

2N5795
2N5796

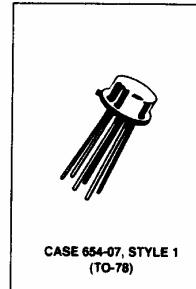
CRYSTALONCS
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Ronkonkoma, N.Y. 11779

**Dual PNP Silicon
Small-Signal Transistors**

... electrically isolated, unmatched transistors designed for high-speed saturated switching applications.

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MAXIMUM RATINGS				
Rating	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	600		mA _{dc}
		One Die	Both Die Equal Power	
Power Dissipation Derate above 25°C	P _T	0.5 2.86	0.6 3.43	Watts mW/°C
Storage and Operating Temperature Range	T _{stg. Top}	-65 to +200		°C



ELECTRICAL CHARACTERISTICS (T _A = 25°C unless otherwise noted.)				
Characteristic	Symbol	Min	Max	Unit
OFF CHARACTERISTICS				
Collector-Emitter Breakdown Voltage ⁽¹⁾ (I _C = 10 mA _{dc})	V _{(BR)CEO}	60	—	Vdc
Collector-Base Breakdown Voltage (I _C = 10 μA _{dc})	V _{(BR)CBO}	60	—	Vdc
Emitter-Base Breakdown Voltage (I _E = 10 μA _{dc})	V _{(BR)EBO}	5.0	—	Vdc
Collector Cutoff Current (V _{CB} = 50 Vdc) (V _{CB} = 50 Vdc, T _A = 150°C)	I _{CBO}	—	20 10	nA _{dc} μA _{dc}
Emitter Cutoff Current (V _{EB} = 3.0 Vdc)	I _{EBO}	—	100	nA _{dc}

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

(continued)

ELECTRICAL CHARACTERISTICS — continued (T _A = 25°C unless otherwise noted.)					
Characteristic	Symbol	Min	Max	Unit	
ON CHARACTERISTICS					
DC Current Gain ⁽¹⁾ (I _C = 100 μAdc, V _{CE} = 10 Vdc)	2N5795	h _{FE}	40	—	—
	2N5796		75	—	—
(I _C = 1.0 mAdc, V _{CE} = 10 Vdc)	2N5795		40	—	—
	2N5796		100	—	—
(I _C = 10 mAdc, V _{CE} = 10 Vdc)	2N5795		40	—	—
	2N5796		100	—	—
(I _C = 150 mAdc, V _{CE} = 10 Vdc)	2N5795		40	150	—
	2N5796		100	300	—
(I _C = 300 mAdc, V _{CE} = 10 Vdc)	2N5795		20	—	—
	2N5796		50	—	—
(I _C = 150 mAdc, V _{CE} = 1.0 Vdc)	2N5795		20	—	—
	2N5796		50	—	—
(I _C = 150 mAdc, V _{CE} = 10 Vdc, T _A = -65°C)	2N5795		16	—	—
	2N5796		40	—	—
Collector-Emitter Saturation Voltage ⁽¹⁾ (I _C = 150 mAdc, I _B = 15 mAdc) (I _C = 500 mAdc, I _B = 50 mAdc)	V _{CE(sat)}	—	0.4	Vdc	
		—	1.6	Vdc	
Base-Emitter Saturation Voltage ⁽¹⁾ (I _C = 150 mAdc, I _B = 15 mAdc) (I _C = 500 mAdc, I _B = 50 mAdc)	V _{BE(sat)}	—	1.3	Vdc	
		—	2.6	Vdc	
SMALL-SIGNAL CHARACTERISTICS					
Output Capacitance (V _{CB} = 10 Vdc, f = 0.1 to 1.0 MHz)	C _{obo}	—	8.0	pF	
Input Capacitance (V _{EB} = 0.5 Vdc, f = 0.1 to 1.0 MHz)	C _{ibo}	—	25	pF	
Small-Signal Current Transfer Ratio, Magnitude (I _C = 20 mAdc, V _{CE} = 20 Vdc, f = 100 MHz)	h _{fe}	2.0	10	—	
SWITCHING CHARACTERISTICS (See Figure 33) (V _{CC} = 30 Vdc, I _C = 150 mAdc, I _B = 15 Vdc)					
Turn-On Time (V _{BE(off)} = 0.5 Vdc)	t _{on}	—	50	ns	
Turn-Off Time	t _{off}	—	140	ns	

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

ASSURANCE TESTING (Pre/Post Burn-In)					
Burn-In Conditions: T _A = 25°C, V _{CB} = 40 Vdc					
P _T = 300 mW Each Section, 600 mW Total					
Characteristics Tested	Symbol	Initial and End Point Limits		Unit	
		Min	Max		
Collector Cutoff Current (V _{CB} = 50 Vdc)	I _{CBO}	—	10	nAdc	
DC Current Gain ⁽¹⁾ (I _C = 150 mAdc, V _{CE} = 10 Vdc)	2N5795	h _{FE}	40	150	—
	2N5796		100	300	—
Delta from Pre-Burn-In Measured Values					
Delta Collector Cutoff Current	ΔI _{CBO}	—	±100 or ±5.0 whichever is greater	% of Initial Value nAdc	
Delta DC Current Gain ⁽¹⁾	Δh _{FE}	—	±15	% of Initial Value	

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