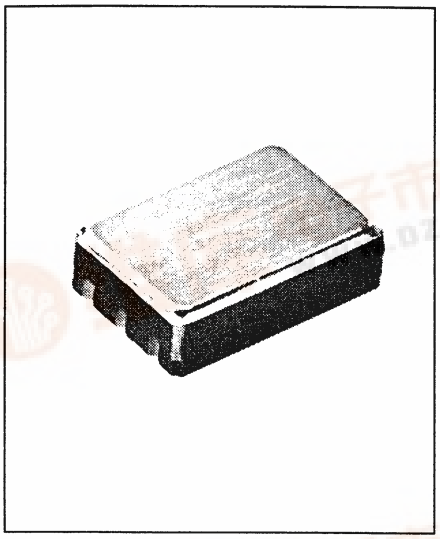
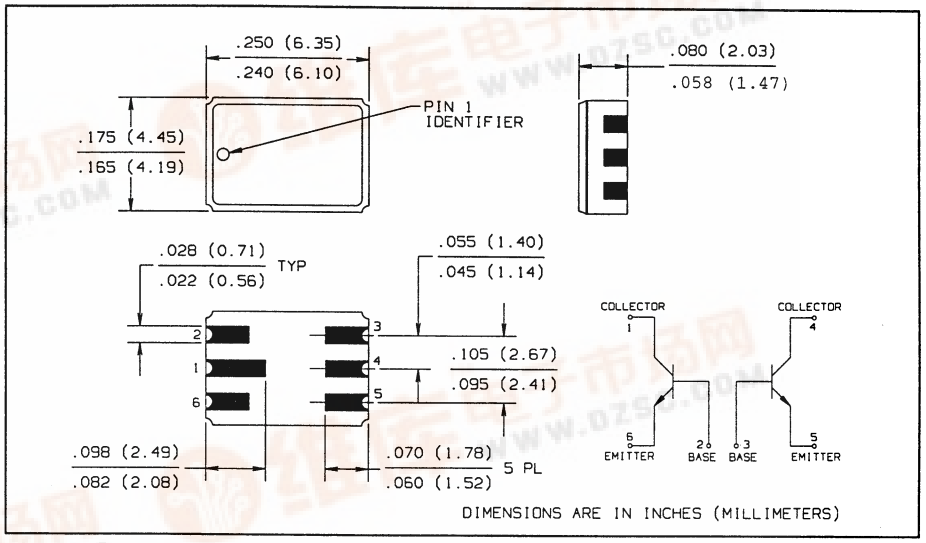
Surface Mount Dual NPN Transistor
Type JANTX, JANTXV, 2N5794U





Features

- Ceramic surface mount package
- Hermetically sealed
- Miniature package minimizes circuit board area required
- Electrical performance similar to dual 2N2222
- Qualification per MIL-PRF-19500/495

Description

The JANTX2N5794U is a hermetically sealed, ceramic surface-mount device, consisting of two individual silicon NPN transistors. The six pin ceramic package is ideal for designs where board space and device weight are important design considerations.

Typical screening and lot acceptance tests are provided on page 13-4. The burn-in condition is V_{CB} = 30 V, P_D = 300 mW each tansistor, T_A = 25° C. Refer to MIL-PRF-19500/495 for complete requirements.

When ordering parts without processing, do not use a JAN prefix.

Absolute Maximum Ratings (T_A = 25° C unless otherwise noted)

Collector-Emitter Voltage	40 V
Collector-Base Voltage	75 V
Emitter-Base Voltage	6 V
Collector Current Continuous (T_A = 25° C)	600 mA
Operating and Storage (T_J, T_{stg})	-65° C to +200° C
Power Dissipation (single transistor, no heat sink)	0.5 W
Power Dissipation (total device)	0.6 W

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Electrical Characterics (T_A = 25° C unless otherwise noted)

SYMBOL	PARAMETER	MIN	MAX	UNIT	TEST CONDITIONS
$V_{(BR)CEO}$	Collector-Emitter Breakdown Voltage	40		V	I_C = 10 mA(1)
I_{CBO1}	Collector-Base Cutoff Current		10	µA	V_{CB} = 75 V
I_{CBO2}	Collector-Base Cutoff Current		10	nA	V_{CB} = 50 V
I_{CBO3}	Collector-Base Cutoff Current		10	µA	V_{BC} = 50 V, T_A = 150° C
I_{EBO1}	Emitter-Base Breakdown Voltage		10	V	V_{EB} = 6 V
I_{EBO2}	Emitter-Base Cutoff Current		10	nA	V_{EB} = 4 V
h_{FE1}	Forward Current Transfer Ratio	35			V_{CE} = 10 V, I_C = 0.1 mA
h_{FE2}	Forward Current Transfer Ratio	50			V_{CE} = 10 V, I_C = 1.0 mA
h_{FE3}	Forward Current Transfer Ratio	75			V_{CE} = 10 V, I_C = 10 mA(1)
h_{FE4}	Forward Current Transfer Ratio	100	300		V_{CE} = 10 V, I_C = 150 mA(1)
h_{FE5}	Forward Current Transfer Ratio	40			V_{CE} = 10 V, I_C = 300 mA(1)
h_{FE6}	Forward Current Transfer Ratio	50			V_{CE} = 1.0 V, I_C = 150 mA(1)
h_{FE7}	Forward Current Transfer Ratio	40			V_{CE} = 10 V, I_C = 150 mA, T_A = -55° C(1)
$V_{CE(SAT)1}$	Collector-Emitter Saturation Voltage		0.3	V	I_C = 150 mA, I_B = 15 mA(1)
$V_{CE(SAT)2}$	Collector-Emitter Saturation Voltage		0.9	V	I_C = 300 mA, I_B = 30 mA(1)
$V_{BE(SAT)1}$	Base-Emitter Saturation Voltage	0.6	1.2	V	I_C = 150 mA, I_B = 15 mA(1)
$V_{BE(SAT)2}$	Base-Emitter Saturation Voltage		1.8	V	I_C = 300 mA, I_B = 30 mA(1)
$\lvert h_{fe} \rvert$	Magnitude of Small-Signal Short-Circuit Forward Current Transfer Ratio	2	10		V_{CE} = 20 V, I_C = 20 mA, f = 100 MHz
C_{obo}	Open Circuit Output Capacitance		8	pF	V_{CB} = 10 V, I_E = 0, 100 kHz ≤ f ≤ 1 MHz
C_{ibo}	Input Capacitance		33	pF	V_{EB} = 0.5 V, I_C = 0, 100 kHz ≤ f ≤ 1 MHz
t_{on}	Turn-On Time		45	ns	V_{CC} = 30 V, I_C = 150 mA, I_{B1} = 15 mA PW = 200 ns
t_{off}	Turn-Off Time		310	ns	V_{CC} = 30 V, I_C = 150 mA, I_{B1} = I_{B2} = 15 mA, PW = 10 µs

(1) Pulsed Test: Pulse Width = 300 µs ±50, 1-2 % Duty Cycle.