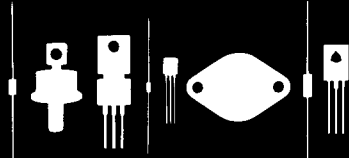


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145 Adams Avenue
Hauppauge, New York 11788



2N3740, A

2N3741, A

PNP SILICON POWER TRANSISTORS

JEDEC TO-66 CASE

DESCRIPTION

The CENTRAL SEMICONDUCTOR 2N3740 series types are silicon PNP power transistors manufactured by the epitaxial base process designed for power amplifier and medium speed switching applications.

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

	<u>SYMBOL</u>	<u>2N3740, A</u>	<u>2N3741, A</u>	<u>UNIT</u>
Collector-Base Voltage	V_{CB0}	60	80	V
Collector-Emitter Voltage	V_{CE0}	60	80	V
Emitter-Base Voltage	V_{EB0}	7.0		V
Collector Current	I_C	4.0		A
Collector Current-Peak	I_{CM}	10		A
Base Current	I_B	2.0		A
Power Dissipation	P_D	25		W

Operating and Storage Junction Temperature T_J, T_{STG} -65 to +200 °C

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

<u>SYMBOL</u>	<u>TEST CONDITIONS</u>	<u>2N3740, A</u>		<u>2N3741, A</u>		<u>UNIT</u>
		<u>MIN</u>	<u>MAX</u>	<u>MIN</u>	<u>MAX</u>	
I_{CEV}	$V_{CE}=\text{Rated } V_{CE0}, V_{BE}(\text{OFF})=1.5\text{V (2N3740,41)}$		100	100		μA
I_{CEV}	$V_{CE}=\text{Rated } V_{CE0}, V_{BE}(\text{OFF})=1.5\text{V (2N3740A,41A)}$		100	100		nA
I_{CEV}	$V_{CE}=40\text{V}, V_{BE}(\text{OFF})=1.5\text{V}, T_C=150^\circ\text{C (2N3740)}$		1.0	-		mA
I_{CEV}	$V_{CE}=40\text{V}, V_{BE}(\text{OFF})=1.5\text{V}, T_C=150^\circ\text{C (2N3740A)}$		0.5	-		mA
I_{CEV}	$V_{CE}=60\text{V}, V_{BE}(\text{OFF})=1.5\text{V}, T_C=150^\circ\text{C (2N3741)}$		-	1.0		mA
I_{CEV}	$V_{CE}=60\text{V}, V_{BE}(\text{OFF})=1.5\text{V}, T_C=150^\circ\text{C (2N3741A)}$		-	0.5		mA
I_{CB0}	$V_{CB}=\text{Rated } V_{CB0} \text{ (2N3740, 2N3741)}$		100	100		μA
I_{CB0}	$V_{CB}=\text{Rated } V_{CB0} \text{ (2N3740A, 2N3741A)}$		100	100		nA
I_{CE0}	$V_{CE}=40\text{V (2N3740)}$		1.0	-		mA
I_{CEQ}	$V_{CE}=40\text{V (2N3740A)}$		1.0	-		μA
I_{CE0}	$V_{CE}=60\text{V (2N3741)}$		-	1.0		mA
I_{CE0}	$V_{CE}=60\text{V (2N3741A)}$		-	1.0		μA
I_{EB0}	$V_{EB}=7.0\text{V (2N3740, 2N3741)}$		0.5	0.5		mA
I_{EB0}	$V_{EB}=7.0\text{V (2N3740A, 2N3741A)}$		100	100		nA
BV_{CE0}	$I_C=100\text{mA}$	60		80		V
$V_{CE}(\text{SAT})$	$I_C=1.0\text{A}, I_B=125\text{mA}$		0.6	0.6		V
$V_{BE}(\text{ON})$	$V_{CE}=1.0\text{V}, I_C=250\text{mA}$		1.0	1.0		V
hFE	$V_{CE}=1.0\text{V}, I_C=100\text{mA}$	40	-	40	-	
hFE	$V_{CE}=1.0\text{V}, I_C=250\text{mA}$	30	150	30	150	
hFE	$V_{CE}=1.0\text{V}, I_C=500\text{mA}$	20	-	20	-	
hFE	$V_{CE}=1.0\text{V}, I_C=1.0\text{A}$	10	-	10	-	
hfe	$V_{CE}=10\text{V}, I_C=50\text{mA}, f=1.0\text{kHz}$	25	-	25	-	
f_T	$V_{CE}=10\text{V}, I_C=100\text{mA}, f=1.0\text{MHz}$	4.0		4.0		MHz
C_{ob}	$V_{CB}=10\text{V}, I_C=0, f=100\text{kHz}$		100	100		pF