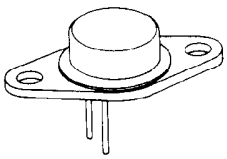
NEW ENGLAND SEMICONDUCTOR

NSX14

EPITAXIAL BASE PNP SILICON TRANSISTORS

- LF LARGE SIGNAL POWER AMPLIFIER
- MEDIUM CURRENT SWITCHING



TO-66

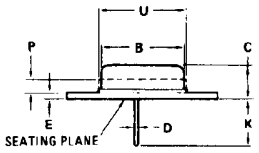
ABSOLUTE RATINGS

RATINGS	SYMBOL	LIMITS	UNITS
Collector-Emitter Voltage	V_{CEO}	-55	Vdc
Collector-Base Voltage	V_{CBO}	-90	Vdc
Collector-Emitter Voltage R_{BE} = 100Ω	V_{CER}	-60	Vdc
Collector-Emitter Voltage V_{BE} = 1.5 V	V_{CEX}	-90	Vdc
Emitter-Base Voltage	V_{EBO}	-7.0	Vdc
Collector Current	I_C	-4.0	Adc
Base Current -- Continuous	I_B	-2.0	Adc
Total Power Dissipation	P_D	29	W
Operating & Storage Junction Temperature Range	T_J, T_{stg}	-65 to +200	^{0}C

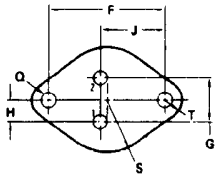
THERMAL CHARATERISTICS

CHARATERISTICS	SYMBOL	MIN.	MAX.	UNITS
Junction to Case Thermal Resistance	R_{th}		6.0	^{0}C/ W

MECHANICAL OUTLINE



STYLE 1:
PIN 1. BASE
2. EMITTER
CASE: COLLECTOR



	MILLIMETER		INCHES	
DIM	MIN	MAX	MIN	MAX
B	11.94	12.70	0.470	0.500
C	6.35	8.64	0.250	0.340
D	0.71	0.86	0.028	0.034
E	1.27	1.91	0.050	0.075
F	24.33	24.43	0.958	0.962
G	4.83	5.33	0.190	0.210
H	2.41	2.67	0.095	0.105
J	14.48	14.99	0.570	0.590
K	9.14	-	0.360	-
P	-	1.27	-	0.050
Q	3.61	3.86	0.142	0.152
S	-	8.89	-	0.350
T	-	3.68	-	0.145
U	-	15.75	-	0.620

NEW ENGLAND SEMICONDUCTOR 6 Lake Street Lawrence, MA 01841
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ELECTRICAL CHARACTERISTICS ($T_C = 25^0C$ unless otherwise noted)

Characteristics	Symbol	Min	Max	Unit
OFF CHARACTERISTICS				
Collector-Emitter Breakdown Voltage (1) I_C = -100 mAdc, I_B = 0	$V_{CEO(sus)}$	-55		Vdc
Collector-Emitter Breakdown Voltage (1) I_C = -100 mAdc, R_{BE} = 100 Ω	$V_{CER(sus)}$	-60		Vdc
Collector Emitter Cutoff Current V_{CE} = -90 Vdc, V_{BE} = 1.5 Vdc V_{CE} = -30 Vdc, V_{BE} = 1.5 Vdc, $T_C = 150^0C$	I_{CEX}		-1.0 -5.0	mAdc mAdc
Emitter Base Breakdown Voltage (1) I_E = -1.0 mAdc, I_C = 0	$V_{(BR)EBO}$		-7.0	Vdc
ON CHARACTERISTICS				
Static Forward Current Transfer Ratio I_C = -0.5 Adc, V_{CE} = -4.0 Vdc	h_{FE}	25	100	
Collector-Emitter Saturation Voltage I_C = -0.5 Adc, I_B = -0.05 Adc	$V_{CE(sat)}$		-1.0	Vdc
Base-Emitter Voltage I_C = -0.5 Adc, V_{CE} = -4.0 Vdc	V_{BE}		-1.7	Vdc
DYNAMIC CHARACTERISTICS				
Transistion Frequency I_C = -0.2 Adc, V_{CE} = -10 Vdc, f = 1.0 MHz	f_T	4.0 typ.		MHz

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

SX LEVEL RELIABILITY TESTING

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

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