Microsemi LAWRENCE

TECHNICAL DATA

NPN DARLINGTON HIGH POWER SILICON TRANSISTOR

Qualified per MIL-PRF-19500/624

Devices	*Qualified Level*
2N7370	**JAN JANTX JANTXV**

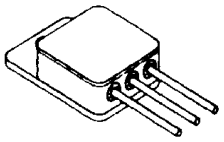
MAXIMUM RATINGS

Ratings	Symbol	Value	Units
Collector-Emitter Voltage	V_{CEO}	100	Vdc
Collector-Base Voltage	V_{CBO}	100	Vdc
Emitter-Base Voltage	V_{EBO}	5.0	Vdc
Base Current	I_B	0.2	Adc
Collector Current	I_C	12	Adc
Total Power Dissipation @ $T_C = +25^0C$ (1)	P_T	100	W
Operating & Storage Junction Temperature Range	T_J, T_{stg}	-65 to +175	^0C

THERMAL CHARACTERISTICS

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

1) Derate linearly 0.667 $W/^0C$ above $T_C > +25^0C$



TO-254*

*See Appendix A for package outline

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

Characteristics	Symbol	Min.	Max.	Unit
OFF CHARACTERISTICS				
Collector-Emitter Breakdown Voltage I_C = 100 mAdc	$V_{CEO(sus)}$	100		Vdc
Collector-Emitter Cutoff Current V_{CE} = 50 Vdc	I_{CEO}		1.0	mAdc
Collector-Emitter Cutoff Current V_{CE} = 100 Vdc, V_{BE} = 1.5 Vdc	I_{CEX}		0.5	mAdc
Emitter-Base Cutoff Current V_{EB} = 5.0 Vdc	I_{EBO}		2.0	mAdc

ELECTRICAL CHARACTERISTICS (con't)

Characteristics	Symbol	Min.	Max.	Unit
ON CHARACTERISTICS [2]				
Forward-Current Transfer Ratio I_C = 6.0 Adc, V_{CE} = 3.0 Vdc I_C = 12 Adc, V_{CE} = 3.0 Vdc	h_{FE}	1,000 150	18,000	
Collector-Emitter Saturation Voltage I_C = 12 Adc, I_B = 120 mAdc	$V_{CE(sat)}$		3.0	Vdc
Base-Emitter Saturation Voltage I_C = 12 Adc, I_B = 120 mAdc	$V_{BE(sat)}$		4.0	Vdc
DYNAMIC CHARACTERISTICS				
Magnitude of Common Emitter Small-Signal Short-Circuit Forward Current Transfer Ratio I_C = 5.0 Adc, V_{CE} = 3.0 Vdc, f = 1.0 MHz	$\lvert h_{fe} \rvert$	10	250	
SWITCHING CHARACTERISTICS				
Turn-On Time V_{CC} = 30 Vdc; I_C = 12 Adc; I_{B1} = 120 mAdc	t_{on}		2.0	µs
Turn-Off Time V_{CC} = 30 Vdc; I_C = 12 Adc; I_{B1} = I_{B2} = 120 mAdc	t_{off}		10	µs
SAFE OPERATING AREA				
DC Tests T_C = +25^{0}C, 1 Cycle, t ≥ 1.0 s **Test 1** V_{CE} = 8.3 Vdc, I_C = 12 Adc **Test 2** V_{CE} = 30 Vdc, I_C = 3.3 Adc **Test 3** V_{CE} = 90 Vdc, I_C = 150 mAdc				

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

littlediode
COMPONENTS FOR ALL

Littlediode supplies new, hard to find or obsolete electronic components and semiconductors all over the world.

With over two million different components listed you are sure to find the part you need.

Feel free to visit us today at our online store:

LittleDiode.com

Looking forward to providing you with the best possible service.