Microsemi LAWRENCE

TECHNICAL DATA

MULTIPLE (QUAD) PNP SILICON SWITCHING TRANSISTOR

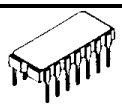
Qualified per MIL-PRF-19500/ 558

Devices		*Qualified Level*
2N6987 **2N6987U**	**2N6988**	**JAN** **JANTX** **JANTXV** **JANS**

MAXIMUM RATINGS (1)

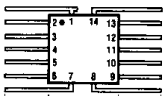
Ratings	Symbol	Value	Units
Collector-Emitter Voltage (4)	V_{CEO}	60	Vdc
Collector-Base Voltage (4)	V_{CBO}	60	Vdc
Emitter-Base Voltage (4)	V_{EBO}	5.0	Vdc
Collector Current	I_C	600	mAdc
Total Power Dissipation @ $T_A = +25^0C$ 2N6987 (2) 2N6987U (2) 2N6988 (3)	P_T	1.5 1.0 0.4	W
Operating & Storage Junction Temperature Range	T_{op}, T_{stg}	-65 to +200	^0C

1) Maximum voltage between transistors shall be ≥ 500 Vdc
2) Derate linearly 8.57 mW/^{0}C above $T_A = +25^0C$
3) Derate linearly 2.286 mW/^{0}C above $T_A = +25^0C$.
4) Ratings apply to each transistor in the array.



2N6987*
TO- 116

2N6987U*
20 PIN LEADLESS



2N6988*
14 PIN FLAT PACK

*See appendix A for package outline

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

Characteristics	Symbol	Min.	Max.	Unit
OFF CHARACTERISTICS				
Collector-Emitter Breakdown Voltage I_C = 10 mAdc	$V_{(BR)CEO}$	60		Vdc
Collector-Base Cutoff Current V_{CB} = 60 Vdc V_{CB} = 50 Vdc	I_{CBO}		10 10	µAdc ηAdc
Emitter-Base Cutoff Current V_{BE} = 5.0 Vdc V_{EB} = 3.5 Vdc	I_{EBO}		10 50	µAdc ηAdc

ELECTRICAL CHARACTERISTICS (con't)

Characteristics	Symbol	Min.	Max.	Unit
ON CHARACTERISTICS				
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 = 150 mAdc, V_{CE} = 10 Vdc I_C = 500 mAdc, V_{CE} =10 Vdc	h_{FE}	75 100 100 100 50	 450 300 	
Collector-Emitter Saturation Voltage I_C = 150 mAdc, I_B = 15 mAdc I_C = 500 mAdc, I_B = 50 mAdc	$V_{CE(sat)}$		0.4 1.6	Vdc
Base-Emitter Voltage I_C = 150 mAdc, I_B = 15 mAdc I_C = 500 mAdc, I_B = 50 mAdc	$V_{BE(sat)}$		1.3 2.6	Vdc
DYNAMIC CHARACTERISTICS				
Magnitude of Small-Signal Short-Circuit Forward-Current Transfer Ratio I_C = 50 mAdc, V_{CE} = 20 Vdc, f = 100 MHz	$\lvert h_{fe} \rvert$	2.0	8.0	
Small-Signal Short-Circuit Forward Current Transfer Ratio I_C = 1.0 mAdc, V_{CE} = 10 Vdc, f = 1.0 kHz	h_{fe}	100		
Output Capacitance V_{CB} = 10 Vdc, I_E = 0, 100 kHz ≤ f ≤ 1.0 MHz	C_{obo}		8.0	pF
Input Capacitance V_{EB} = 2.0 Vdc, I_C = 0, 100 kHz ≤ f ≤ 1.0 MHz	C_{ibo}		30	pF