



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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PNP SWITCHING SILICON TRANSISTOR

Qualified per MIL-PRF-19500/396

Devices

2N3762	2N3763	2N3764	2N3765
2N3762L	2N3763L		

Qualified Level

JAN
JANTX
JANTXV

MAXIMUM RATINGS

Ratings	Symbol	2N3762* 2N3764	2N3763* 2N3765	Unit
Collector-Emitter Voltage	V_{CEO}	40	60	Vdc
Collector-Base Voltage	V_{CBO}	40	60	Vdc
Emitter-Base Voltage	V_{EBO}	5.0		Vdc
Collector Current	I_C	1.5		Adc
		2N3762* ¹ 2N3763*	2N3764 ² 2N3765	
Total Power Dissipation @ $T_A = +25^{\circ}C$	P_T	1.0	0.5	W
Operating & Storage Junction Temp. Range	T_{op}, T_{stg}	-55 to +200		$^{\circ}C$

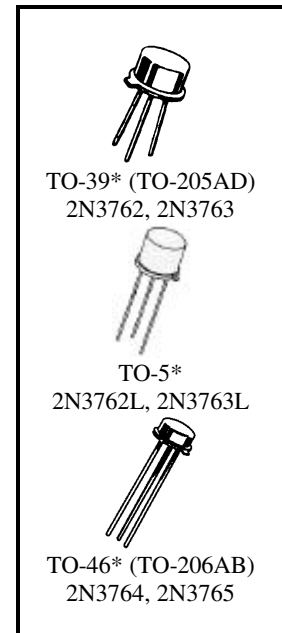
THERMAL CHARACTERISTICS

Characteristics	Symbol	Max.		Unit
		2N3762* 2N3763*	2N3764 2N3765	
Thermal Resistance Junction-to-Case	$R_{\theta JC}$	60	88	$^{\circ}C/W$

*Electrical characteristics for "L" suffix devices are identical to the "non L" corresponding devices

1) Derate linearly at 5.71 mW/ $^{\circ}C$ for $T_A > +25^{\circ}C$

2) Derate linearly at 2.86 mW/ $^{\circ}C$ for $T_A > +25^{\circ}C$



*See appendix A for package outline

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

Characteristics	Symbol	Min.	Max.	Unit
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OFF CHARACTERISTICS

Collector-Emitter Breakdown Current $I_C = 10$ mAdc	2N3762, 2N3764 2N3763, 2N3765	$V_{(BR)CEO}$	40 60	Vdc
Collector-Base Cutoff Current $V_{CB} = 20$ Vdc $V_{CB} = 30$ Vdc $V_{CB} = 40$ Vdc $V_{CB} = 60$ Vdc	2N3762, 2N3764 2N3763, 2N3765 2N3762, 2N3764 2N3763, 2N3765	I_{CBO}		100 100 10 10 η Adc μ Adc

2N3762, L, 2N3763, L, 2N3764, 2N3765 JAN SERIES

ELECTRICAL CHARACTERISTICS (con't)

Characteristics	Symbol	Min.	Max.	Unit
Collector-Emitter Cutoff Current $V_{EB} = 2.0 \text{ Vdc}$, $V_{CE} = 20 \text{ Vdc}$ $V_{EB} = 2.0 \text{ Vdc}$, $V_{CE} = 30 \text{ Vdc}$	I_{CEX}		100 100	ηAdc
Emitter-Base Cutoff Current $V_{EB} = 2.0 \text{ Vdc}$ $V_{EB} = 5.0 \text{ Vdc}$	I_{EBO}		200 10 10	ηAdc μAdc

ON CHARACTERISTICS (3)

Forward-Current Transfer Ratio $I_C = 10 \text{ mAdc}$, $V_{CE} = 1.0 \text{ Vdc}$ $I_C = 150 \text{ mAdc}$, $V_{CE} = 1.0 \text{ Vdc}$ $I_C = 500 \text{ mAdc}$, $V_{CE} = 1.0 \text{ Vdc}$ $I_C = 1.0 \text{ Adc}$, $V_{CE} = 1.5 \text{ Vdc}$ $I_C = 1.5 \text{ Adc}$, $V_{CE} = 5.0 \text{ Vdc}$	h_{FE}		35 40 40 30 20 30 20	140 120 80
Collector-Emitter Saturation Voltage $I_C = 10 \text{ mAdc}$, $I_B = 1.0 \text{ mAdc}$ $I_C = 150 \text{ mAdc}$, $I_B = 15 \text{ mAdc}$ $I_C = 500 \text{ mAdc}$, $I_B = 50 \text{ mAdc}$ $I_C = 1.0 \text{ Adc}$, $I_B = 100 \text{ mAdc}$	$V_{CE(sat)}$			0.1 0.22 0.5 0.9 Vdc
Base-Emitter Saturation Voltage $I_C = 10 \text{ mAdc}$, $I_B = 1.0 \text{ mAdc}$ $I_C = 150 \text{ mAdc}$, $I_B = 15 \text{ mAdc}$ $I_C = 500 \text{ mAdc}$, $I_B = 50 \text{ mAdc}$ $I_C = 1.0 \text{ Adc}$, $I_B = 100 \text{ mAdc}$	$V_{BE(sat)}$		0.9	0.8 1.0 1.2 1.4 Vdc

DYNAMIC CHARACTERISTICS

Forward Current Transfer Ratio, Magnitude $I_C = 50 \text{ mAdc}$, $V_{CE} = 10 \text{ Vdc}$, $f = 100 \text{ MHz}$	$ h_{fe} $		1.8 1.5	6.0 6.0
Output Capacitance $V_{CB} = 10 \text{ Vdc}$, $I_E = 0$, $100 \text{ kHz} \leq f \leq 1.0 \text{ MHz}$	C_{obo}			25 pF
Input Capacitance $V_{EB} = 0.5 \text{ Vdc}$, $I_C = 0$, $100 \text{ kHz} \leq f \leq 1.0 \text{ MHz}$	C_{ibo}			80 pF

SWITCHING CHARACTERISTICS

Delay Time	$V_{CC} = 30 \text{ Vdc}$, $V_{EB} = 0$,	t_d		8.0	ηs
Rise Time	$I_C = 1.0 \text{ mAdc}$, $I_{B1} = 100 \text{ mAdc}$	t_r		35	ηs
Storage Time	$V_{CC} = 30 \text{ Vdc}$, $V_{EB} = 0$,	t_s		80	ηs
Fall Time	$I_C = 1.0 \text{ mAdc}$, $I_{B1} = 100 \text{ mAdc}$	t_f		35	ηs

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