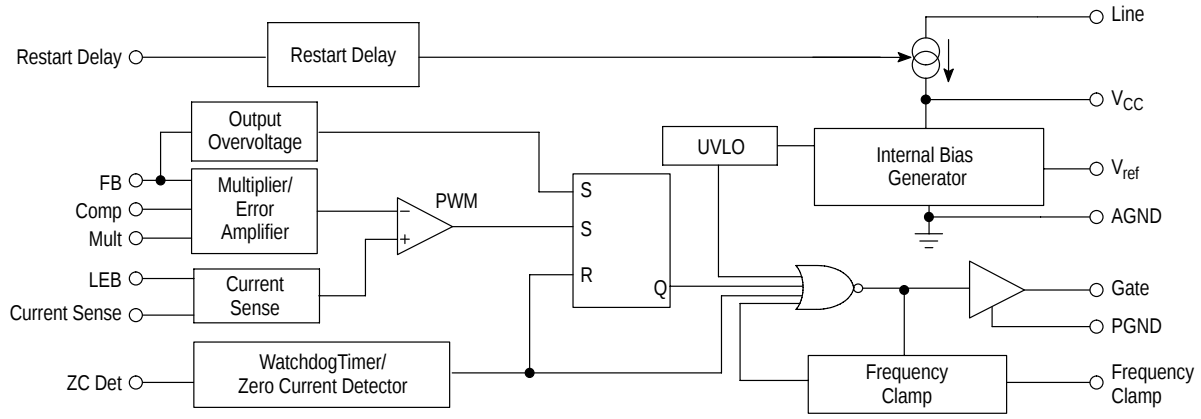


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This device contains 240 active transistors.

Figure 1. Representative Block Diagram

MAXIMUM RATINGS (T_A = 25°C, unless otherwise noted)

Rating	Symbol	Value	Unit
Power Supply Voltage (Transient)	V _{CC}	20	V
Power Supply Voltage (Operating)	V _{CC}	16	V
Line Voltage	V _{Line}	500	V
Current Sense, Multiplier, Compensation, Voltage Feedback, Restart Delay and Zero Current Input Voltage	V _{in1}	-1.0 to +10	V
LEB Input, Frequency Clamp Input	V _{in2}	-1.0 to +20	V
Zero Current Detect Input	I _{in}	±5.0	mA
Restart Diode Current	I _{in}	5.0	mA
Power Dissipation and Thermal Characteristics D Suffix, Plastic Package Case 751K Maximum Power Dissipation @ T _A = 70°C Thermal Resistance, Junction-to-Air	P _D R _{θJA}	450 178	mW °C/W
Operating Junction Temperature	T _J	150	°C
Operating Ambient Temperature	T _A	-25 to +125	°C
Storage Temperature Range	T _{stg}	-55 to +150	°C

Stresses exceeding Maximum Ratings may damage the device. Maximum Ratings are stress ratings only. Functional operation above the Recommended Operating Conditions is not implied. Extended exposure to stresses above the Recommended Operating Conditions may affect device reliability.

NOTE: ESD data available upon request.

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ELECTRICAL CHARACTERISTICS ($V_{CC} = 14.5\text{ V}$, for typical values $T_A = 25^\circ\text{C}$, for min/max values $T_J = -25\text{ to }+125^\circ\text{C}$)

Characteristic	Symbol	Min	Typ	Max	Unit
ERROR AMPLIFIER					
Input Bias Current ($V_{FB} = 5.0\text{ V}$)	I_{IB}	-	0	1.0	μA

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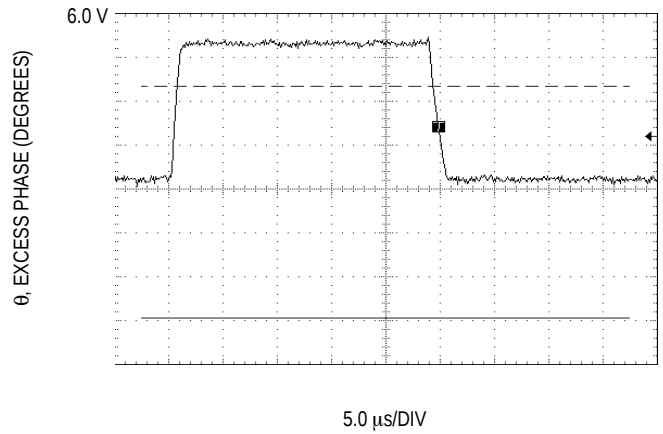
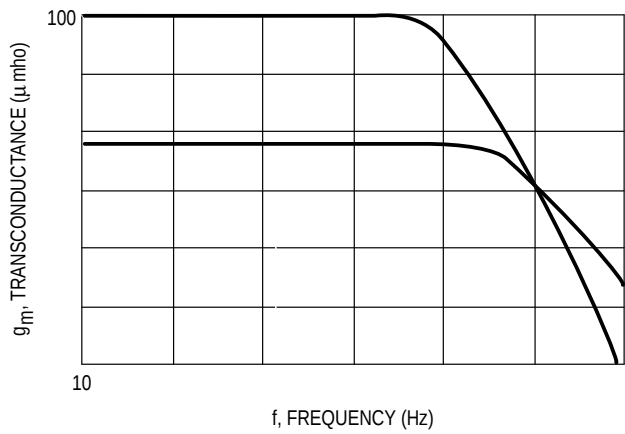
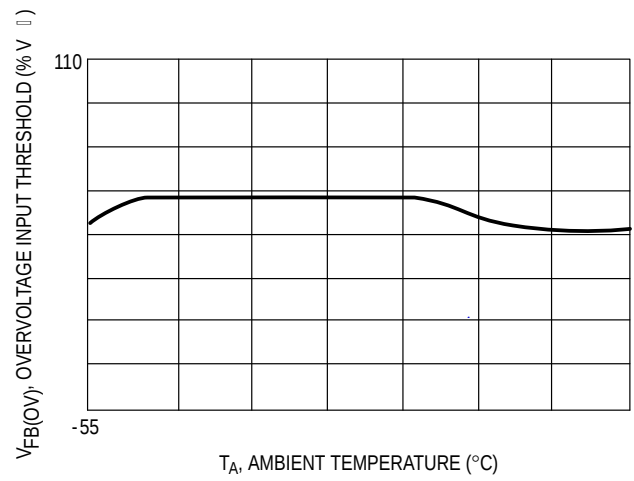
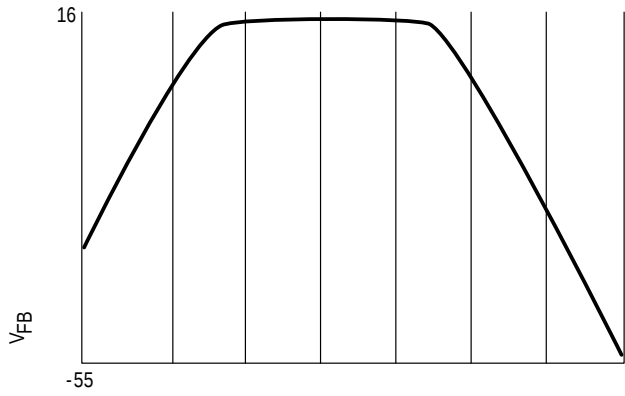
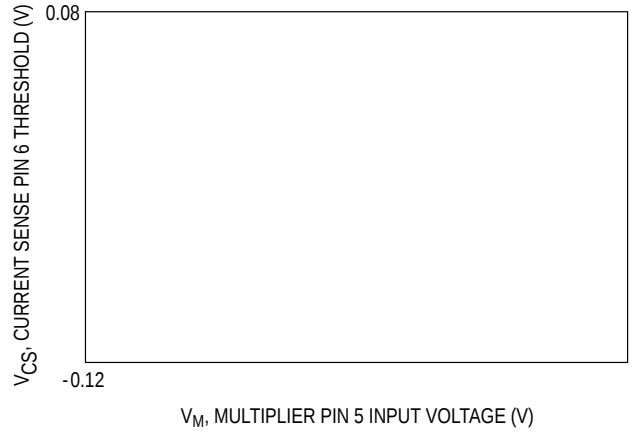
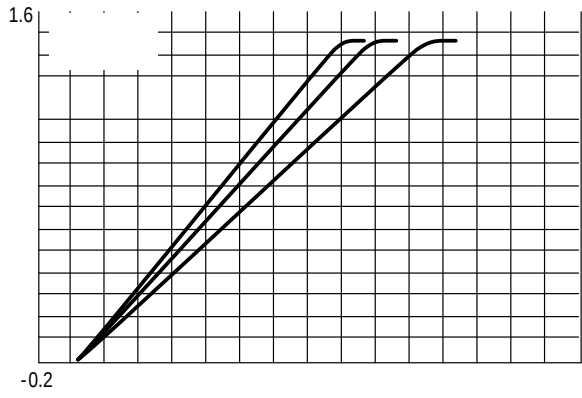
ELECTRICAL CHARACTERISTICS (continued) ($V_{CC} = 14.5\text{ V}$, for typical values $T_A = 25^\circ\text{C}$, for min/max values $T_J = -25\text{ to }+125^\circ\text{C}$)

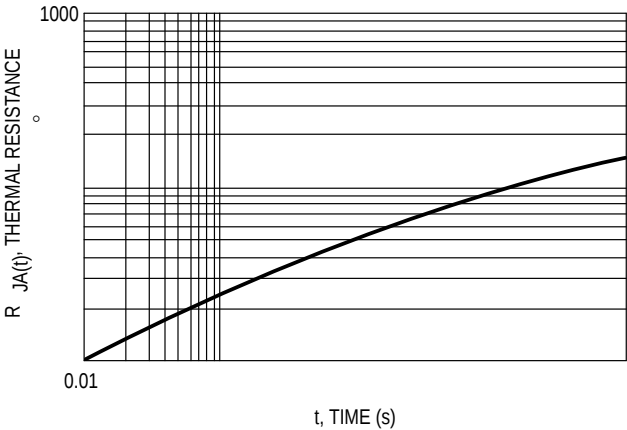
Characteristic	Symbol	Min	Typ	Max	Unit
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DRIVE OUTPUT

Source Resistance (Current Sense = 0 V, $V_{Gate} = V_{CC} - 1.0\text{ V}$)	R_{OH}				
Sink Resistance (Current Sense = 3.0 V, $V_{Gate} = 1.0\text{ V}$)	R_{OL}				

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FUNCTIONAL DESCRIPTION

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Multiplier

$$I_{pk(max)} = \frac{1.5 V}{R7}$$

Timer

$$\text{Pin 6 Threshold} = 0.55 V_{Pin 4} - V_{Pin 3} V_{Pin 5}$$

μ

Zero Current Detector

Undervoltage Lockout and Quickstart

Restart Delay

Current Sense Comparator and RS Latch

$$I_{pk} = \frac{\text{Pin 6 Threshold}}{R7}$$

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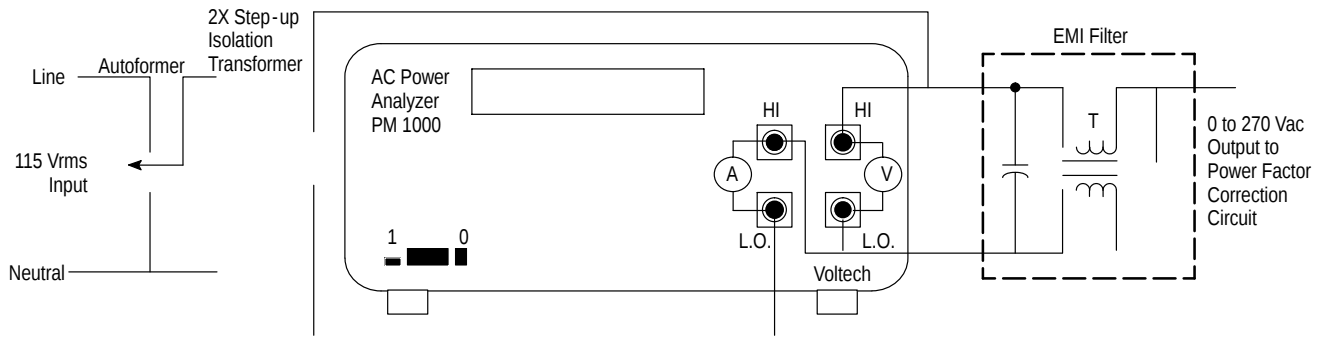
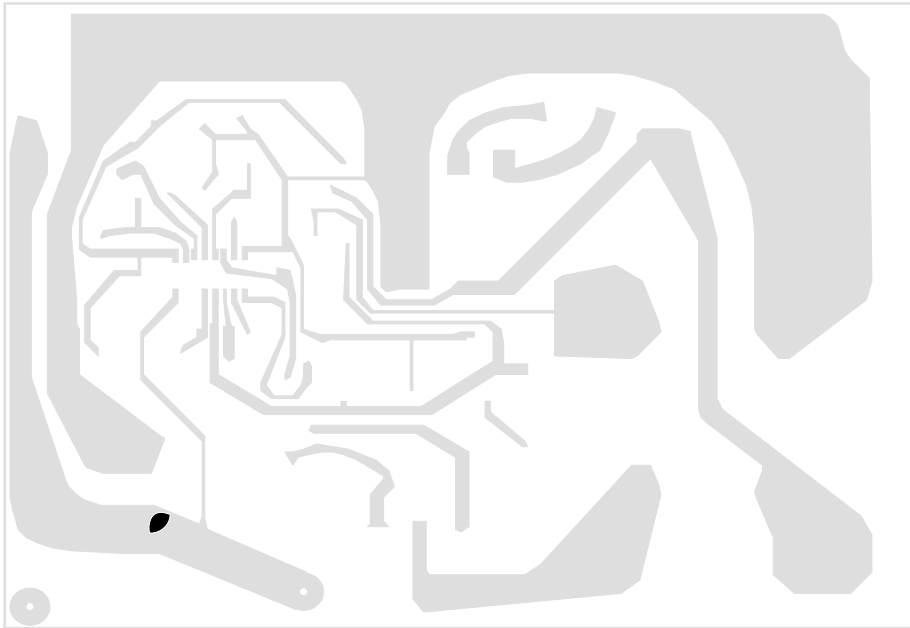
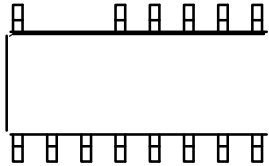


Figure 18. Power Factor Test Setup

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NOTES:

1. DIMENSIONING AND TOLERANCING PER ANSI Y14.5M, 1982.
2. CONTROLLING DIMENSION: MILLIMETER.
3. DIMENSIONS A AND B DO NOT INCLUDE MOLD PROTRUSION.
4. MAXIMUM MOLD PROTRUSION 0.15 (0.006) PER SIDE.
5. DIMENSION D DOES NOT INCLUDE DAMBAR PROTRUSION. ALLOWABLE DAMBAR PROTRUSION SHALL BE 0.127 (0.005) TOTAL IN EXCESS OF THE D DIMENSION AT MAXIMUM MATERIAL CONDITION.

DIM	MILLIMETER		INCH	
	MIN	MA	MIN	MA
A	9.80	10.00	0.368	0.393
B	3.80	4.00	0.150	0.157
C	1.35	1.75	0.054	0.068
D	0.35	0.49	0.014	0.019
F	0.40	1.25	0.016	0.049
G	1.27 BSC		0.050 BSC	
J	0.19	0.25	0.008	0.009
K	0.10	0.25	0.004	0.009
M	0°	7°	0°	7°
P	5.80	6.20	0.229	0.244
R	0.25	0.50	0.010	0.019

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