



NEC

NEW ENGLAND SEMICONDUCTOR

NSQ3467

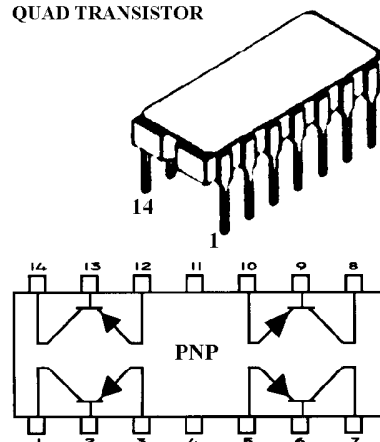
QUAD GENERAL PURPOSE DUAL-IN-LINE TRANSISTORS

...designed for general-purpose switching circuits and DC to VHF amplifier applications.

- FOUR ISOLATED TRANSISTORS.
- DC CURRENT GAIN SPECIFIED
- LOW COLLECTOR-CUTOFF CURRENT
- HIGH COLLECTOR BREAKDOWN VOLTAGES

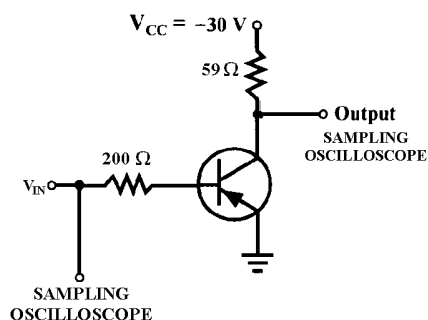
TO-116

PNP HERMETIC SILICON
QUAD TRANSISTOR

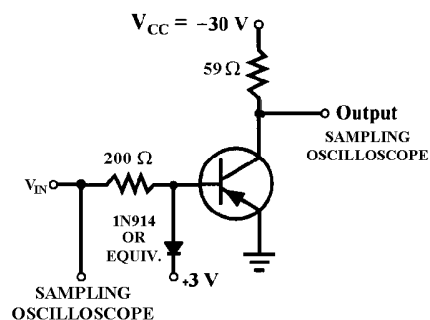


MAXIMUM RATINGS

RATINGS	SYMBOL	VALUE		UNITS
Collector-Emitter Voltage	V_{CEO}	40		Vdc
Collector-Base Voltage	V_{CBO}	40		Vdc
Emitter-Base Voltage	V_{EBO}	5.0		Vdc
Collector Current -- Continuous	I_C	1.0		Adc
		Each Transistor	Total Device	
Total Power Dissipation @ $T_C = 25^{\circ}C$	P_D	0.4	2.7	W
Derate above $25^{\circ}C$		5.14	15.4	mW/ $^{\circ}C$
Operating & Storage Junction Temperature Range	T_J, T_{stg}	-65 to +200		$^{\circ}C$



T_{on} TEST CIRCUIT



T_{off} TEST CIRCUIT

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1-800-446-1158 / (978) 794-1666 / FAX: (978) 689-0803

T4-4.8-860-058 REV: --



NES

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

Characteristics	Symbol	Min	Max	Unit
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OFF CHARACTERISTICS

Collector-Emitter Breakdown Voltage $I_C = 10 \text{ mAdc}$, $I_B = 0$	$V_{(BR)CEO}$	40		Vdc
Collector-Base Breakdown Voltage $I_C = 10 \text{ }\mu\text{Adc}$, $I_E = 0$	$V_{(BR)CBO}$	40		Vdc
Emitter-Base Breakdown Voltage $I_E = 10 \text{ }\mu\text{Adc}$, $I_C = 0$	$V_{(BR)EBO}$	5.0		Vdc
Collector Cutoff Current $I_E = 0$, $V_{CB} = 30 \text{ Vdc}$ $I_E = 0$, $V_{CB} = 30 \text{ Vdc}$ $T_A = 150^{\circ}\text{C}$	I_{CBO}		100 15	ηAdc μAdc
Emitter Cutoff Current $I_B = 0$, $V_{CB} = 4.0 \text{ Vdc}$	I_{EBO}		100	ηAdc

ON CHARACTERISTICS (1)

DC Current Gain $I_C = 150 \text{ mAdc}$, $V_{CE} = 5.0 \text{ Vdc}$ $I_C = 500 \text{ mAdc}$, $V_{CE} = 1.0 \text{ Vdc}$	h_{FE}	40 20		
Collector-Emitter Saturation Voltage $I_C = 150 \text{ mAdc}$, $I_B = 15 \text{ mAdc}$ $I_C = 500 \text{ mAdc}$, $I_B = 50 \text{ mAdc}$	$V_{CE(sat)}$		0.4 0.5	Vdc
Base-Emitter Saturation Voltage $I_C = 150 \text{ mAdc}$, $I_B = 15 \text{ mAdc}$ $I_C = 500 \text{ mAdc}$, $I_B = 50 \text{ mAdc}$	$V_{BE(sat)}$		1.0 1.4	Vdc

DYNAMIC CHARACTERISTICS

Small-Signal Current Gain $V_{CE} = 10 \text{ Vdc}$, $I_C = 1.0 \text{ mAdc}$, $f = 1.0 \text{ kHz}$	h_{fe}	50		
Magnitude of Small Signal Current Gain $I_C = 20 \text{ mAdc}$, $V_{CE} = 20 \text{ Vdc}$, $f = 100 \text{ MHz}$	$ h_{fe} $	125		MHz
Output Capacitance $V_{CB} = 10 \text{ Vdc}$, $I_E = 0$, $f = 100 \text{ kHz to } 1.0 \text{ MHz}$	C_{obo}		25	pf
Input Capacitance $V_{BE} = 0.5 \text{ Vdc}$, $I_C = 0$, $f = 100 \text{ kHz to } 1.0 \text{ MHz}$	C_{ibo}		100	pf

SWITCHING CHARACTERISTICS

Turn-On Time $V_{CC} = 30 \text{ Vdc}$, $V_{BE(off)} = 2.0 \text{ Vdc}$, $I_C = 500 \text{ mAdc}$, $I_{B1} = 50 \text{ mAdc}$	t_{on}		40	ns
Turn-Off Time $V_{CC} = 30 \text{ Vdc}$, $I_C = 500 \text{ mAdc}$, $I_{B1} = I_{B2} = 50 \text{ mAdc}$	t_{off}		100	ns

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

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