

## PNP SILICON DUAL TRANSISTOR

Qualified per MIL-PRF-19500 /336

### DEVICES

2N3810      2N3811  
 2N3810L    2N3811L  
 2N3810U    2N3811U

### LEVELS

JAN  
 JANTX  
 JANTV  
 JANS

### ABSOLUTE MAXIMUM RATINGS ( $T_C = +25^\circ\text{C}$ unless otherwise noted)

Parameters / Test Conditions	Symbol	Value		Unit
Collector-Emitter Voltage	$V_{CEO}$	60		Vdc
Collector-Base Voltage	$V_{CBO}$	60		Vdc
Emitter-Base Voltage	$V_{EBO}$	5.0		Vdc
Collector Current	$I_C$	50		mAdc
		One Section <sup>1</sup>	Both Sections <sup>2</sup>	
Total Power Dissipation @ $T_A = +25^\circ\text{C}$	$P_T$	200	350	mW
Operating & Storage Junction Temperature Range	$T_J, T_{stg}$	-65 to +200		$^\circ\text{C}$



TO-78

### Note:

- Derate linearly 1.143mW/ $^\circ\text{C}$  for  $T_A > +25^\circ\text{C}$  (one section)
- Derate linearly 2.00mW/ $^\circ\text{C}$  for  $T_A > +25^\circ\text{C}$  (both sections)

### ELECTRICAL CHARACTERISTICS ( $T_A = +25^\circ\text{C}$ , unless otherwise noted)

Parameters / Test Conditions	Symbol	Min.	Max.	Unit
<b>OFF CHARACTERISTICS</b>				
Collector-Emitter Breakdown Voltage $I_C = 100\mu\text{Adc}$	$V_{(BR)CEO}$	60		Vdc
Collector-Base Cutoff Current $V_{CB} = 50\text{Vdc}$ $V_{CB} = 60\text{Vdc}$	$I_{CBO}$		10 10	$\eta\text{Adc}$ $\mu\text{Adc}$
Emitter-Base Cutoff Current $V_{EB} = 4.0\text{Vdc}$ $V_{EB} = 5.0\text{Vdc}$	$I_{EBO}$		10 10	$\eta\text{Adc}$ $\mu\text{Adc}$





# TECHNICAL DATA SHEET

6 Lake Street, Lawrence, MA 01841  
 1-800-446-1158 / (978) 620-2600 / Fax: (978) 689-0803  
 Website: <http://www.microsemi.com>

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### DYNAMIC CHARACTERISTICS (cont.)

Parameters / Test Conditions	Symbol	Min.	Max.	Unit
Noise Figure				
$I_C = 100\mu\text{A}$ dc, $V_{CE} = 10\text{V}$ dc, $f = 100\text{Hz}$ , $R_G = 3.0\text{k}\Omega$ 2N3810, L, U	F <sub>1</sub>		7.0	dB
$I_C = 100\mu\text{A}$ dc, $V_{CE} = 10\text{V}$ dc, $f = 1.0\text{kHz}$ , $R_G = 3.0\text{k}\Omega$ 2N3810, L, U	F <sub>2</sub>		3.0	
$I_C = 100\mu\text{A}$ dc, $V_{CE} = 10\text{V}$ dc, $f = 10\text{kHz}$ , $R_G = 3.0\text{k}\Omega$ 2N3810, L, U	F <sub>3</sub>		2.5	
$I_C = 100\mu\text{A}$ dc, $V_{CE} = 10\text{V}$ dc, $f = 10\text{Hz to } 15.7\text{kHz}$ , $R_G = 3.0\text{k}\Omega$ 2N3810, L, U	F <sub>4</sub>		3.5	
$I_C = 100\mu\text{A}$ dc, $V_{CE} = 10\text{V}$ dc, $f = 100\text{Hz}$ , $R_G = 3.0\text{k}\Omega$ 2N3811, L, U	F <sub>1</sub>		4.0	dB
$I_C = 100\mu\text{A}$ dc, $V_{CE} = 10\text{V}$ dc, $f = 1.0\text{kHz}$ , $R_G = 3.0\text{k}\Omega$ 2N3811, L, U	F <sub>2</sub>		1.5	
$I_C = 100\mu\text{A}$ dc, $V_{CE} = 10\text{V}$ dc, $f = 10\text{kHz}$ , $R_G = 3.0\text{k}\Omega$ 2N3811, L, U	F <sub>3</sub>		2.0	
$I_C = 100\mu\text{A}$ dc, $V_{CE} = 10\text{V}$ dc, $f = 10\text{Hz to } 15.7\text{kHz}$ , $R_G = 3.0\text{k}\Omega$ 2N3811, L, U	F <sub>4</sub>		2.5	