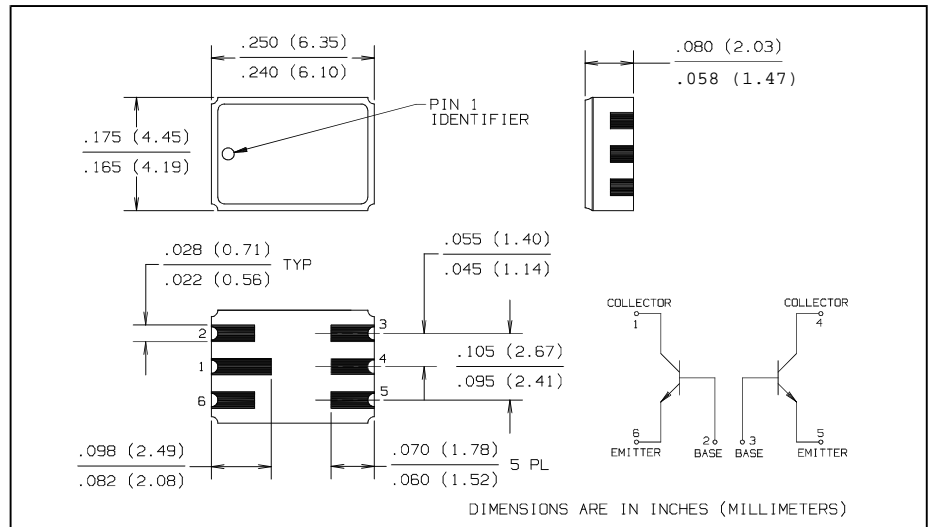


Surface Mount Dual NPN Transistor Type JANTX, JANTXV, 2N5794U



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 $V_{CB} = 30\text{ V}$, $P_D = 300\text{ mW}$ each transistor, $T_A = 25^\circ\text{ C}$. Refer to MIL-PRF-19500/495 for complete requirements.

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

Absolute Maximum Ratings ($T_A = 25^\circ\text{ C}$ unless otherwise noted)

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

Type JANTX, JANTXV, 2N5794U

Electrical Characteristics ($T_A = 25^\circ\text{C}$ unless otherwise noted)

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

(1) Pulsed Test: Pulse Width = $300\text{ }\mu\text{s} \pm 50$, 1-2 % Duty Cycle.

HI-REL
SURFACE
MOUNT

Optek reserves the right to make changes at any time in order to improve design and to supply the best product possible.

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