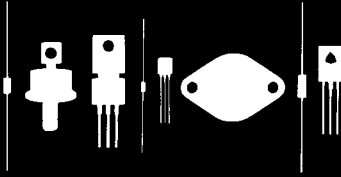


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145 Adams Avenue
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2N3726

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}	± 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	μA
I_{EB0}	$V_{BE}=3.0\text{V}$		0.1	μA
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	μmhos
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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