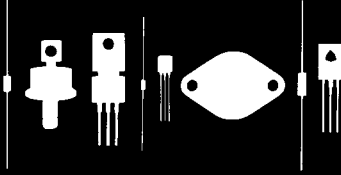


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2N3726

2N3727

PNP DUAL SILICON TRANSISTOR

JEDEC TO-78 CASE

**DESCRIPTION**

The CENTRAL SEMICONDUCTOR 2N3726, 2N3727 types are silicon PNP dual transistors manufactured by the epitaxial planar process utilizing 2 individual chips mounted in a hermetically sealed metal case designed for differential amplifier applications.

**MAXIMUM RATINGS** ( $T_A=25^\circ\text{C}$  unless otherwise noted)

	SYMBOL		UNIT
Collector-Base Voltage	$V_{CB0}$	45	V
Collector-Emitter Voltage	$V_{CE0}$	45	V
Emitter-Base Voltage	$V_{EB0}$	5.0	V
Collector Current	$I_C$	300	mA
Base Current	$I_B$	100	mA
Power Dissipation (One Die)	$P_D$	400	mW
Power Dissipation (Both Dice)	$P_D$	500	mW
Power Dissipation (One Die, $T_C=25^\circ\text{C}$ )	$P_D$	850	mW
Power Dissipation (Both Dice, $T_C=25^\circ\text{C}$ )	$P_D$	1400	mW
Operating and Storage Junction Temperature	$T_J, T_{STG}$	-65 to +200	$^\circ\text{C}$
Collector 1 to Collector 2 Voltage (Voltage Rated From Any Lead to the Case)	$V_{C1}, V_{C2}$	$\pm 200$	V

**ELECTRICAL CHARACTERISTICS** ( $T_A=25^\circ\text{C}$  unless otherwise noted)

SYMBOL	TEST CONDITIONS	MIN	MAX	UNIT
$I_{CB0}$	$V_{CB}=30\text{V}$		10	nA
$I_{CB0}$	$V_{CB}=30\text{V}, T_A=150^\circ\text{C}$		10	$\mu\text{A}$
$I_{EB0}$	$V_{BE}=3.0\text{V}$		0.1	$\mu\text{A}$
$BV_{CB0}$	$I_C=10\mu\text{A}$	45		V
$BV_{CE0}$	$I_C=10\text{mA}$	45		V
$BV_{EB0}$	$I_E=10\mu\text{A}$	5.0		V
$V_{CE(SAT)}$	$I_C=50\text{mA}, I_B=2.5\text{mA}$		0.25	V
$V_{BE(SAT)}$	$I_C=50\text{mA}, I_B=2.5\text{mA}$		1.0	V
$h_{FE}$	$V_{CE}=5.0\text{V}, I_C=10\mu\text{A}$	80	-	
$h_{FE}$	$V_{CE}=5.0\text{V}, I_C=100\mu\text{A}$	120	-	
$h_{FE}$	$V_{CE}=5.0\text{V}, I_C=1.0\text{mA}$	135	350	
$h_{FE}$	$V_{CE}=5.0\text{V}, I_C=50\text{mA}$	115	-	
$h_{fe}$	$V_{CE}=10\text{V}, I_C=1.0\text{mA}, f=1.0\text{kHz}$	135	420	
$f_T$	$V_{CE}=10\text{V}, I_C=1.0\text{mA}, f=20\text{MHz}$	60	-	MHz
$f_T$	$V_{CE}=20\text{V}, I_C=50\text{mA}, f=100\text{MHz}$	200	600	MHz
$h_{ie}$	$V_{CE}=10\text{V}, I_C=1.0\text{mA}, f=1.0\text{kHz}$	-	11.5	$k\Omega$
$h_{re}$	$V_{CE}=10\text{V}, I_C=1.0\text{mA}, f=1.0\text{kHz}$	-	1500	$\times 10^{-6}$
$h_{oe}$	$V_{CE}=10\text{V}, I_C=1.0\text{mA}, f=1.0\text{kHz}$		80	$\mu\text{mhos}$
$C_{ib}$	$V_{EB}=0.5\text{V}, I_C=0, f=1.0\text{MHz}$		30	pF
$C_{ob}$	$V_{CB}=10\text{V}, I_E=0, f=1.0\text{MHz}$		8.0	pF
NF	$V_{CE}=5.0\text{V}, I_C=30\mu\text{A}, R_S=10k\Omega, f=1.0\text{kHz}, BW=200\text{Hz}$		4.0	dB

(ELECTRICAL CHARACTERISTICS CONTINUED ON OTHER SIDE)

MATCHING CHARACTERISTICS:

		<u>MIN</u>	<u>MAX</u>
$ V_{BE1}-V_{BE2} $	$V_{CE}=5.0V, I_C=0.1mA \text{ to } 1.0mA$ (2N3726)		5.0
$ V_{BE1}-V_{BE2} $	$V_{CE}=5.0V, I_C=0.1mA \text{ to } 1.0mA$ (2N3727)		2.5
$\Delta(V_{BE1}-V_{BE2})$	$V_{CE}=5.0V, I_C=0.1mA \text{ to } 1.0mA, T_A=-55^\circ C \text{ to } +25^\circ C$ (2N3726)		1.6
$\Delta(V_{BE1}-V_{BE2})$	$V_{CE}=5.0V, I_C=0.1mA \text{ to } 1.0mA, T_A=-55^\circ C \text{ to } +25^\circ C$ (2N3727)		0.8
$\Delta(V_{BE1}-V_{BE2})$	$V_{CE}=5.0V, I_C=0.1mA \text{ to } 1.0mA, T_A=+25^\circ C \text{ to } +125^\circ C$ (2N3726)		2.0
$\Delta(V_{BE1}-V_{BE2})$	$V_{CE}=5.0V, I_C=0.1mA \text{ to } 1.0mA, T_A=+25^\circ C \text{ to } +125^\circ C$ (2N3727)		1.0
$h_{FE1}/h_{FE2}$	$V_{CE}=5.0V, I_C=0.1 \text{ to } 1.0mA$	0.9	1.0

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