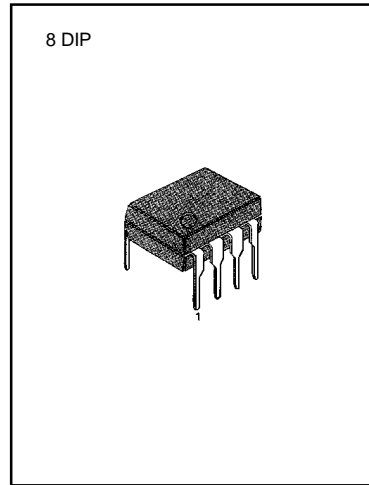


EARTH LEAKAGE DETECTOR

KA2807 is a IC for ground fault circuit interrupters which are intended to provide electrical shock hazard protection from line-to-ground fault currents on grounded circuits of 120V supplies.

FEATURES

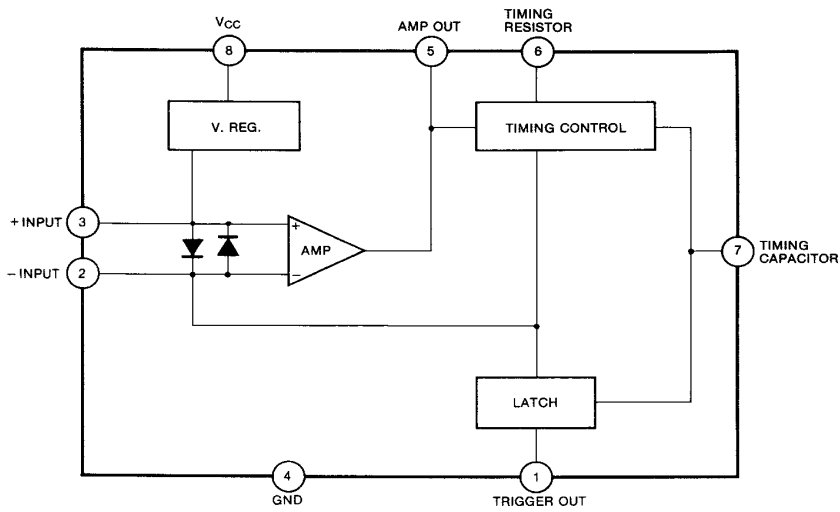
- Full Advantage Of The UL943
- Built-In Voltage Regulator
- Sense Coil: 1000:1
- GND/Neutral Coil: 200:1
- Normal Fault Sensitivity Current Is 5mA Typical
- Trip Time In Normal Fault And Ground Neutral Fault Is 18ms Typ
- Wide Operating Temperature Range
- Excellent ESD Characteristic
- 1mA Output Current Pulse To Trigger SCR



ORDERING INFORMATION

Device	Package	Operating Temperature
KA2807	8 DIP	-40 ~ + 70 °C

BLOCK DIAGRAM



ABSOLUTE MAXIMUM RATINGS

Characteristic	Symbol	Value	Unit
Supply Current	I_{CC}	19	mA
Power Dissipation	P_D	1250	mW
Operating Temperature Range	T_{OPR}	- 40 ~ + 70	°C
Storage Temperature Range	T_{STG}	- 55 ~ + 150	°C

ELECTRICAL CHARACTERISTICS ($T_A = 25\text{ }^\circ\text{C}$, $I_{CC} = 5\text{mA}$)

Characteristics	Symbol	Test Conditions	Min	Typ	Max	Unit
Shunt Regulator Voltage	V_{REG}	Pin 8, S1:2, S2:OFF	23	26	29	V
Amp Reference Voltage	V_{REF}	Pin 3, S1:2, S2:OFF	9.5	10.5	11.5	V
Amp High Output Voltage	V_{OH}	Pin 5, S1:3, S2:ON Sig: 800Hz, 3.0V _{P-P} Sinewave	17	19	21	V
Amp Low Output Voltage	V_{OL}	Pin 5, S1:3, S2:ON Sig: 800Hz, 3.0V _{P-P} Sinewave	1.5	2.5	3.5	V
Amp Sensitivity Current	I_{SEN}	Pin 2, S1:3, S2:ON Sig: 800Hz, 1.0V _{P-P} ~ 2.5V _{P-P} Sinewave	3.5	5	6.5	μ Arms
Latch On Voltage	$V_{ON(LATCH)}$	Pin 7, S1:3, S2:ON Sig: 800Hz, 3.0V _{P-P} Sinewave	16.5	17.5	19.5	V
SCR Trigger Current	I_{TR}	Pin 1, S1:3, S2:ON Sig:800Hz, 3.0V _{P-P} Sinewave	0.5	1	2.0	mA
Output Low Voltage	$V_S 1$	Pin 1, S1:2, S2:OFF		100	240	mV
Output Impedance	Z_O	Pin 1, S1:2, S2:OFF		100	250	Ω
Output Sink Current	I_{SINK}	Pin 1, S1:2, S2:OFF	2.0	6.0		mA

TEST CIRCUIT

