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!

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Microsemi LAWRENCE

TECHNICAL DATA

PNP HIGH VOLTAGE SILICON TRANSISTOR

Qualified per MIL-PRF-19500/ 397

Devices			*Qualified Level*
2N3743	**2N4930**	**2N4931**	**JAN, JANTX JANTXV**

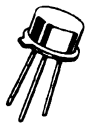
MAXIMUM RATINGS

Ratings	Sym	2N3743	2N4930	2N4931	Unit
Collector-Emitter Voltage	V_{CEO}	300	200	250	Vdc
Collector-Base Voltage	V_{CBO}	300	200	250	Vdc
Emitter-Base Voltage	V_{EBO}	5.0			Vdc
Collector Current	I_C	200			mAdc
Total Power Dissipation @T_A = +25^{0}C [1]	P_T	1.0			W
@T_C = +25^{0}C [2]		5.0			W
Operating & Storage Junction Temperature Range	T_J, T_{stg}	-65 to +200			^{0}C

THERMAL CHARACTERISTICS

Characteristics	Symbol	Max.	Unit
Thermal Resistance Junction-to-Case	$R_{\theta JC}$	35	^{0}C/W

1) Derate linearly 5.71 mW/^{0}C for T_A > +25^{0}C
2) Derate linearly 28.6 mW/^{0}C for T_C > +25^{0}C



TO-39*
(TO-205AD)

*See appendix A for package outline

ELECTRICAL CHARACTERISTICS (T_C = 25^{0}C unless otherwise noted)

Characteristics		Symbol	Min.	Max.	Unit
OFF CHARACTERISTICS					
Collector-Emitter Breakdown Voltage					
I_C = 1.0 mAdc	2N3743	$V_{(BR)CEO}$	300		Vdc
	2N4930		200		
	2N4931		250		
Collector-Emitter Breakdown Voltage					
I_C = 100 µAdc	2N3743	$V_{(BR)CBO}$	300		Vdc
	2N4930		200		
	2N4931		250		
Emitter-Base Breakdown Voltage					
I_E = 100 µAdc		$V_{(BR)EBO}$		5.0	Vdc
Collector-Base Cutoff Current					
V_{CB} = 250 Vdc	2N3743	I_{CBO}		250	ηAdc
V_{CB} = 150 Vdc	2N4930			250	
V_{CB} = 200 Vdc	2N4931			250	

ELECTRICAL CHARACTERISTICS (con't)

Characteristics	Symbol	Min.	Max.	Unit
Emitter-Base Cutoff Current V_{EB} = 4.0 Vdc	I_{EBO}		150	ηAdc
ON CHARACTERISTICS (3)				
Forward-Current Transfer Ratio I_C = 0.1 mAdc, V_{CE} = 10 Vdc I_C = 1.0 mAdc, V_{CE} = 10 Vdc I_C = 10 mAdc, V_{CE} = 10 Vdc I_C = 30 mAdc, V_{CE} = 10 Vdc I_C = 50 mAdc, V_{CE} = 20 Vdc	h_{FE}	 30 40 40 50 30	 200 	
Collector-Emitter Saturation Voltage I_C = 30 mAdc, I_B = 3.0 mAdc I_C = 10 mAdc, I_B = 1.0 mAdc	$V_{CE(sat)}$		1.2 1.0	Vdc
Base-Emitter Saturation Voltage I_C = 10 mAdc, I_B = 1.0 mAdc I_C = 30 mAdc, I_B = 3.0 mAdc	$V_{BE(sat)}$		1.0 1.2	Vdc
DYNAMIC CHARACTERISTICS				
Magnitude of Common Emitter Small-Signal Short-Circuit Forward Current Transfer Ratio I_C = 10 mAdc, V_{CE} = 20 Vdc, f = 20 MHz	$\lvert h_{fe} \rvert$	2.0	8.0	
Small-Signal Short-Circuit Forward Current Transfer Ratio I_C = 10 mAdc, V_{CE} = 10 Vdc, f = 1.0 kHz	h_{fe}	30	300	
Output Capacitance V_{CB} = 20 Vdc, I_E = 0, f ≥ 0.1 MHz	C_{obo}		15	pF
Input Capacitance V_{EB} = 1.0 Vdc, I_C = 0, f ≥ 0.1 MHz	C_{ibo}		400	pF

SAFE OPERATING AREA

DC Tests

T_C = +25^{0}C, 1 Cycle, t ≥ 1.0 s

Test 1

V_{CE} = 20 Vdc, I_C = 50 mAdc — All Types

Test 2

V_{CE} = 100 Vdc, I_C = 10 mAdc — All Types

Test 3

V_{CE} = 300 Vdc, I_C = 3.3 mAdc — 2N3743

V_{CE} = 200 Vdc, I_C = 5.0 mAdc — 2N4930

V_{CE} = 250 Vdc, I_C = 4.0 mAdc — 2N4931

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