CRYSTALONICS
2805 Veterans Highway
Suite 14
Ronkonkoma, N.Y. 11779

2N5794*

| ELECTRICAL CHARACTERISTICS — continued ($T_C$ = 25°C unless otherwise noted.) | | | | |
|---|---|---|---|---|
| **Characteristic** | **Symbol** | **Min** | **Max** | **Unit** |
| **ON CHARACTERISTICS**(1) | | | | |
| DC Current Gain<br>($I_C$ = 5.0 Adc, $V_{CE}$ = 2.0 Vdc)<br>($I_C$ = 25 Adc, $V_{CE}$ = 2.0 Vdc)<br>($I_C$ = 50 Adc, $V_{CE}$ = 5.0 Vdc)<br>($I_C$ = 25 Adc, $V_{CE}$ = 2.0 Vdc, $T_A$ = −65°C) | $h_{FE}$ | <br>30<br>15<br>5.0<br>7.0 | <br>—<br>60<br>—<br>— | — |
| Collector-Emitter Saturation Voltage<br>($I_C$ = 25 Adc, $I_B$ = 2.5 Adc)<br>($I_C$ = 50 Adc, $I_B$ = 10 Adc) | $V_{CE(sat)}$ | <br>—<br>— | <br>1.0<br>5.0 | Vdc |
| Base-Emitter Saturation Voltage<br>($I_C$ = 25 Adc, $I_B$ = 2.5 Adc) | $V_{BE(sat)}$ | — | 2.0 | Vdc |
| Base-Emitter On Voltage<br>($I_C$ = 25 Adc, $V_{CE}$ = 2.0 Vdc) | $V_{BE(on)}$ | — | 2.0 | Vdc |
| **SMALL-SIGNAL CHARACTERISTICS** | | | | |
| Output Capacitance<br>($V_{CB}$ = 10 Vdc, f = 0.1 to 1.0 MHz) 2N5683, 2N5684<br>2N5685, 2N5686 | $C_{obo}$ | <br>—<br>— | <br>2000<br>1200 | pF |
| Small-Signal Current Gain<br>($I_C$ = 10 Adc, $V_{CE}$ = 5.0 Vdc, f = 1.0 kHz) | $h_{fe}$ | 15 | — | — |
| Small-Signal Current Transfer Ratio, Magnitude<br>($I_C$ = 5.0 Adc, $V_{CE}$ = 10 Vdc, f = 1.0 MHz) | $\|h_{fe}\|$ | 2.0 | 20 | — |
| **SWITCHING CHARACTERISTICS** (See Figures 9, 37)<br>($V_{CC}$ = 30 Vdc, $I_C$ = 25 Adc, $I_B$ = 2.5 Adc) | | | | |
| Turn-On Time | $t_{on}$ | — | 1.5 | μs |
| Turn-Off Time | $t_{off}$ | — | 3.0 | μs |
| Storage Time | $t_s$ | — | 2.0 | μs |

**ASSURANCE TESTING (Pre/Post Burn-In)**
**Burn-In Conditions: $T_J$ = 187.5 ±12.5°C, $V_{CB}$ = 20 Vdc (Min)**
**$P_T$ = 5.0 W**

| | | Initial and End Point Limits | | |
|---|---|---|---|---|
| **Characteristics Tested** | **Symbol** | **Min** | **Max** | **Unit** |
| Collector Cutoff Current<br>($V_{CE}$ = Rated Voltage, $V_{BE}$ = 1.5 Vdc) | $I_{CEX}$ | — | 1.0 | mAdc |
| DC Current Gain(1)<br>($I_C$ = 25 Adc, $V_{CE}$ = 2.0 Vdc) | $h_{FE}$ | 15 | 60 | — |

| **Delta from Pre-Burn-In Measured Values** |
|---|
| No Delta limits are required, devices must meet the same end points as the initial value. |

(1) Pulsed. Pulse Width 250 to 350 μs. Duty Cycle 1.0 to 2.0%.