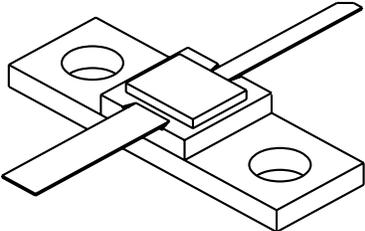


1417 - 12A

12 Watt - 28 Volts, Class C
Microwave 1400 - 1700 MHz

<p>GENERAL DESCRIPTION</p> <p>The 1417-12A is a COMMON BASE transistor capable of providing 12 Watts of Class C, RF output power over the band 1400-1700 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. The transistor uses a fully hermetic high temperature solder sealed package.</p>	<p>CASE OUTLINE 55LV, STYLE 1</p>
<p>ABSOLUTE MAXIMUM RATINGS</p> <p>Maximum Power Dissipation @ 25°C 29 Watts</p> <p>Maximum Voltage and Current</p> <p>BVces Collector to Emitter Voltage 50 Volts BVebo Emitter to Base Voltage 3.5 Volts Ic Collector Current 2.0 A</p> <p>Maximum Temperatures</p> <p>Storage Temperature - 65 to + 200°C Operating Junction Temperature + 200°C</p>	

ELECTRICAL CHARACTERISTICS @ 25 °C

SYMBOL	CHARACTERISTICS	TEST CONDITIONS	MIN	TYP	MAX	UNITS
Pout	Power Out	F = 1.4-1.7 GHz	12.0			Watt
Pin	Power Input	Vcb = 28 Volts			2.4	Watt
Pg	Power Gain	Pin = 2.4 Watts	7.0	8.7		dB
η_c	Collector Efficiency	As Above		40		%
VSWR ₁	Load Mismatch Tolerance	F = 1.7 GHz, Pin = 2.4 W			30:1	

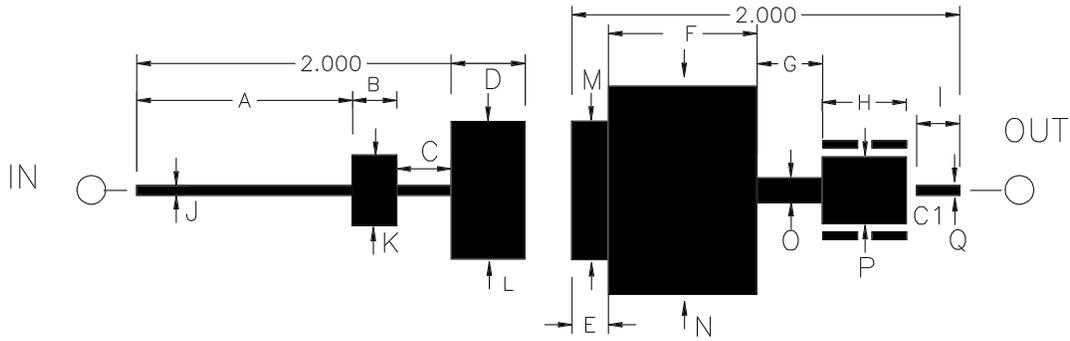
BVces	Collector to Emitter Breakdown	Ic = 80 mA	50			Volts
BVebo	Emitter to Base Breakdown	Ie = 2.0 mA	3.5			Volts
Icbo	Collector to Base Current	Vcb = 28 Volts			2.0	mA
h _{FE}	Current Gain	Vce = 5 V, Ic = 800 mA	20			
Cob	Output Capacitance	F = 1.0 MHz, Vcb = 28 V		12		pF
θ_{jc}	Thermal Resistance				6.0	°C/W

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REVISIONS

ZONE	REV	DESCRIPTION	DATE	APPROVED
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DIM	INCHES
A	1.110
B	.230
C	.280
D	.380
E	.190
F	.765
G	.335
H	.435
I	.225
J	.053
K	.365
L	.710
M	.715
N	1.075
O	.130
P	.345
Q	.053

1417-12A TEST CIRCUIT

C1=100 PF ATC

DIELECTRIC = 19.4MIL THICK TFE Er = 2.43



CAGE OPJR2	DWG NO. 1417-12A	REV 1
SCALE	SHEET 1/1	