Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!

Contact us

Tel: +86-755-8981 8866 Fax: +86-755-8427 6832
Email & Skype: info@chipsmall.com Web: www.chipsmall.com
Address: A1208, Overseas Decoration Building, #122 Zhenhua RD., Futian, Shenzhen, China

6 Lake Street, Lawrence, MA 01841
1-800-446-1158 / (978) 620-2600 / Fax: (978) 689-0803
Website: http: //www.microsemi.com

Gort Road Business Park, Ennis, Co. Clare, Ireland
Tel: +353 (0) 65 6840044 Fax: +353 (0) 65 6822298

TECHNICAL DATA SHEET

PNP POWER SILICON TRANSISTOR

Qualified per MIL-PRF-19500/441

DEVICES

2N3740 2N3741

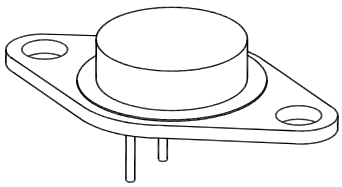
LEVELS

JAN
JANTX
JANTXV
JANS

ABSOLUTE MAXIMUM RATINGS *(T_C = +25°C unless otherwise noted)*

Parameters / Test Conditions	Symbol	2N3740	2N3741	Unit
Collector-Emitter Voltage	V_{CEO}	60	80	Vdc
Collector-Base Voltage	V_{CBO}	60	80	Vdc
Emitter-Base Voltage	V_{EBO}	7.0		Vdc
Base Current	I_B	2.0		Adc
Collector Current	I_C	4.0		Adc
Total Power Dissipation @ T_A = +25°C (1) @ T_C = +100°C	P_T	25 14		W
Operating & Storage Junction Temperature Range	T_J, T_{stg}	-65 to +200		°C
Thermal Resistance, Junction-to-Case	$R_{\theta JC}$	7.0		°C/W

Note: (1) Derate linearly @ 143 mW/°C for T_C > +25°C



TO-66 (TO-213AA)

* See Appendix A for Package Outline

ELECTRICAL CHARACTERISTICS *(T_A = +25°C, unless otherwise noted)*

Parameters / Test Conditions		Symbol	Min.	Max.	Unit
OFF CHARACTERTICS					
Collector-Emitter Breakdown Voltage I_C = 100mAdc	2N3740 2N3741	$V_{(BR)CEO}$	60 80		Vdc
Collector-Emitter Cutoff Current V_{CE} = 40Vdc V_{CE} = 60Vdc	2N3740 2N3741	I_{CEO}		10 10	µAdc
Collector-Emitter Cutoff Current V_{CE} = 60Vdc, V_{BE} = 1.5Vdc V_{CE} = 80Vdc, V_{BE} = 1.5Vdc	2N3740 2N3741	I_{CEX}		300 300	ηAdc
Collector-Base Cutoff Current V_{CB} = 60Vdc V_{CB} = 80Vdc	2N3740 2N3741	I_{CBO}		100 100	ηAdc
Emitter-Base Cutoff Current V_{EB} = 7.0Vdc		I_{EBO}		100	ηAdc

6 Lake Street, Lawrence, MA 01841
1-800-446-1158 / (978) 620-2600 / Fax: (978) 689-0803
Website: http: //www.microsemi.com

Gort Road Business Park, Ennis, Co. Clare, Ireland
Tel: +353 (0) 65 6840044 Fax: +353 (0) 65 6822298

ELECTRICAL CHARACTERISTICS *(T_A = +25°C, unless otherwise noted)*

Parameters / Test Conditions	Symbol	Min.	Max.	Unit
ON CHARACTERISTICS (2)				
Forward-Current Transfer Ratio I_C = 100mAdc, V_{CE} = 1.0Vdc I_C = 250mAdc, V_{CE} = 1.0Vdc I_C = 500mAdc, V_{CE} = 1.0Vdc I_C = 1.0Adc, V_{CE} = 1.0Vdc I_C = 4.0Adc, V_{CE} = 5.0Vdc	h_{FE}	 40 30 20 10 3.0	 120	
Collector-Emitter Saturation Voltage I_C = 250mAdc, I_B = 25mAdc I_C = 1.0Adc, I_B = 125mAdc	$V_{CE(sat)}$		 0.4 0.6	Vdc
Base-Emitter Voltage I_C = 250mAdc, V_{CE} = 1.0Vdc	$V_{BE(on)}$		1.0	Vdc

DYNAMIC CHARACTERISTICS

Parameters / Test Conditions	Symbol	Min.	Max.	Unit
Magnitude of Common Emitter Small-Signal Short-Circuit Forward Current Transfer Ratio I_C = 100mAdc, V_{CE} = 10Vdc, f = 5.0MHz	$\|h_{fe}\|$	1.0	12	
Small-Signal Short-Circuit Forward Current Transfer Ratio I_C = 50mAdc, V_{CE} = 10Vdc, f = 1.0kHz	h_{fe}	25	250	
Output Capacitance V_{CB} = 10Vdc, I_E = 0, 100kHz ≤ f ≤ 1.0MHz	C_{obo}		100	pF

SWITCHING CHARACTERISTICS

Parameters / Test Conditions	Symbol	Min.	Max.	Unit
Turn-On Time V_{CC} = 30Vdc; I_C = 1.0Adc; I_B = 0.1Adc	t_{on}		400	µs
Turn-Off Time V_{CC} = 30Vdc; I_C = 1.0Adc; I_{B1} = I_{B2} = 0.1Adc	t_{off}		1.0	µs

SAFE OPERATING AREA

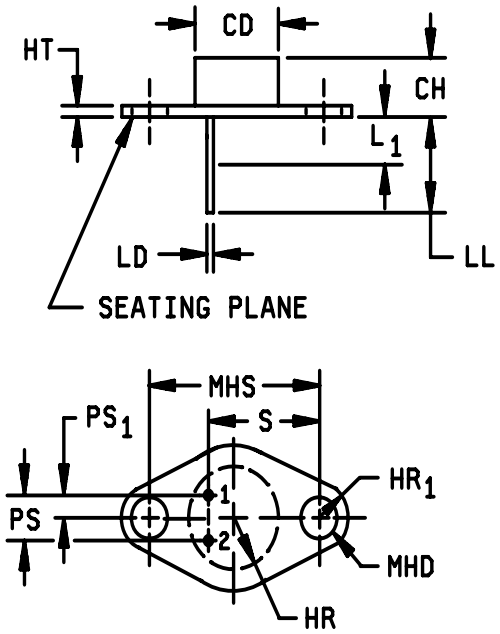
DC Tests
T_C = +25°C, 1 Cycle, t = 1.0s
Test 1
V_{CE} = 6.25Vdc, I_C = 4.0Adc
Test 2
V_{CE} = 20Vdc, I_C = 1.25Adc
Test 3
V_{CE} = 50Vdc, I_C = 150mAdc 2N3740
V_{CE} = 65Vdc, I_C = 150mAdc 2N3741

(2) Pulse Test: Pulse Width = 300µs, Duty Cycle ≤ 2.0%.

6 Lake Street, Lawrence, MA 01841
1-800-446-1158 / (978) 620-2600 / Fax: (978) 689-0803
Website: http: //www.microsemi.com

Gort Road Business Park, Ennis, Co. Clare, Ireland
Tel: +353 (0) 65 6840044 Fax: +353 (0) 65 6822298

PACKAGE DIMENSIONS



Ltr	Dimensions				Notes
	Inches		Millimeters		
	Min	Max	Min	Max	
CD		.620		15.75	9
CH	.250	.340	6.35	8.64	
HT	.050	.075	1.27	1.91	
HR		.350		8.89	
HR_1	.115	.145	2.92	3.68	5
LD	.028	.034	0.71	0.86	4, 8, 9
LL	.360	.500	9.14	12.70	4, 8
L_1		.050		1.27	4, 8
MHD	.142	.152	3.61	3.86	6, 9
MHS	.958	.962	24.33	24.43	
PS	.190	.210	4.83	5.33	3
PS_1	.093	.107	2.36	2.72	3
S	.570	.590	14.48	14.99	3

NOTES:

1. Dimensions are in inches.
2. Millimeters are given for general information only.
3. These dimensions should be measured at points .050 to .055 inch (1.27 to 1.40 mm) below seating plane. When gauge is not used, measurement will be made at seating plane.
4. Both terminals.
5. At both ends.
6. Two holes.
7. The collector shall be electrically connected to the case.
8. LD applies between L1 and LL. Lead diameter shall not exceed twice LD within L1.
9. In accordance with ASME Y14.5M, diameters are equivalent to ϕ symbology.
10. Lead 1 is the emitter, lead 2 is the base, collector is the case.

FIGURE 1. Physical dimensions, TO-66 (2N3740, 2N3741)