



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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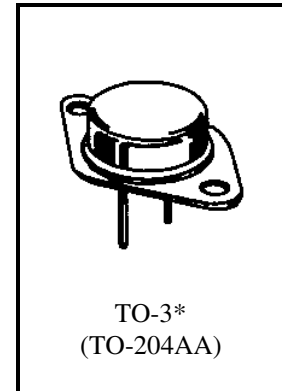
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NPN HIGH POWER SILICON TRANSISTOR
Qualified per MIL-PRF-19500/ 518
Devices
2N3771
2N3772
Qualified Level
**JANTX
JANTXV**
MAXIMUM RATINGS

Ratings	Symbol	2N3771	2N3772	Unit
Collector-Emitter Voltage	V_{CEO}	40	60	Vdc
Collector-Base Voltage	V_{CBO}	50	100	Vdc
Emitter-Base Voltage	V_{EBO}	7.0	7.0	Vdc
Base Current	I_B	7.5	5.0	Adc
Collector Current	I_C	30	20	Adc
Total Power Dissipation	P_T		6.0	W
			150	W
Operating & Storage Junction Temperature Range	T_J, T_{stg}	-65 to +200		$^{\circ}C$

 1) Derate linearly 34.2 mW/ $^{\circ}C$ for $T_A > +25^{\circ}C$

 2) Derate linearly 857 mW/ $^{\circ}C$ for $T_C > +25^{\circ}C$


*See Appendix A for Package Outline

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

Characteristics	Symbol	Min.	Max.	Unit
OFF CHARACTERISTICS				
Collector-Base Breakdown Voltage $I_C = 200$ mAdc	2N3771 2N3772	$V_{(BR)CEO}$	40 60	Vdc
Collector-Emitter Breakdown Voltage $I_C = 200$ mAdc, $R_{BE} = 100 \Omega$	2N3771 2N3772	$V_{(BR)CER}$	45 70	Vdc
Collector-Emitter Breakdown Voltage $I_C = 200$ mAdc, $V_{BE} = -1.5$ Vdc	2N3771 2N3772	$V_{(BR)CEX}$	50 90	Vdc
Collector-Emitter Cutoff Current $V_{CE} = 30$ Vdc $V_{CE} = 50$ Vdc	2N3771 2N3772	I_{CEO}	5.0 5.0	mAdc
Emitter-Base Cutoff Current $V_{BE} = 7.0$ Vdc	2N3771 2N3772	I_{EBO}	2.0	mAdc
Collector-Emitter Cutoff Current $V_{BE} = 1.5$ Vdc, $V_{CE} = 50$ Vdc $V_{BE} = 1.5$ Vdc, $V_{CE} = 100$ Vdc	2N3771 2N3772	I_{CEX}	500 500	μ Adc

2N3771, 2N3772 JAN SERIES

ELECTRICAL CHARACTERISTICS (con't)

Characteristics		Symbol	Min.	Max.	Unit
ON CHARACTERISTICS ⁽³⁾					
Forward-Current Transfer Ratio I _C = 15 Adc, V _{CE} = 4.0 Vdc I _C = 10 Adc, V _{CE} = 4.0 Vdc I _C = 1.0 Adc, V _{CE} = 4.0 Vdc	2N3771 2N3772 Both	h _{FE}	15 15 40	60 60 -	
Collector-Emitter Saturation Voltage I _C = 15 Adc, I _B = 1.5 Adc I _C = 30 Adc, I _B = 6.0 Adc I _C = 10 Adc, I _B = 1.0 Adc I _C = 20 Adc, I _B = 4.0 Adc	2N3771 2N3771 2N3772 2N3772	V _{CE(sat)}		1.5 4.0 1.2 4.0	Vdc
Base-Emitter Voltage (non-saturated) I _C = 15 Adc, V _{CE} = 4.0 Vdc I _C = 10 Adc, V _{CE} = 4.0 Vdc	2N3771 2N3772	V _{BE}		2.3 2.0	Vdc

DYNAMIC CHARACTERISTICS

Small-Signal Cutoff Frequency I _C = 1.0 Adc, V _{CE} = 10 Vdc, f = 1.0 kHz		h _{fe}	40		
Magnitude of Common Emitter Small-Signal Short-Circuit Forward-Current Transfer I _C = 1.0 Adc, V _{CE} = 4.0 Vdc, f = 100 kHz		h _{fe}	6.0	30	
Output Capacitance V _{CB} = 10 Vdc, I _E = 0, 100 kHz ≤ f ≤ 1.0 MHz		C _{obo}		1200	p ^f

SWITCHING CHARACTERISTICS

Turn-On Time V _{CC} = 30 Vdc; I _C = 15 Adc; I _{B1} = 1.5 Adc V _{CC} = 30 Vdc; I _C = 10 Adc; I _{B1} = 1.0 Adc	2N3771 2N3772	t _{on}		10 8.0	μs
Turn-Off Time V _{CC} = 30 Vdc; I _C = 15 Adc; I _{B1} = 1.5 Adc; I _{B2} = -1.5 Adc V _{CC} = 30 Vdc; I _C = 10 Adc; I _{B1} = 1.0 Adc; I _{B2} = -1.0 Adc	2N3771 2N3772	t _{off}		12 10	μs

SAFE OPERATING AREA

DC Tests T _C = +25°C, 1 Cycle, t = 1.0 s					
Test 1 (2N3771 only) V _{CE} = 5.0 Vdc, I _C = 30 Adc					
Test 2 (2N3771 only) V _{CE} = 40 Vdc, I _C = 3.75 Adc					
Test 3 (2N3772 only) V _{CE} = 7.5 Vdc, I _C = 20 Adc					
Test 4 (2N3772 only) V _{CE} = 60 Vdc, I _C = 2.5 Adc					
Clamped Inductive T _A = +25°C; duty cycle ≤ 10%; R _S = 0.1 Ω					
Test 1 (2N3771 only) R _{BB1} = 2.0 Ω; V _{BB1} ≤ 14 Vdc; R _{BB2} = 100 Ω; V _{CC} = 20±5.0 Vdc; V _{BB2} = 1.5 Vdc; I _C = 30 Adc; R _L ≤ 0.67 Ω; L = 5.0 mH					
Test 2 (2N3772 only) R _{BB1} = 2.0 Ω; V _{BB1} ≤ 10 Vdc; R _{BB2} = 100 Ω; V _{CC} = 40±5.0 Vdc; V _{BB2} = 1.5 Vdc; I _C = 20 Adc; R _L ≤ 2.0 Ω; L = 5.0 mH					

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