2N5793
2N5794

JAN, JTX, JTXV AVAILABLE
CASE 654-07, STYLE 1

DUAL TRANSISTOR

NPN SILICON

MAXIMUM RATINGS

Rating	Symbol	Value		Unit
Collector-Emitter Voltage	V_{CEO}	40		Vdc
Collector-Base Voltage	V_{CBO}	75		Vdc
Emitter-Base Voltage	V_{EBO}	6.0		Vdc
Collector Current — Continuous	I_C	600		mAdc
		One Die	Both Die Equal Power	
Total Device Dissipation @ T_A = 25°C Derate above 25°C	P_D	500 2.9	600 3.4	mW mW/°C
Total Device Dissipation @ T_C = 25°C Derate above 25°C	P_D	1.2 6.9	2.0 11.43	Watts mW/°C
Operating and Storage Junction Temperature Range	T_J, T_{stg}	−65 to +200		°C

Refer to MD2218,A for graphs.

ELECTRICAL CHARACTERISTICS (T_A = 25°C unless otherwise noted.)

Characteristic		Symbol	Min	Max	Unit
OFF CHARACTERISTICS					
Collector-Emitter Breakdown Voltage(1) (I_C = 10 mAdc, I_B = 0)		$V_{(BR)CEO}$	40	—	Vdc
Collector-Base Breakdown Voltage (I_C = 10 μAdc, I_E = 0)		$V_{(BR)CBO}$	75	—	Vdc
Emitter-Base Breakdown Voltage (I_E = 10 μAdc, I_C = 0)		$V_{(BR)EBO}$	6.0	—	Vdc
Collector Cutoff Current (V_{CB} = 50 Vdc, I_E = 0)		I_{CBO}	—	10	nAdc
Emitter Cutoff Current (V_{EB} = 4.0 Vdc, I_C = 0)		I_{EBO}	—	10	nAdc
Collector 1 to Collector 2 Leakage Current (V_{1C-2C} = ± 50 Vdc)		I_{C1-C2}	—	±1.0	nAdc
ON CHARACTERISTICS					
DC Current Gain		h_{FE}			—
(I_C = 100 μAdc, V_{CE} = 10 Vdc)	2N5793		20	—	
	2N5794		35	—	
(I_C = 1.0 mAdc, V_{CE} = 10 Vdc)	2N5793		25	—	
	2N5794		50	—	
(I_C = 10 mAdc, V_{CE} = 10 Vdc)(1)	2N5793		35	—	
	2N5794		75	—	
(I_C = 150 mAdc, V_{CE} = 1.0 Vdc)(1)	2N5793		20	—	
	2N5794		50	—	
(I_C = 150 mAdc, V_{CE} = 10 Vdc)(1)	2N5793		40	120	
	2N5794		100	300	
(I_C = 300 mAdc, V_{CE} = 10 Vdc)(1)	2N5793		25	—	
	2N5794		40	—	
Collector-Emitter Saturation Voltage(1) (I_C = 150 mAdc, I_B = 15 mAdc) (I_C = 300 mAdc, I_B = 30 mAdc)		$V_{CE(sat)}$	— —	0.3 0.9	Vdc
Base-Emitter Saturation Voltage(1) (I_C = 150 mAdc, I_B = 15 mAdc) (I_C = 300 mAdc, I_B = 30 mAdc)		$V_{BE(sat)}$	0.6 —	1.2 1.8	Vdc
SMALL-SIGNAL CHARACTERISTICS					
Current-Gain — Bandwidth Product(2) (I_C = 20 mAdc, V_{CE} = 20 Vdc, f = 100 MHz)		f_T	250	—	MHz
Collector-Base Capacitance (V_{CB} = 10 Vdc, I_E = 0, f = 100 kHz)		C_{cb}	—	8.0	pF
Emitter-Base Capacitance (V_{EB} = 0.5 Vdc, I_C = 0, f = 100 kHz)		C_{eb}	—	25	pF
SWITCHING CHARACTERISTICS					
Delay Time	(V_{CC} = 30 Vdc, $V_{BE(off)}$ = 0.5 Vdc,	t_d	—	15	ns
Rise Time	I_C = 150 mAdc, I_{B1} = 15 mAdc)	t_r	—	30	ns
Storage Time	(V_{CC} = 30 Vdc, I_C = 150 mAdc,	t_s	—	250	ns
Fall Time	I_{B1} = I_{B2} = 15 mAdc)	t_f	—	60	ns

(1) Pulse Test: Pulse Width ≤ 300 μs, Duty Cycle ≤ 2.0%.
(2) f_T is defined as the frequency at which $|h_{fe}|$ extrapolates to unity.