

SSM SOLID STATE MICROWAVE

SD1014-1

THOMSON-CSF COMPONENTS CORPORATION

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VHF COMMUNICATIONS TRANSISTOR

DESCRIPTION

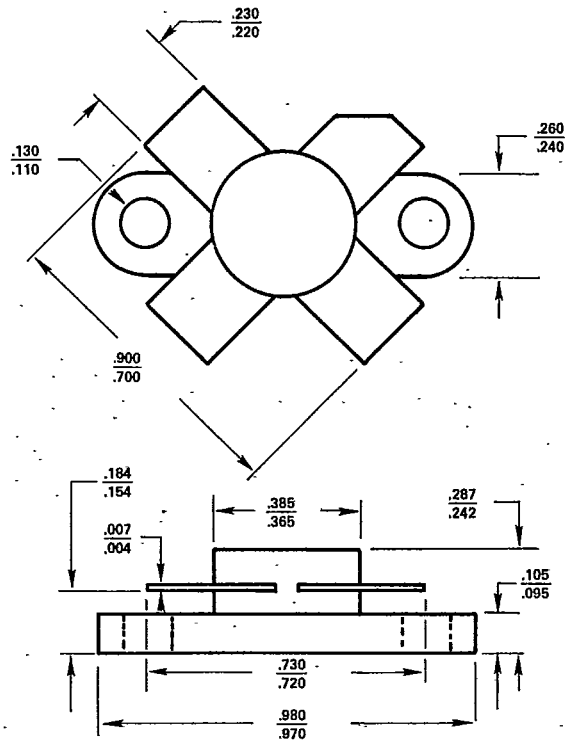
This epitaxial silicon NPN-planar transistor is designed primarily for VHF mobile and marine transmitters. The device utilizes emitter ballasting resistors and improved metalization systems to achieve extreme ruggedness under severe operating conditions.

FEATURES:

- Designed for VHF mobile and marine transmitters
- Withstands severe mismatch under operating conditions
- Low inductance stripline package
- All leads electrically isolated from stud

ABSOLUTE MAX. RATING

V_{CBO}	: Collector-Base Voltage	36.0 V
V_{CEO}	: Collector-Emitter Voltage	18.0 V
V_{EBO}	: Emitter-Base Voltage	4.0 V
I_c	: Collector Current (max.)	2.5 A
PT.	: Total Device Dissipation @ 25°C	31.0 W
ϕ_{jc}	: Thermal Resistance	5.6°C/W
T_j	: Junction Temperature	-65°C to 200°C
T_s	: Storage Temperature	-65°C to 200°C



.380 4LFL

ELECTRICAL CHARACTERISTICS

Characteristics	Symbol	Test Conditions	Min.	Typ.	Max.	Unit
Collector-Emitter Breakdown Voltage*	BV_{CEO}	$I_c = 200$ mA	18.0	—	—	V_{dc}
Collector-Emitter Breakdown Voltage*	BV_{CES}	$I_c = 200$ mA	36.0	—	—	V_{dc}
Emitter-Base Breakdown Voltage	BV_{EBO}	$I_e = 2.5$ mA	4.0	—	—	V_{dc}
Collector Cut Off Current	I_{CES}	$V_{ce} = 15.0$	—	—	8.0	mA
DC Current Gain	h_{FE}	$V_{ce} = 5.0$ V, $I_c = .5$ A	5.0	—	—	—

*Pulsed through 25 MH Inductor

RF CHARACTERISTICS: SMALL SIGNAL

Output Capacitance	C_{ob}	$V_{cb} = 15.0$ V	—	—	8.5	pF
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RF CHARACTERISTICS: LARGE SIGNAL

Amplifier power out	P_o	175 MHz/12.5 V	15.0	—	—	Watts
Amplifier power gain	P_g		6.3	—	—	dB



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SD---10141-X