Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!

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GHz TECHNOLOGY
RF·MICROWAVE SILICON POWER TRANSISTORS

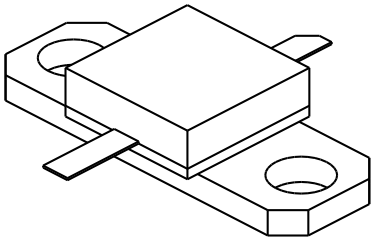
1014 - 12

12 Watt - 28 Volts, Class C
Microwave 1000 - 1400 MHz

GENERAL DESCRIPTION

The 1014-12 is a COMMON BASE transistor capable of providing 12 Watts of Class C, RF output power over the band 1000-1400 MHz. This transistor is designed for Microwave Broadband Class C amplifier applications. It includes input prematching and utilizes gold metalization and diffused ballasting to provide high reliability and supreme ruggedness.

CASE OUTLINE
55LT, STYLE 1



ABSOLUTE MAXIMUM RATINGS

Maximum Power Dissipation @ 25ºC 39 Watts

Maximum Voltage and Current

BVces	Collector to Emitter Voltage	50 Volts
BVebo	Emitter to Base Voltage	3.5 Volts
Ic	Collector Current	5.0 A

Maximum Temperatures

Storage Temperature	- 65 to +150ºC
Operating Junction Temperature	+200ºC

ELECTRICAL CHARACTERISTICS @ 25 °C

SYMBOL	CHARACTERISTICS	TEST CONDITIONS	MIN	TYP	MAX	UNITS
Pout	Power Out	F = 1000-1400 MHz	12			Watt
Pin	Power Input	Vcc = 28 Volts			2.5	Watt
Pg	Power Gain	Pin = 2.5 Watts	6.8			dB
η_c	Collector Efficiency	As Above		40		%
$VSWR_1$	Load Mismatch Tolerance	F = 1.4 GHz, Pin = 2.5 W			30:1	

BVces	Collector to Emitter Breakdown	Ic = 5 mA	50			Volts
BVebo	Emitter to Base Breakdown	Ie = 5 mA	3.5			Volts
Icbo	Collector to Base Current	Vcb = 28 Volts			3.0	mA
h_{FE}	Current Gain	Vce = 5 V, Ic = 200mA	10			
Cob	Output Capacitance	F =1 MHz, Vcb = 28 V		12.0		pF
θ_{jc}	Thermal Resistance				4.5	ºC/W

Issue June 1996

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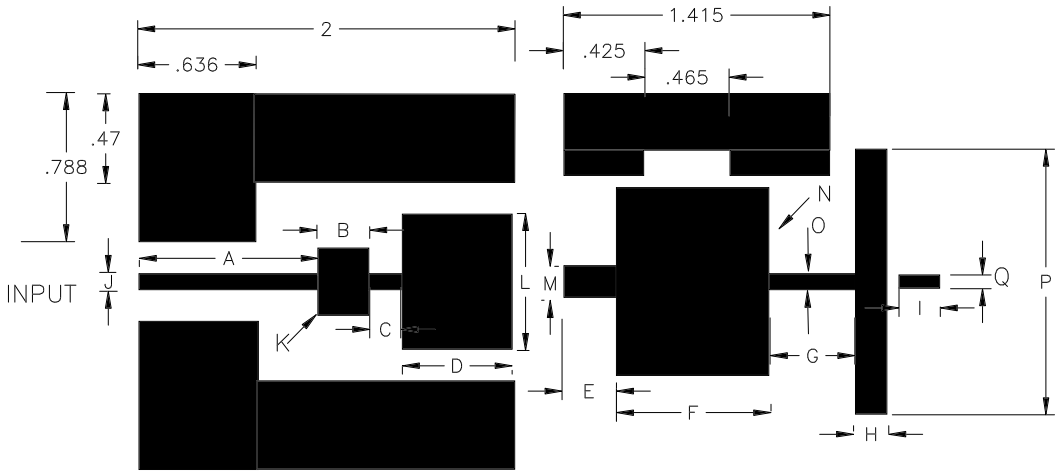
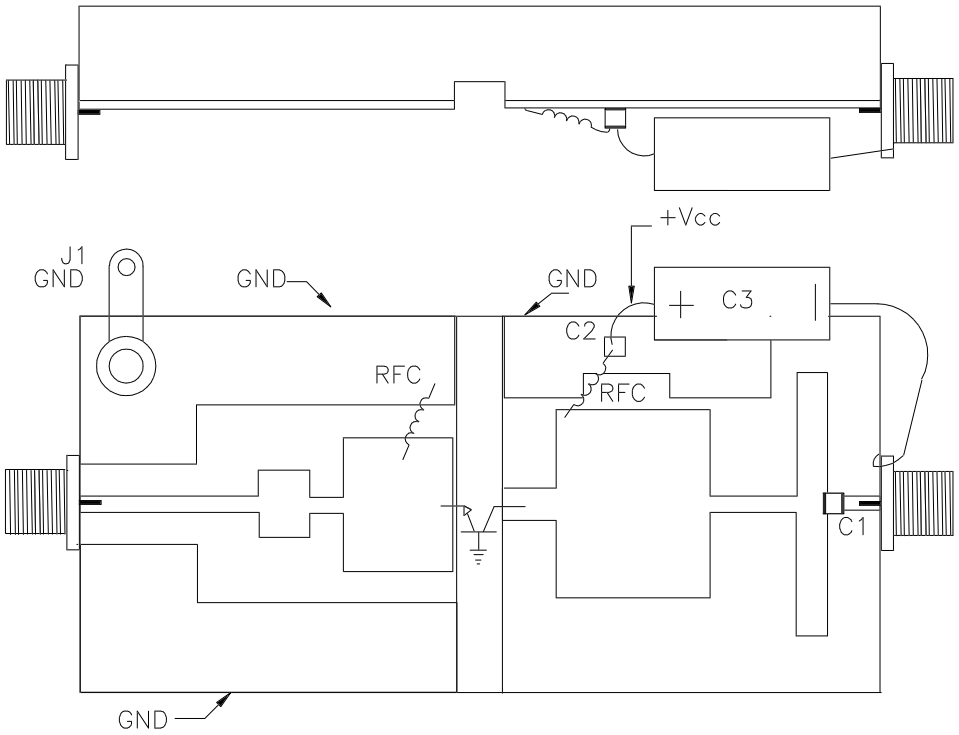
REVISIONS				
ZONE	REV	DESCRIPTION	DATE	APPROVED



DIM	INCHES
A	.960
B	.270
C	.180
D	.590
E	.280
F	.810
G	.460
H	.168
I	.217
J	.085
K	.360
L	.720
M	.170
N	1.00
O	.085
P	1.41
Q	.063

1014-12 TEST CIRCUIT



DIELECTRIC = 20 MIL THICK DUROID (Hardback) Er = 2.33
C1=150 pF chip
C2=18 pF chip
C3= 50uF, 50v dc, electrolytic
RFC= 6 turns, .1 in dia., #24 ga. enamel wire

	CAGE	DWG NO.	REV
GHz TECHNOLOGY	0PJR2	1014-12	2
		SCALE 1/1	SHEET