



NEG

NEW ENGLAND SEMICONDUCTOR

NCC1000

SURFACE MOUNT NPN/PNP COMPLEMENTARY TRANSISTORS

- Hermetic Ceramic Package
- Electrical Specification Similar to 2N3439 / 2N5416
- Screening to SX Level Available
- Group B and C Testing

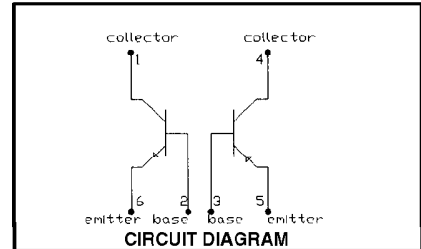
MAXIMUM RATINGS

Rating	Symbol		Unit
Collector-Emitter Voltage	V_{CEO}	300	Vdc
Collector-Base	V_{cb}	350	Vdc
Emitter-Base Voltage	V_{EB}	6	Vdc
Collector Current -- Continuous Peak (1)	I_C	1.0	Adc
Total Power Dissipation @ $T_A = 25^\circ\text{C}$ Derate above 25°C	P_D	0.8	Watts $\text{W}/^\circ\text{C}$
Operating and Storage Junction	T_J, T_{stg}	-65 to +200	$^\circ\text{C}$

(1) Pulse Test: Pulse Width = 10ms, Duty Cycle $\leq 10\%$

PRODUCT DESCRIPTION

The NCC1000 is a high voltage NPN/PNP complementary pair of Transistors packaged in a 6 pin hermetically sealed ceramic leadless chip carrier. The electrical characteristics are similar to the MIL-S-19500/368 and MIL-S-19500/485 (2N3439 and 2N5416). The small size makes this device ideal for application where size and weight are important design considerations.

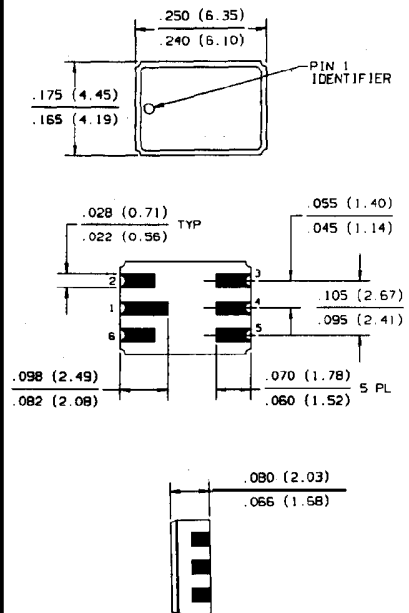


CIRCUIT DIAGRAM



6 PIN LCC

MECHANICAL OUTLINE



DIMENSIONS ARE IN INCHES (MILLIMETERS)

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6 Lake Street Lawrence, MA 01841
1-800-446-1158 / (978) 794-1666 / FAX: (978) 689-0803

T4-4.8-860-017 REV: --



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NCC1000**ELECTRICAL CHARACTERISTICS ($T_C=25^{\circ}\text{C}$ unless otherwise noted)**

Characteristic	Symbol	Min	Max	Unit
OFF CHARACTERISTICS				
Collector-Emitter Sustaining Voltage (1) ($I_C = 50\text{mA}$, $I_B = 0$)	$V_{CE(sus)}$	300		V
Collector Cutoff Current ($V_{CE} = 280\text{V}$, $I_E = 0$)	I_{CBO}		50	μA
Collector-Emitter Cutoff Current ($V_{CE} = \text{Rated } V_{CEO}$, $V_{EB} = 0$)	I_{CES}		500	μA
Emitter-Base Cutoff Current ($V_{EB} = 5.0\text{V}$, $I_C = 0$)	I_{EBO}		20	μA
ON CHARACTERISTICS (1)				
DC Current Gain ($I_C = 50\text{mA}$, $V_{CE} = 10\text{V}$) ($I_C = 100\text{mA}$, $V_{CE} = 10\text{V}$)	h_{FE}	30 20	120	
Collector-Emitter Saturation Voltage ($I_C = 50\text{mA}$, $I_B = 4\text{mA}$)	$V_{CE(sat)}$		0.6	V_{de}
Base-Emitter Saturation Voltage ($I_C = 50\text{mA}$, $I_B = 4\text{mA}$)	$V_{BE(sat)}$		1.4	V_{de}
DYNAMIC CHARACTERISTICS				
Output Capacitance ($V_{CB} = 10\text{V}$, $I_E = 0$)	C_{obo}		15	pF
Current-Gain -- Bandwidth Product ($I_C = 10\text{mA}$, $V_{CE} = 10\text{V}$, $f = 5.0\text{MHz}$)	f_T	15		MHz

(1) Pulse Test: Pulse width = 300 μs , Duty Cycle $\leq 2.0\%$.

SX LEVEL RELIABILITY TESTING

100% SCREENING	GROUP A	GROUP B (Sample)	GROUP C (Sample)
Internal Visual Temp Cycle Thermal Response Constant Acceleration PIND Fine and Gross Leak HTRB Power Burn In	Visual and Mechanical Dc Static Tests 25°C DC Static Tests High Temp DC Static Tests Low Temp Dynamic Tests @ 25°C	Solderability Temp Cycle Fine and Gross Leak Bond Strength Intermittent Op Life Steady State Op Life Thermal Resistance Hi-Temp Life (non operating)	Physical Dimensions Thermal Shock Terminal Strength Hermetic Seal Moisture Resistance Shock Test Vibration Test Constant Acceleration Salt Atmosphere Operation Life

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