

12 Watt L-Band Radar Transistor

Frequency : 870-990 MHz
Output Power : \approx 12 W pk
Power Gain : 7.8 dB
Efficiency : 54 %
Output VSWR : 2:1 Stable
Pulse Width : 300 msec
Duty Factor : 15 %
Collector Voltage : 36 V



Driver Transistor

Use as driver transistor for IB0810M50.

Bandwidth

Instantaneous operating bandwidth: 870-990 MHz.

Silicon Bipolar

New generation technology, ultra-high f_t frequency.

Class C Operation

Designed for Class C operational mode for maximum efficiency.

Common Base Configuration

Bipolar common base configuration requires only a single collector supply voltage for class C operation.

Gold Metal

Gold metalization system for maximum reliability.

Emitter Ballasting

Resistance incorporated on the active-cell for optimum thermal distribution and maximum reliability.

BeO Package

Mature, high-power packaging technology. Multiple reliable suppliers. Unmatched thermal conductivity for maximum device reliability.

RF Test Fixture

All devices 100% RF tested in a correlated, broadband test fixture. Impedance matched to 50Ω. No external tuning allowed for production tests. Micro-strip structure on soft pc board with dielectric constant $\epsilon_r = 10.5$.

SAMPLE DATA SAMPLE DATA SAMPLE DATA SAMPLE DATA

F (MHz)	Pin (Wpk)	Po pk (Wpk)	Ic (A avg)	RL (dB)	G (dB)	Nc (%)	2:1 (VSWR)	3:1 (VSWR)	2fo (dB)	Drp (dB)
870	2.00	12.0	0.0884	12	7.8	57	S	P	>-30	0.1
870	2.25	13.7	0.0974		7.8	59	S	P	>-30	
930	2.00	12.0	0.0952	14	7.8	53	S	P	>-30	0.1
930	2.25	13.6	0.1064		7.8	53	S	P	>-30	
990	2.00	13.2	0.1018	19	8.2	54	S	P	>-30	
990	2.25	14.7	0.1129		8.1	54	S	P	>-30	0.2
Test Conditions:		Pulse width = 300 usec								
		Duty Factor = 15%								
		Vcc = 36 Volts								
Test Notes:		All tests performed in a broadband, correlated RF test fixture.								
		Impedance matched to 50 ohms, no external tuning is allowed.								
		2:1 VSWR - 'S' is defined as stable operation into all phases.								
		3:1 VSWR - 'P' is defined as operation into all phases without damage.								