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

NPN POWER SILICON TRANSISTOR

Qualified per MIL-PRF-19500/407

Devices	*Qualified Level*
2N3055	**JAN** **JANTX**

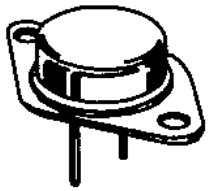
MAXIMUM RATINGS

Ratings	Symbol	Value	Units
Collector-Emitter Voltage	V_{CEO}	70	Vdc
Collector-Base Voltage	V_{CBO}	100	Vdc
Emitter-Base Voltage	V_{EBO}	7.0	Vdc
Base Current	I_B	7.0	Adc
Collector Current	I_C	15	Adc
Total Power Dissipation @ $T_A = 25^0C$ (1) @ $T_C = 25^0C$ (2)	P_T	6.0 117	W W
Operating & Storage Temperature Range	T_{op}, T_{stg}	-65 to +200	^0C

THERMAL CHARACTERISTICS

Characteristics	Symbol	Max.	Unit
Thermal Resistance, Junction-to-Case	$R_{\theta JC}$	1.5	$^0C/W$

1) Derate linearly @ 34.2 mW/^{0}C for $T_A > +25^0C$
2) Derate linearly @ 668 mW/^{0}C for $T_C > +25^0C$



TO-3*
(TO-204AA)

*See Appendix A for Package Outline

ELECTRICAL CHARACTERISTICS

Characteristics	Symbol	Min.	Max.	Unit
OFF CHARACTERISTICS				
Collector-Emitter Breakdown Voltage I_C = 200 mAdc	$V_{(BR)CEO}$	70		Vdc
Collector-Emitter Breakdown Voltage I_C = 200 mAdc, R_{BE} = 100Ω	$V_{(BR)CER}$	80		Vdc
Collector-Emitter Breakdown Voltage V_{BE} = -1.5 Vdc, I_C = 200 mAdc	$V_{(BR)CEX}$	90		Vdc
Collector-Emitter Cutoff Current V_{CE} = 60 Vdc	I_{CEO}		1.0	mAdc
Collector-Emitter Cutoff Current V_{BE} = -1.5 Vdc; V_{CE} = 100 Vdc	I_{CEX}		1.0	mAdc
Emitter-Base Cutoff Current V_{EB} = 7.0 Vdc	I_{EBO}		1.0	mAdc

ELECTRICAL CHARACTERISTICS (con't)

Characteristics	Symbol	Min.	Max.	Unit
ON CHARACTERISTICS				
Forward-Current Transfer Ratio I_C = 0.5 Adc, V_{CE} = 4.0 Vdc I_C = 4.0 Adc, V_{CE} = 4.0 Vdc I_C = 10 Adc, V_{CE} = 4.0 Vdc	h_{FE}	40 20 5.0	60	
Collector-Emitter Saturation Voltage I_C = 4.0 Adc, I_B = 0.4 Adc I_C = 10 Adc, I_B = 3.3 Adc	$V_{CE(sat)}$		0.75 2.0	Vdc
Base-Emitter Saturation Voltage I_C = 4.0 Adc, V_{CE} = 4.0 Vdc	$V_{BE(sat)}$		1.4	Vdc
DYNAMIC CHARACTERISTICS				
Magnitude of Common Emitter Small-Signal Short-Circuit Forward Current Transfer Ratio I_C = 4.0 Adc, V_{CE} = 4.0 Vdc, f = 100 kHz	$\lvert h_{fe} \rvert$	8.0	40	
Output Capacitance V_{CB} = 10 Vdc, I_E = 0, 100 kHz ≤ f ≤ 1.0 MHz	C_{obo}		700	pF
SWITCHING CHARACTERISTICS				
Turn-On Time V_{CC} = 30 Vdc; I_C = 4.0 Adc; I_{B1}= 0.4 Adc	t_{on}		6.0	µs
Turn-Off Time V_{CC} = 30 Vdc; I_C = 4.0 Adc; I_{B1} = -I_{B2} = 0.4 Adc	t_{off}		12	µs

SAFE OPERATING AREA

DC Tests

T_C = +25^{0}C, 1 Cycle, t = 1.0 s

Test 1

V_{CE} = 7.8 Vdc, I_C = 15 Adc

Test 2

V_{CE} = 70 Vdc, I_C = 1.67 Adc

Switching Tests

T_A = +25^{0}C; duty cycle ≤ 10%; R_S ≤ 0.1 Ω

Test 1

t_P = 5.0 ms; R_{BB1} = 2.0 Ω; V_{BB1} ≥ 10 Vdc; R_{BB2} = 100 Ω; V_{CC} ≥ 10 Vdc; V_{BB2} = 1.5 Vdc; I_C = 15 Adc

Test 2

t_P = 20 ms; R_{BB1} = 30 Ω; V_{BB1} ≥ 10 Vdc; R_{BB2} = 100 Ω; V_{CC} ≥ 10 Vdc; V_{BB2} = 1.5 Vdc; I_C = 3.8 Adc