

9BSE55

55 Watts, 25 Volts
CELLULAR 850-960 MHz

GENERAL DESCRIPTION

The 9BSE55 is a COMMON BASE, silicon bipolar transistor capable of providing 55 watts of output power at 960 MHz. The device is designed for cellular base station applications in the 850 to 960 MHz frequency range. Gold metallization and emitter ballasting provide a highly reliable and rugged device which can be used for driver stages or in the output stage of an amplifier.

ABSOLUTE MAXIMUM RATINGS

Maximum Power Dissipation @ 25°C¹ 135 Watts

Maximum Voltage and Current

BVces Collector to Emitter Voltage 50 Volts

BVebo Emitter to Base Voltage 4.0 Volts

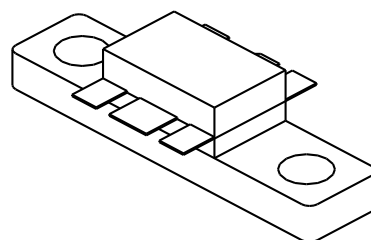
Ic Collector Current 8.0 A

Maximum Temperatures

Storage Temperature - 65 to +150°C

Operating Junction Temperature +200°C

CASE OUTLINE 55CW, STYLE 1



ELECTRICAL CHARACTERISTICS @ 25 °C¹

SYMBOL	CHARACTERISTICS	TEST CONDITIONS	MIN	TYP	MAX	UNITS
P_{out}	Power Output	F = 900 MHz	55	60		Watts
P_{in}	Power Input	V _{cc} = 25 Volts			7.0	Watts
P_g²	Power Gain		8.9	9.3		dB
η_c²	Collector Efficiency			55		%
VSWR²	Load Mismatch Tolerance				4.4:1	

BVebo	Voltage Emitter to Base	I _e = 15 mA	4.0			Volts
BVces	Voltage Collector to Emitter	I _c = 50 mA	50			Volts
C_{cb}	Capacitance Collector to Base			50		pF
h_{FE}	DC - Current Gain	I _c = 3 mA, V _{ce} = 5V	10			
θ_{jc}	Thermal Resistance				1.3	°C/W

Note 1: T_c = 25°C unless otherwise noted

Note 2: At Rated Output Power

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Power Output VS Frequency

$P_{in} = 7W$, $V_{cc} = 25V$

