

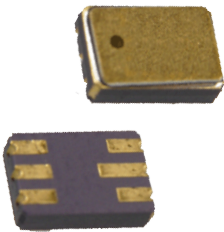
Surface Mount Dual PNP Transistor

2N5796U (TX, TXV)



Features:

- Ceramic 6 pin surface mount package
- Small package to minimize circuit board area
- Hermetically sealed
- Electrical performance similar to dual 2N2907A
- Processed per MIL-PRF-19500/496



Description:

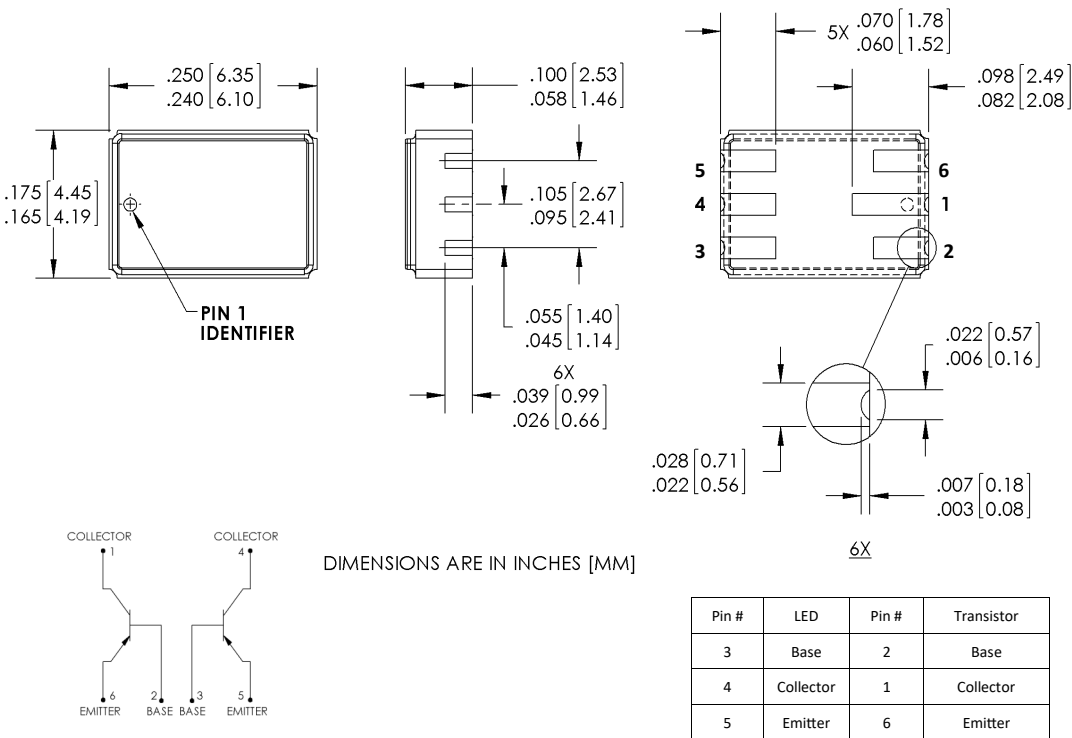
The 2N5796U (TX, TXV) are hermetically sealed, ceramic surface mount devices, consisting of two individual silicon PNP transistors. The six pin ceramic package is ideal for designs where board space and device weight are important design considerations.

Typical screening and lot acceptance tests are per MIL-PRF-19500/496. 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-19500/496 for complete requirements.

When ordering parts without processing, do not use the TX or TXV suffix.

Applications:

- General switching
- Amplification
- Signal processing
- Radio transmission
- Logic gates



General Note
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Electrical Specifications

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

Collector-Emitter Voltage	60 V
Collector-Base Voltage	60 V
Emitter-Base Voltage	5 V
Collector Current-Continuous	600 mA
Operating Junction Temperature (T_J)	-65°C to $+200^\circ\text{C}$
Storage Junction Temperature (T_{stg})	-65°C to $+200^\circ\text{C}$
Power Dissipation @ $T_A = 25^\circ\text{C}$	0.5 W
Power Dissipation @ $T_c = 25^\circ\text{C}$	0.6 W ⁽¹⁾
Soldering Temperature (vapor phase reflow for 30 seconds)	215°C
Soldering Temperature (heated collet for 5 seconds)	260°C

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

SYMBOL	PARAMETER	MIN	MAX	UNITS	TEST CONDITIONS
OFF CHARACTERISTICS					
$V_{(BR)CBO}$	Collector-Base Breakdown Voltage	75			$I_C = 10\ \mu\text{A}$
$V_{(BR)CEO}$	Collector-Emitter Breakdown Voltage	60		V	$I_C = 10\ \text{mA}^{(1)}$
$V_{(BR)EBO}$	Emitter-Base Breakdown Voltage	5		V	$I_E = 10\ \mu\text{A}$
I_{CBO1}	Collector-Base Cutoff Current		10	nA	$V_{CB} = 50\ \text{V}$
I_{CBO2}	Collector-Base Cutoff Current		10	μA	$V_{BC} = 50\ \text{V}$, $T_A = 150^\circ\text{C}$
I_{EBO}	Emitter-Base Cutoff Current		100	nA	$V_{EB} = 3\ \text{V}$
h_{FE1}	Forward-Current Transfer Ratio	75		-	$V_{CE} = 10\ \text{V}$, $I_C = 100\ \mu\text{A}$
h_{FE2}		100		-	$V_{CE} = 10\ \text{V}$, $I_C = 1.0\ \text{mA}$
h_{FE3}		100		-	$V_{CE} = 10\ \text{V}$, $I_C = 10\ \text{mA}^{(1)}$
h_{FE4}		100	300	-	$V_{CE} = 10\ \text{V}$, $I_C = 150\ \text{mA}^{(1)}$
h_{FE5}		50		-	$V_{CE} = 10\ \text{V}$, $I_C = 300\ \text{mA}^{(1)}$
h_{FE6}		50		-	$V_{CE} = 1.0\ \text{V}$, $I_C = 150\ \text{mA}^{(1)}$
h_{FE7}		40		-	$V_{CE} = 10\ \text{V}$, $I_C = 150\ \text{mA}$, $T_A = -55^\circ\text{C}^{(1)}$

Note:

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

General Note

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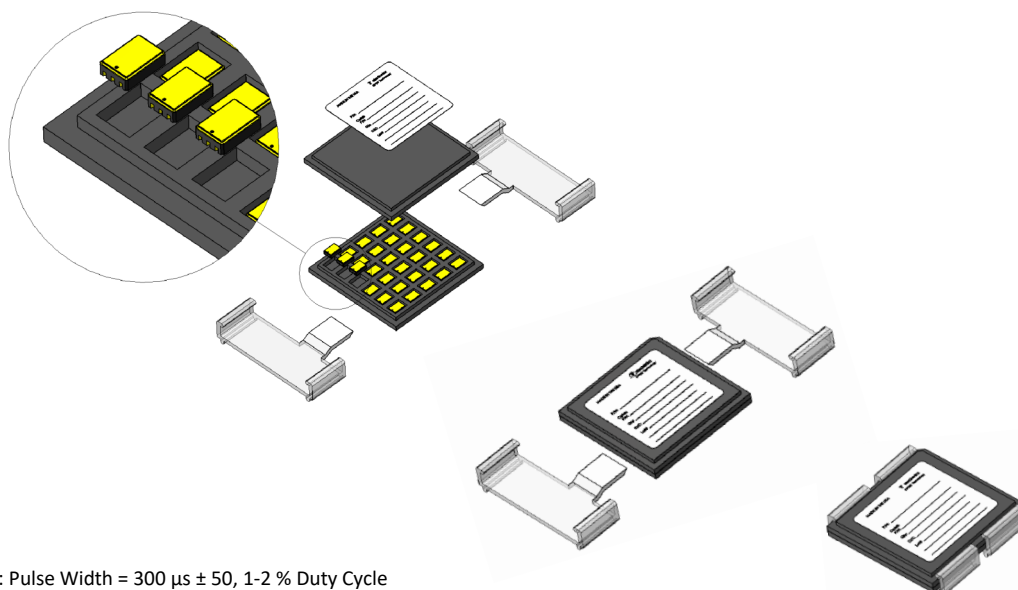
Electrical Specifications

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

SYMBOL	PARAMETER	MIN	MAX	UNITS	TEST CONDITIONS
Off Characteristics continued					
$V_{CE(SAT)1}$	Collector-Emitter Saturation Voltage		0.4	V	$I_C = 150 \text{ mA}$, $I_B = 15 \text{ mA}^{(1)}$
$V_{CE(SAT)2}$	Collector-Emitter Saturation Voltage		1.6	V	$I_C = 500 \text{ mA}$, $I_B = 50 \text{ mA}^{(1)}$
$V_{BE(SAT)1}$	Base-Emitter Saturation Voltage		1.3	V	$I_C = 150 \text{ mA}$, $I_B = 15 \text{ mA}^{(1)}$
$V_{BE(SAT)1}$	Base-Emitter Saturation Voltage		2.6	V	$I_C = 500 \text{ mA}$, $I_B = 50 \text{ mA}^{(1)}$
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 (output open)		25	pF	$V_{EB} = 2.0 \text{ V}$, $I_E = 0$, $100 \text{ kHz} \leq f \leq 1 \text{ MHz}$
t_{on}	Turn-on Time		50	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		140	ns	$V_{CC} = 30 \text{ V}$, $I_C = 150 \text{ mA}$, $I_{B1} = I_{B2} = 15 \text{ mA}$, $PW = 200 \text{ ns}$

Standard Packaging:

Waffle Pack



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