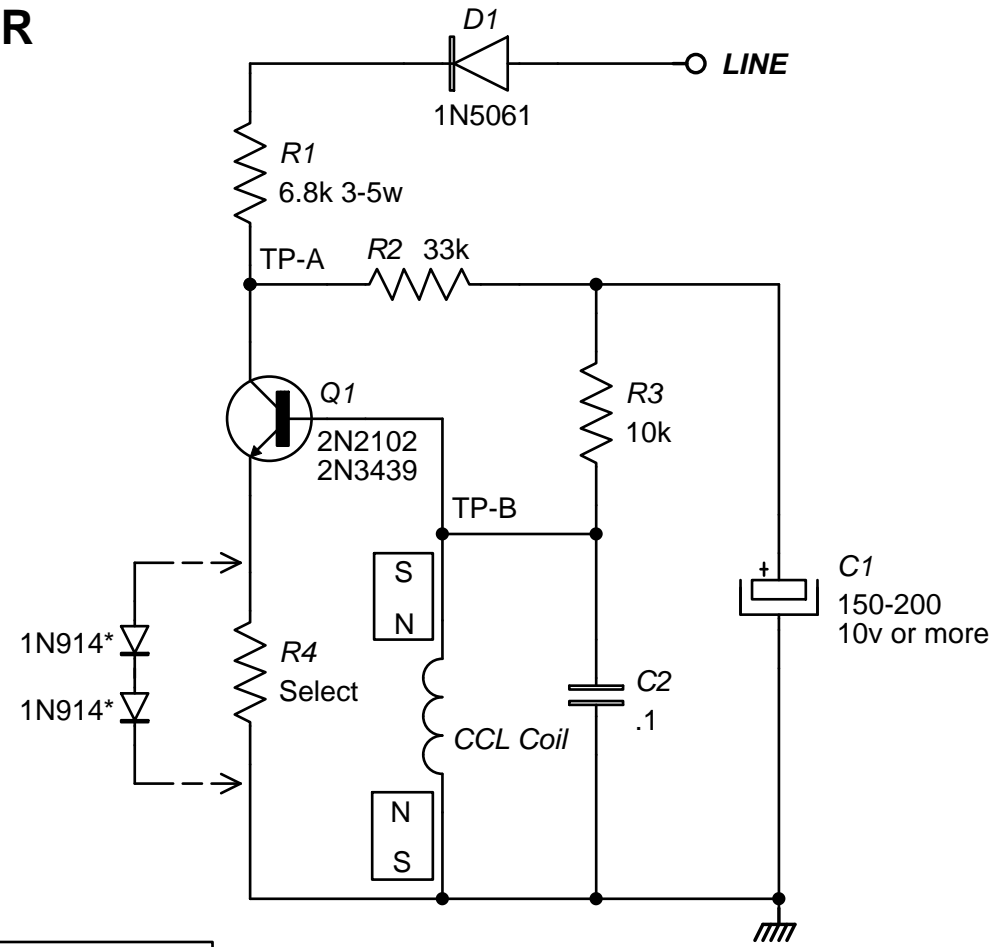
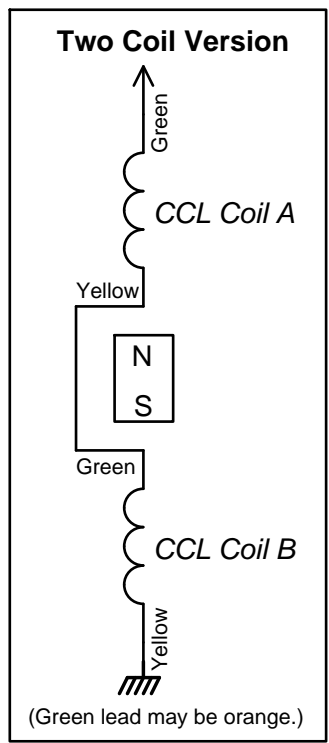


SIE DOWNHOLE CCL AMPLIFIER



NOTES:
 This circuit typically draws 10-12 milliamps at 120 volts.
 Use the 2N3439 for a more "bullet proof" circuit.
 Select emitter resistor R4 for approximately 10 milliamp current draw.
 (10 ohms up to perhaps 500 ohms, but higher values reduce gain.)
 * Diodes can replace R4 to reduce current while maintaining gain.
 TP-A: 22 volts nominal (over 18 volts and below 40 volts or so).
 TP-B: .61 volts nominal.
 R2 and R3 are usually reversed in SIE production tools.
 Coil resistances are in the range of 2-5 kilohms.

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SIE Downhole CCL Amp		CCLSIEa.sch
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Revision: 1.0	Modify Date: 11/16/2009	Sheet 1 of 1