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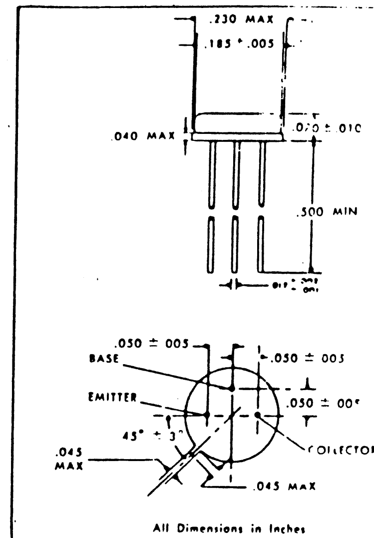
2N3218

The 2N 3218 is designed for low level chopper applications and embody the most advanced semiconductor technology, combining epitaxial junction growth with diffusion and oxide passivation techniques. This transistor exhibit the high voltage capabilities of alloy junction devices with the ruggedness, stability, and reliability of the planar process. The bed mounted construction utilizes a unique gold bonding technique which eliminates "purple plague". In addition, leakage current and offset voltage are exceptionally low. The inherent parameter stability of this passivated transistor allows standard matching of offset voltage to 50 microvolts over the range from —25 to +100° C.



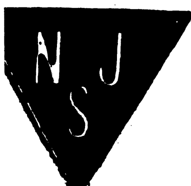
TO-46

ELECTRICAL DATA ABSOLUTE MAXIMUM RATINGS

	2N3218	
Collector To Emitter Voltage (BVceo)	—20	Volts
Collector To Base Voltage (BVcbo)	—25	Volts
Emitter To Base Voltage (BVebo)	—25	Volts
Collector Current (Ic)	100	mA
Total Power Dissipation (free air)	400	mW
Total Power Dissipation (infinite heat sink)	2	Watts
Storage Temp (max)	200	°C
Operation Temp (max)	200	°C
Lead Temp (@ 1/16 ± 1/32 from case)	240	10 sec
Derating Factor (D_F)	2.3	mW/C°

ELECTRICAL CHARACTERISTICS T_A = 25°C (UNLESS OTHERWISE STATED)

Symbol	Parameter	Conditions	2N3218 Min.	Typ.	Max.	Units
I_{CBO}	Collector Leakage	At Max Rated Voltage	—	0.1	1.0	nA
I_{EBO}	Emitter Leakage	At Max Rated Voltage	—	0.1	1.0	nA
I_{CBO}	Collector Leakage at 100°C	At Max Rated Voltage	—	0.01	0.1	μA
I_{EBO}	Emitter Leakage at 100°C	At Max Rated Voltage	—	0.01	0.1	μA
Vo	Offset Voltage	$I_B = 200\mu A$ $I_E = 0$	—	1.0	2.0	mV
h_{fe}	High Frequency Current Gain	f = IMC $V_{CE} = -6V$ $I_{CE} = 1mA$	—	5	—	
r_{sat}	Inverted Dynamic Saturation Resistance	$I_E = 0.1mA$ $I_B = 1mA$	—	25	50	ohms
Cob	Collector To Base Capacitance	$V_{CB} = -6V$ $I_C = 1mA$	—	—	14	pfd
Ceb	Emitter To Base Capacitance	$V_{EB} = -6V$ $I_E = 0$	—	—	8	pfd



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