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2N1099

POWER TRANSISTOR

ABSOLUTE MAXIMUM RATINGS

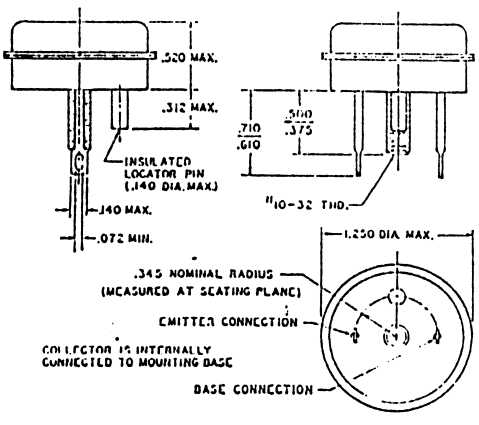
Collector diode voltage V_{CB} (V_{EB} = −1.5 volts)	−80 volts	Base current (continuous)	4 amp.
Emitter diode voltage V_{EBO}	−10 volts	Maximum junction temperature	100 °C
Emitter current (continuous)	15 amp.	Minimum junction temperature	−65 °C

ELECTRICAL CHARACTERISTICS (T = 25° C)

	Min.	Typical	Max.	
Collector diode current I_{CBO} (V_{CBO} = −2 volts)		100		microamp
Collector diode current I_{CB} (V_{CB} = −80 volts, V_{EB} = −1.5 volts)		.5	4	ma
Collector diode current I_{CBO} (V_{CBO} = −80 volts, 71°C)			15	ma
Emitter diode current I_{EBO} (V_{EBO} = −10 volts)		.25	4	ma
Current gain h_{FE} (V_{CB} = −2 volts, I_C = 5 amps)	35		70	
Current gain h_{FE} (V_{CB} = −2 volts, I_C = 12 amps)		25		
Base voltage V_{EB} (V_{CB} = −2 volts, I_C = 5 amps)		.65	.9	volt
Floating potential V_{EBF} (V_{CBO} = −80 volts, I_E = 0)		−.15	−1	volt
Saturation voltage V_{EC} (I_B = 2A, I_C = 12 amps)		.3	0.7	volt
Collector to emitter voltage V_{CES} (I_C = 300 ma, V_{EB} = 0)*	−70			volts
Collector to emitter voltage V_{CEO} (I_C = I amp, I_B = 0)*	−55			volts
Common emitter current amplification cutoff frequency f_{ae} (I_C = 5 amp, V_{CE} = −6 volts)		10		kcs
Rise time ("on" I_C = 12 Adc, I_B = 2 amp, V_{CE} = −12 volts)		15		microsec
Fall time ("off" I_C = 0, V_{EB} = −6 volts, R_{EB} = 10Ω)		15		microsec

*In order to avoid excessive heating of the collector junction, perform test with the sweep method.

DIMENSIONS AND CONNECTIONS



NOTE: MAXIMUM RECOMMENDED TORQUE ON THE MOUNTING STUD IS TWELVE INCH-POUNDS.