GHz TECHNOLOGY
RF·MICROWAVE SILICON POWER TRANSISTORS

1516-35

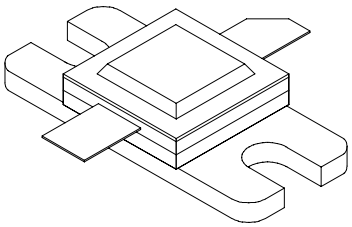
35 WATT, 28V, Pulsed
Microwave 1450 - 1550 MHz

Proposed Product

GENERAL DESCRIPTION

The **1516-35** is a common base transistor capable of providing 35 Watts of Class C, RF output power over the band 1450-1550 MHz. This transistor is designed for Microwave Broadband Class C amplifier applications. It includes Input and Output 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.

CASE OUTLINE
55AW, Style 1



ABSOLUTE MAXIMUM RATINGS

Maximum Power Dissipation @25°C 135 W

Maximum Voltage and Current

BV_{CES}	Collector to Emitter Voltage	45V
BV_{EBO}	Emitter to Base Voltage	3.5V
I_C	Collector Current	12A

Temperatures

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

ELECTRICAL CHARACTERISTICS @ 25°C

SYMBOL	CHARACTERISTICS	TEST CONDITIONS	MIN	TYP	MAX	UNITS
P_{OUT}	Power out	F = 1450-1550	35			W
P_{IN}	Power input	V_{CB} = 28 Volts			7	W
Pg	Power Gain	P_{IN} = 7 Watts	7.0			dB
η_C	Collector Efficiency	As Above		40		%
VSWR	Load Mismatch Tolerance	F = 1.45 GHz, P_{IN} = 7 W			10:1	

BV_{CES}	Collector to Emitter Breakdown	I_C = 20mA	45			V
BV_{EBO}	Emitter to Base Breakdown	Ie = 15mA	3.5			V
h_{FE}	Current Gain	V_{CE} = 5V, I_C = 1A	10		100	
C_{OB}*	Output Capacitance	F = 1MHz, V_{CB} = 28V				pF
θjc	Thermal Resistance				1.3	^{O}C/W

*Not measurable due to output match
Issued July 1999

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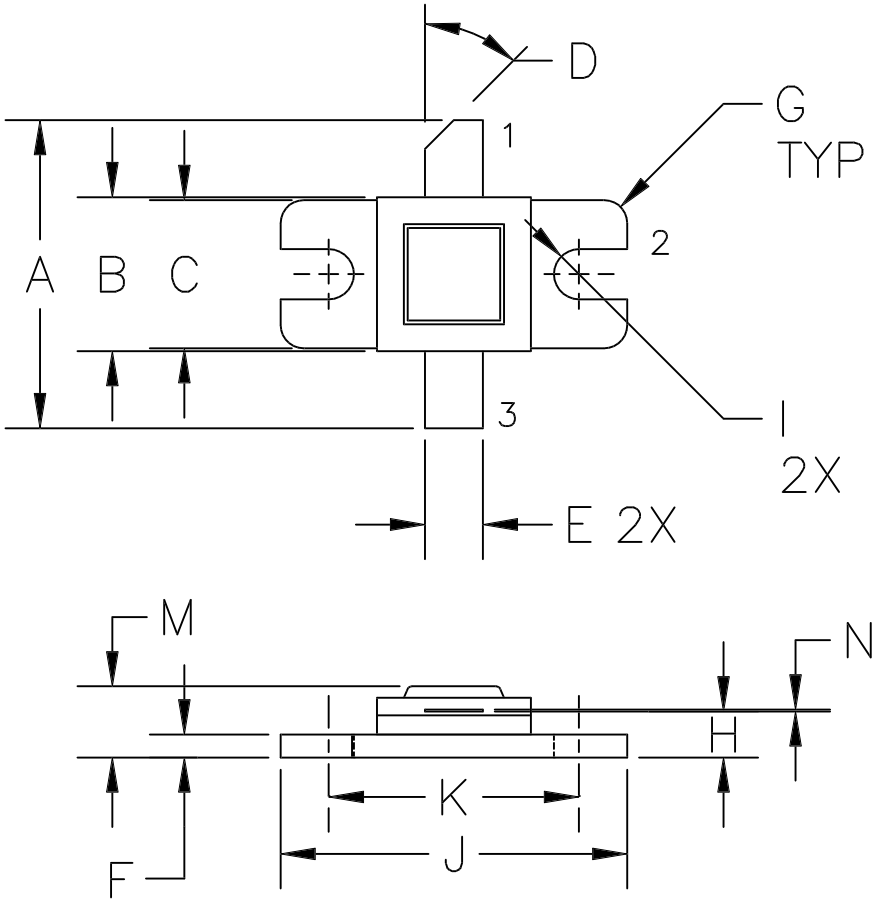
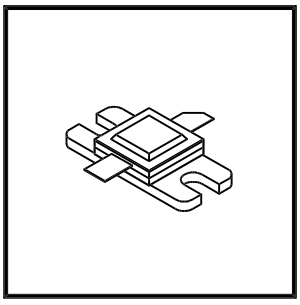


DIM	MILLIMETER	TOL	INCHES	TOL
A	20.32	.76	.800	.050
B	10.16	.13	.400	.005
C	9.78	.13	.385	.005
D	45°	5°	45°	5°
E	3.81	.13	.150	.005
F	1.52	.13	.060	.005
G	1.52R	.13	.060R	.005
H	3.05	.13	.120	.005
I	3.30 DIA	.13	.130 DIA	.005
J	22.86	.13	.900	.005
K	16.51	.13	.650	.005
M	4.70	REF	.185	REF
N	0.13	.02	.005	.001

STYLE 1:
PIN1 = COLLECTOR
2 = BASE
3 = EMITTER

STYLE 2:
PIN1 = COLLECTOR
2 = EMITTER
3 = BASE



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DWG NO.
55AW