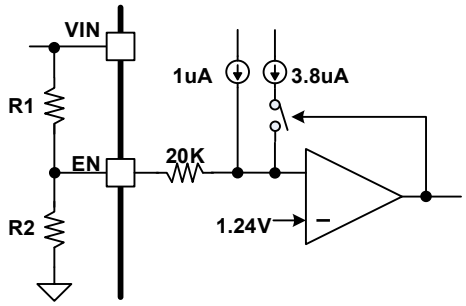


OPERATION

Overview

Peak Current Mode Control

Enable and Under Voltage Lockout Threshold



Output Voltage

Internal Soft-Start

Frequency Spread Spectrum

Fsw	R_6 (R_{FSW})

Fsw	R_6 (R_{FSW})

Bootstrap Voltage Regulator and Low Drop-out Operation

Over Current Limit and Hiccup Mode

Thermal Shutdown

Output Voltage

V_{OUT}	R_3	R_4

Switching Frequency

Fsw	R_6 (R_{FSW})

Fsw	R_6 (R_{FSW})

Under Voltage Lock-Out

Inductor Selection

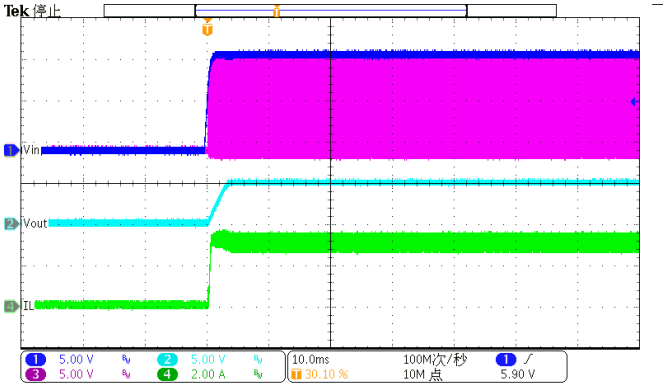
Input Capacitor Selection

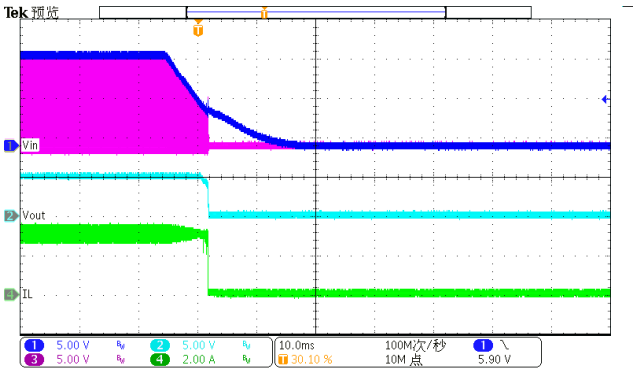
Bootstrap Capacitor Selection

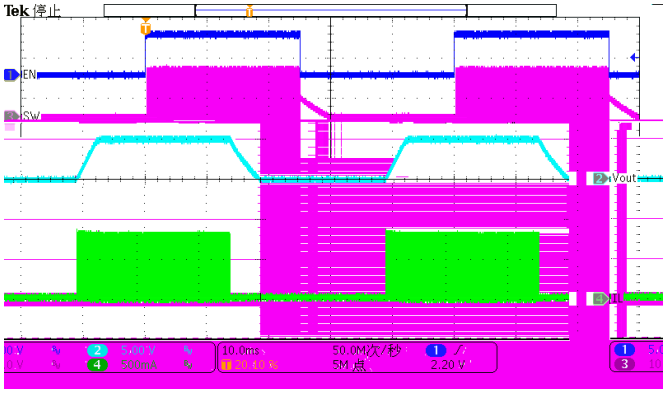
Output Capacitor Selection

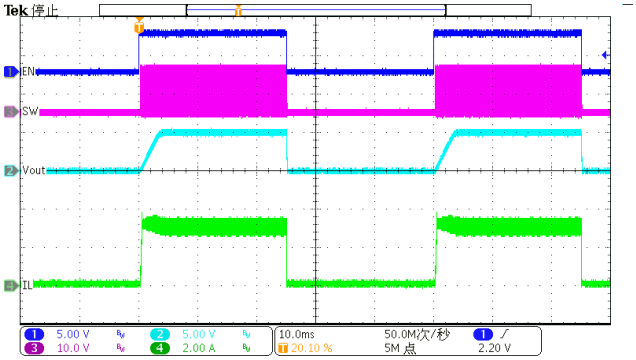
Table 4: Typical External Component Values

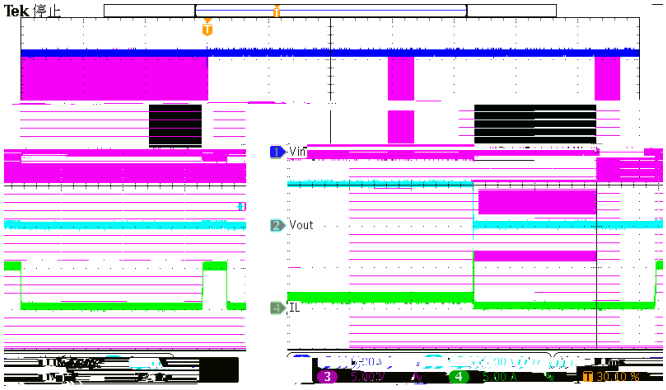
Application Waveforms

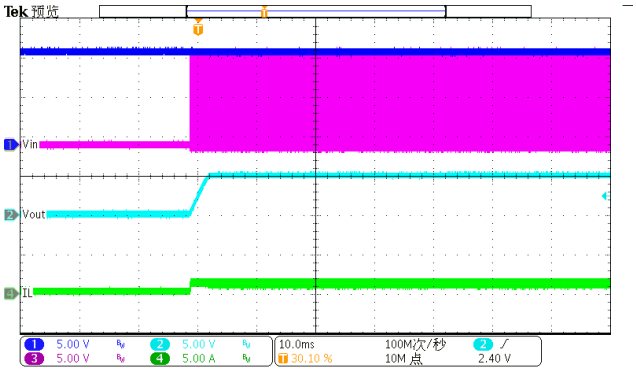




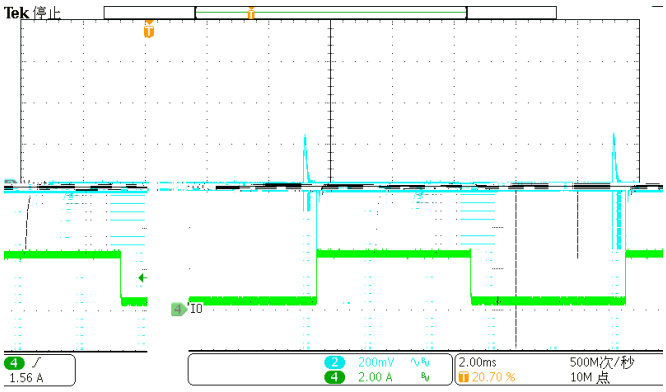


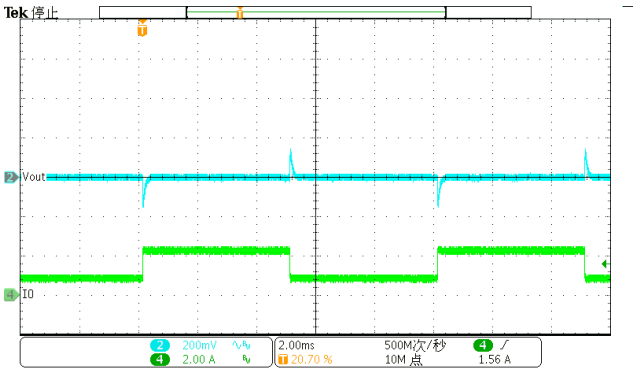


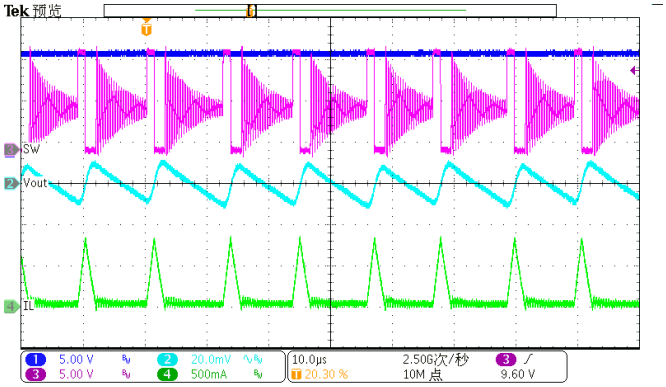


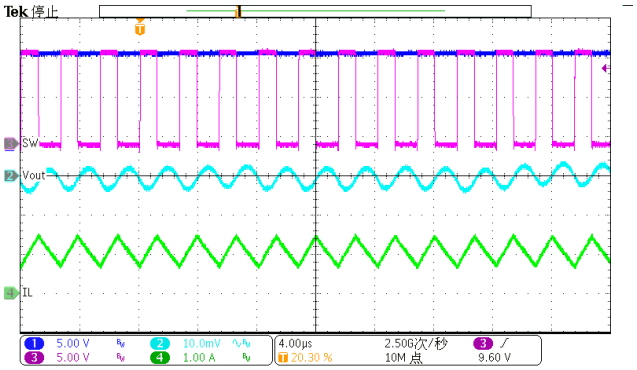


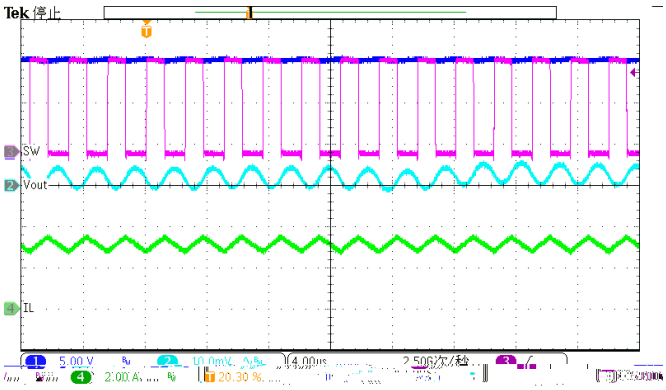
Application Waveforms

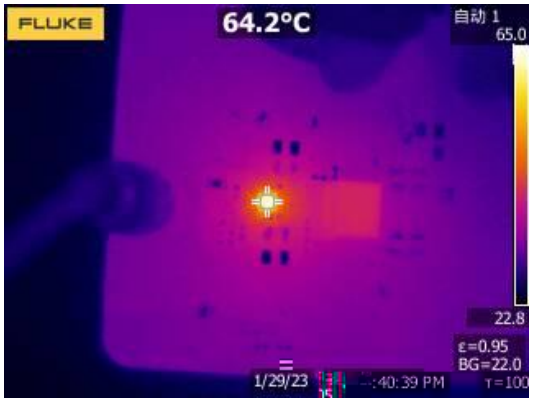






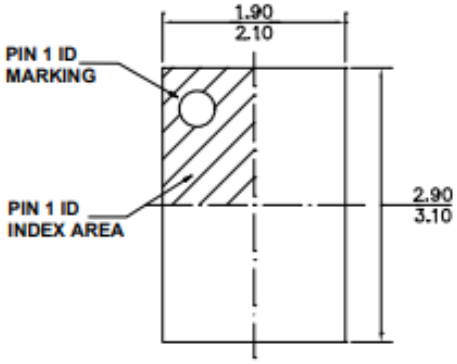




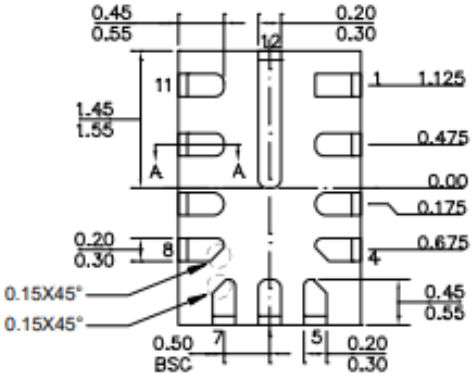


Layout Guideline

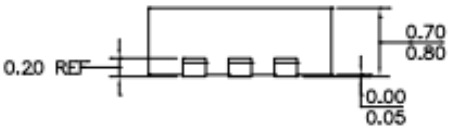
PACKAGE INFORMATION



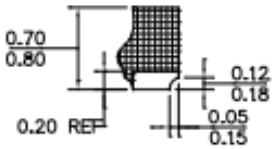
TOP VIEW



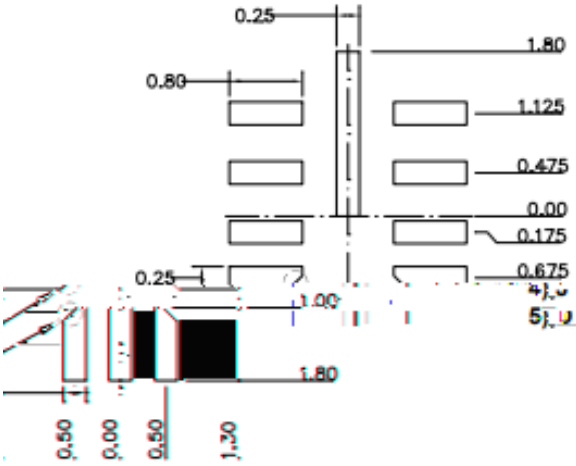
BOTTOM VIEW



SIDE VIEW



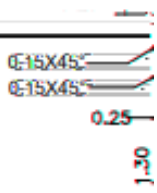
SECTION A-A

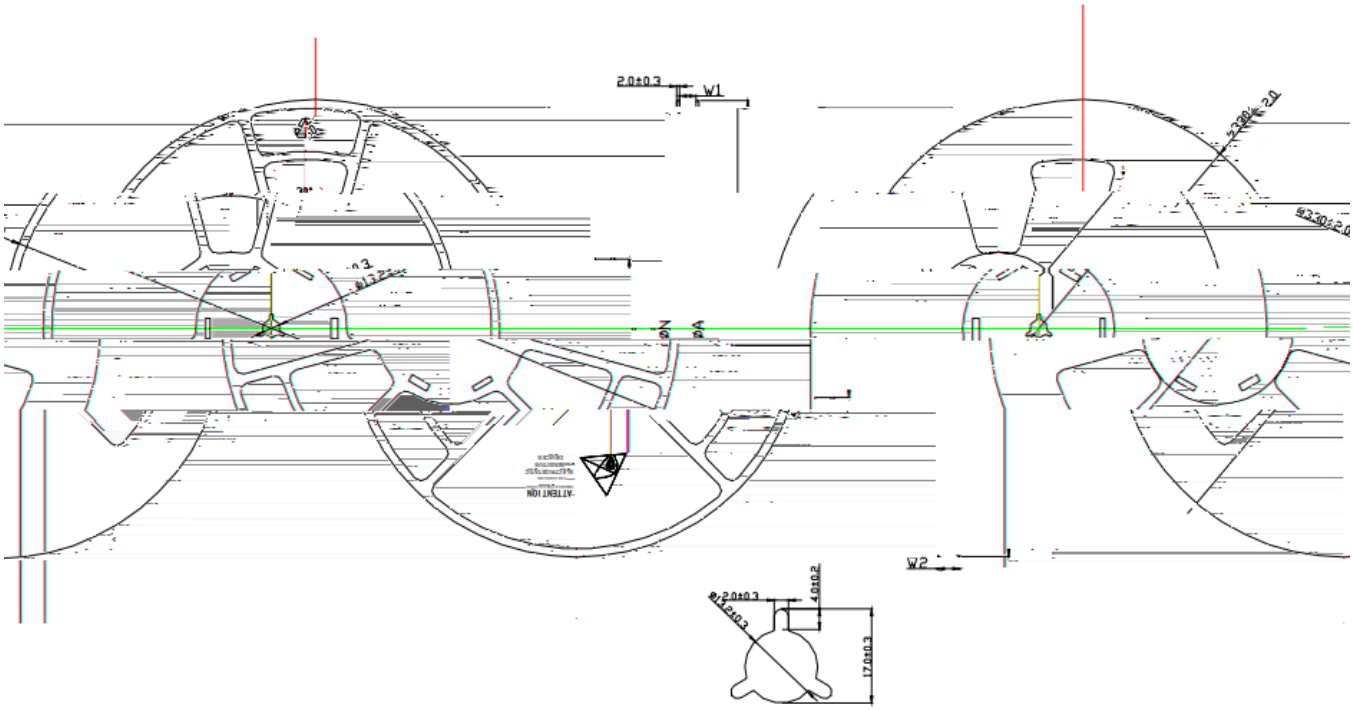
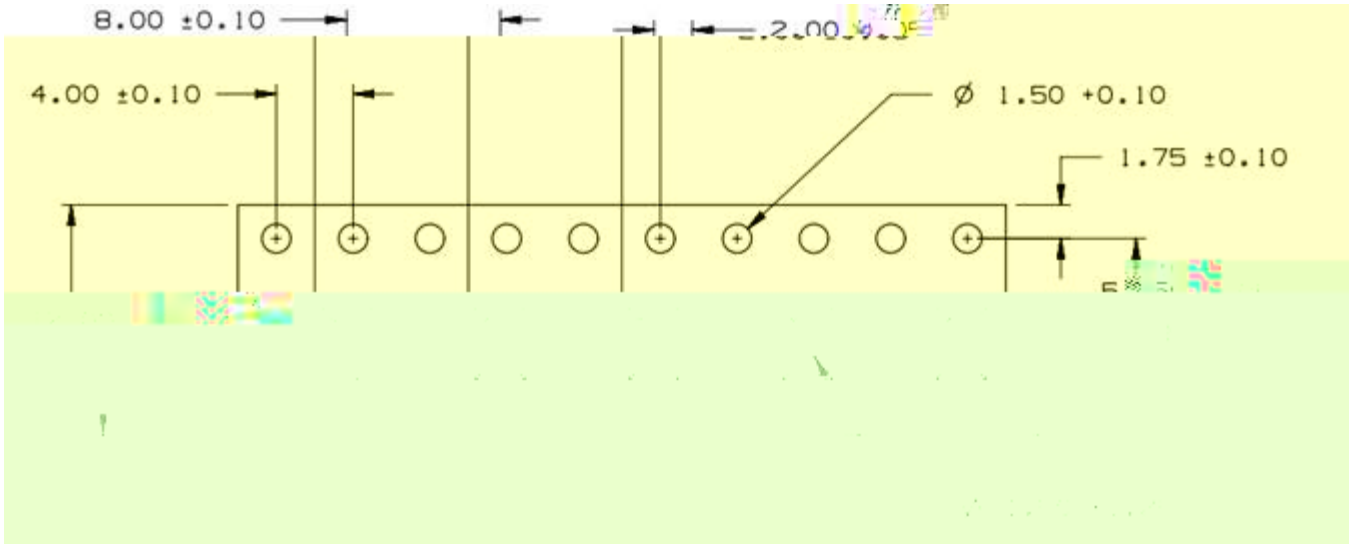
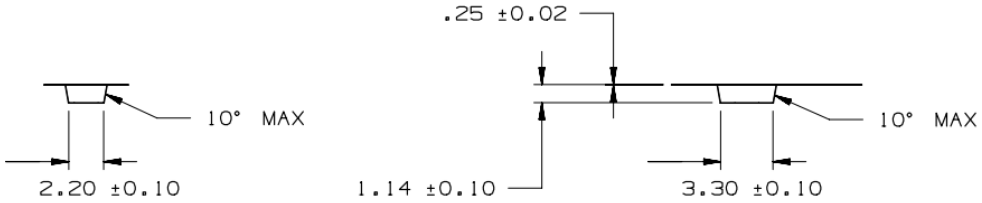


MMENDED LAND PATTERN

NOTE:

1) THE LEAD SIDE IS WETTABLE.
2) ALL DIMENSIONS ARE IN MILLIMETERS.
3) LEAD COPLANARITY SHALL BE 0.08 MILLIMETERS MAX.



RECO

TAPE AND REEL INFORMATION