查询1517-20M供应商 捷多邦，专业PCB打样工厂，24小时加急出货

ADVANCED POWER TECHNOLOGY RF®

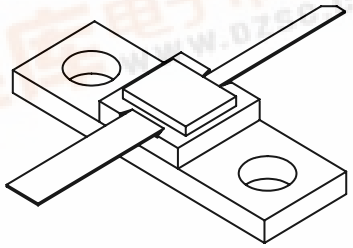
1517-20M

20 Watts, 36 Volts, 200µs, 10%
Radar 1480 to 1650 MHz

GENERAL DESCRIPTION

The 1517-20M is an internally matched, COMMON BASE transistor capable of providing 20 Watts of pulsed RF output power at 200 microseconds pulse width, 10% duty factor across the band 1480 to 1650 MHz. This hermetically solder-sealed transistor is specifically designed for upper L-Band radar applications. It utilizes gold metallization and diffused emitter ballasting to provide high reliability and supreme ruggedness.

CASE OUTLINE
55LV-1



ABSOLUTE MAXIMUM RATINGS

Maximum Power Dissipation

Device Dissipation @25°C[1]	175	W

Maximum Voltage and Current

Collector to Base Voltage (BV_{CES})	70	V
Emitter to Base Voltage (BV_{EBO})	3	V
Collector Current (I_C)	3	A

Maximum Temperatures

Storage Temperature	-65 to +200	°C
Operating Junction Temperature	+200	°C

FUNCTIONAL CHARACTERISTICS @ 25°C

SYMBOL	CHARACTERISTICS	TEST CONDITIONS	MIN	TYP	MAX	UNITS
P_{out}	Power Output	F = 1480-1650 MHz Vcc = 36 Volts Pin = 3.5 W Pulse Width = 200µs Duty Factor = 10%	20	25	30	W
P_g	Power Gain		7.6		9.3	dB
η_c	Collector Efficiency		40			%
IR_L	Input Return Loss		9			dB
Pd	Pulse Droop				0.5	dB
VSWR[1]	Load Mismatch Tolerance	F=1480 MHz, Pin = 3.5W			3.0:1	

ELECTRICAL CHARACTERISTICS @ 25°C

I_{EBO}	Emitter cut-off current	V_{EB} = 3 V			3	mA
BV_{CES}	Collector to Emitter Breakdown	I_C = 15 mA	65			V
h_{FE}	DC – Current Gain	V_{CE} = 5V, I_c = 500 mA	20			
θjc[1]	Thermal Resistance				1	°C/W

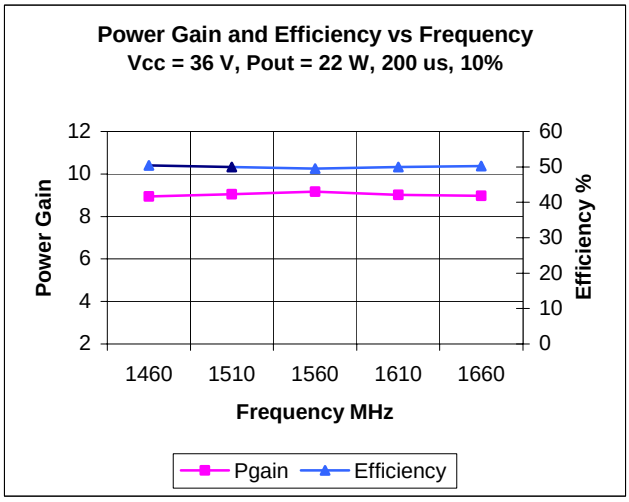
NOTES: 1. Pulse condition of 200µsec, 10%

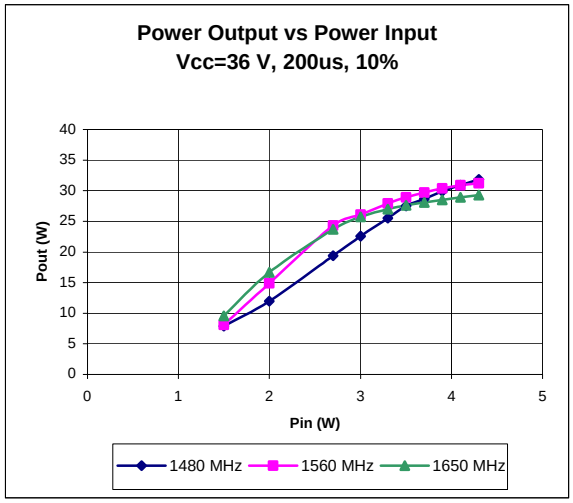
Issue Jan 2006

ADVANCED POWER TECHNOLOGY INC. RESERVES THE RIGHT TO MAKE CHANGES WITHOUT FURTHER NOTICE. TO VERIFY THE CURRENT VERSION PLEASE CHECK OUR WEB SITE AT WWW. ADVANCEDPOWER.COM OR CONTACT OUR FACTORY DIRECT.
Advanced Power Technology Inc. 3000 Oakmead Village Drive, Santa Clara, CA 95051-0808 Tel. 408 / 986-8031 Fax 408 / 986-8120

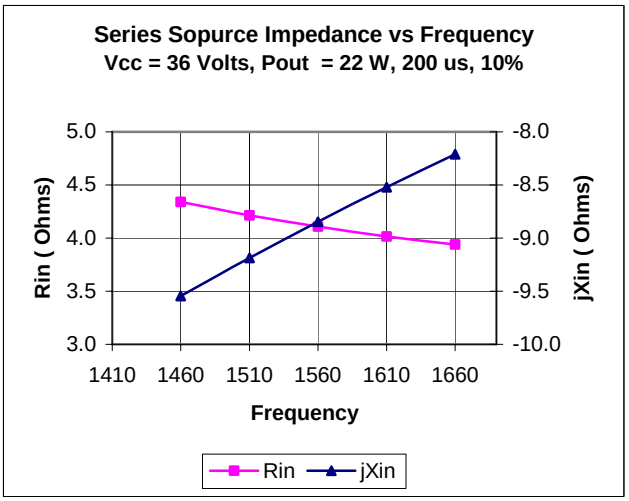
ADVANCED POWER TECHNOLOGY RF®

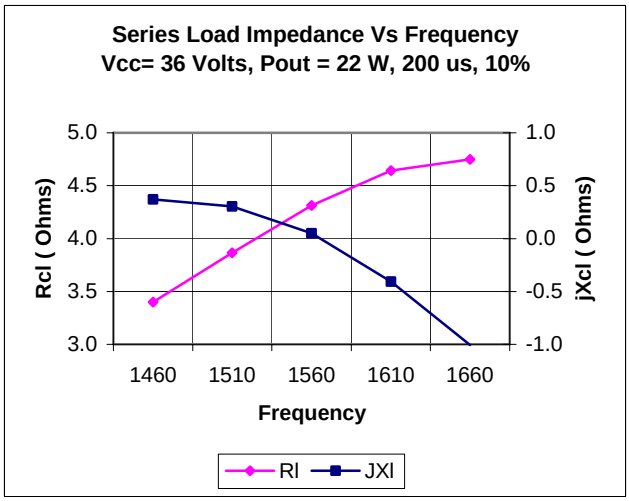
Performance Curves –



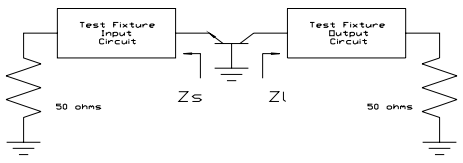


Typical Impedances





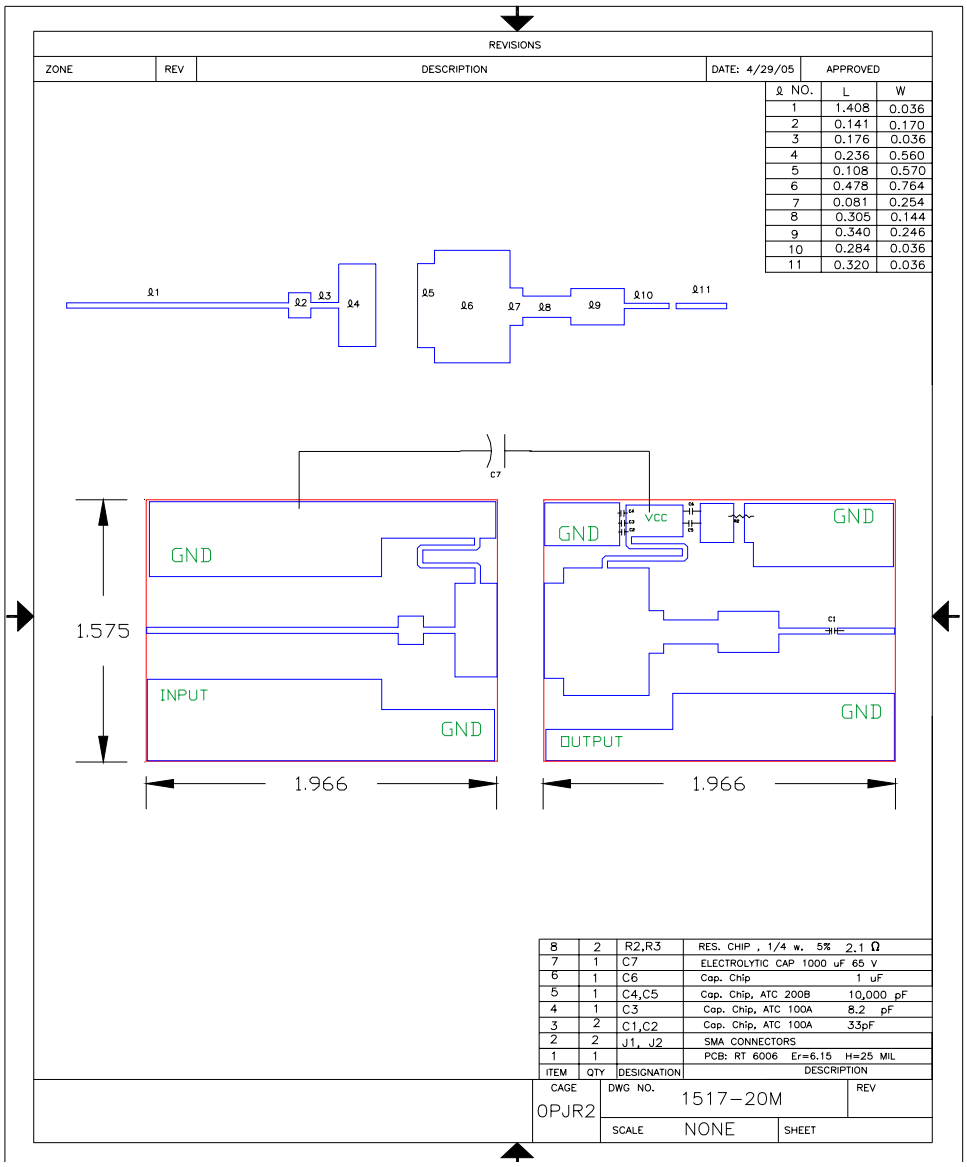
IMPEDANCE		
Freq (MHz)	Zs	Zl
1480	4.34 - j 9.55	3.40 + j 0.37
1510	4.22 – j 9.18	3.86 + j 0.31
1560	4.11 – j 8.85	4.31 + j 0.05
1610	4.02 – j 8.52	4.64 – j 0.41
1650	3.94 - j8.21	4.75 – j 1.01



ADVANCED POWER TECHNOLOGY INC. RESERVES THE RIGHT TO MAKE CHANGES WITHOUT FURTHER NOTICE. TO VERIFY THE CURRENT VERSION PLEASE CHECK OUR WEB SITE AT WWW. ADVANCEDPOWER.COM OR CONTACT OUR FACTORY DIRECT.

1517-20M

BROADBAND TEST CIRCUIT



Q NO.	L	W
1	1.408	0.036
2	0.141	0.170
3	0.176	0.036
4	0.236	0.560
5	0.108	0.570
6	0.478	0.764
7	0.081	0.254
8	0.305	0.144
9	0.340	0.246
10	0.284	0.036
11	0.320	0.036

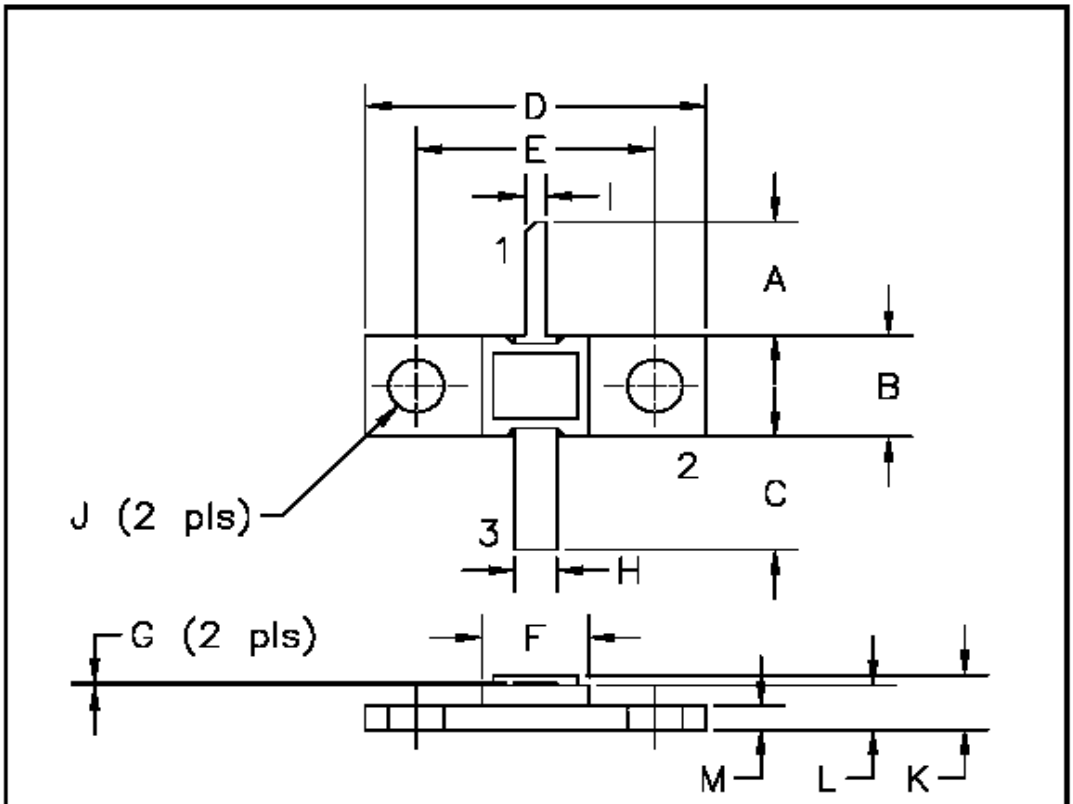
ITEM	QTY	DESIGNATION	DESCRIPTION
8	2	R2,R3	RES. CHIP , 1/4 w. 5% 2.1 Ω
7	1	C7	ELECTROLYTIC CAP 1000 uF 65 V
6	1	C6	Cap. Chip 1 uF
5	1	C4,C5	Cap. Chip, ATC 200B 10,000 pF
4	1	C3	Cap. Chip, ATC 100A 8.2 pF
3	2	C1,C2	Cap. Chip, ATC 100A 33pF
2	2	J1, J2	SMA CONNECTORS
1	1		PCB: RT 6006 Er=6.15 H=25 MIL

ADVANCED POWER TECHNOLOGY INC. RESERVES THE RIGHT TO MAKE CHANGES WITHOUT FURTHER NOTICE. TO VERIFY THE CURRENT VERSION PLEASE CHECK OUR WEB SITE AT WWW. ADVANCEDPOWER.COM OR CONTACT OUR FACTORY DIRECT.
Advanced Power Technology Inc. 3000 Oakmead Village Drive, Santa Clara, CA 95051-0808 Tel. 408 / 986-8031 Fax 408 / 986-8120

ADVANCED POWER TECHNOLOGY RF®

1517-20M

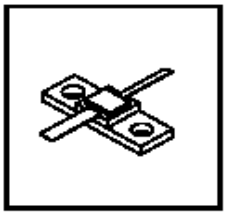
Case Outline



DIM	MILLIMETER	TOL	INCHES	TOL
A	9.40	.61	.370	.024
B	6.35	.18	.250	.005
C	9.40	.61	.370	.024
D	20.82	.25	.820	.010
E	14.48	.13	.570	.005
F	6.35	.13	.250	.005
G	0.10	.05	.004	.002
H	2.54	.13	.100	.005
I	1.27	.13	.050	.005
J	3.30 DIA	.13	.130 DIA	.005
K	3.43	.13	.135	.005
L	2.79	.13	.110	.005
M	1.52	.13	.060	.005

STYLE 1:
PIN 1 = COLLECTOR
2 = BASE
3 = EMITTER

STYLE 2:
PIN 1 = COLLECTOR
2 = EMITTER
3 = BASE



CHz TECHNOLOGY
RF – MICROWAVE SILICON POWER TRANSISTORS

DWG NO. 55LV

ADVANCED POWER TECHNOLOGY INC. RESERVES THE RIGHT TO MAKE CHANGES WITHOUT FURTHER NOTICE. TO VERIFY THE CURRENT VERSION PLEASE CHECK OUR WEB SITE AT WWW. ADVANCEDPOWER.COM OR CONTACT OUR FACTORY DIRECT.
Advanced Power Technology Inc. 3000 Oakmead Village Drive, Santa Clara, CA 95051-0808 Tel. 408 / 986-8031 Fax 408 / 986-8120