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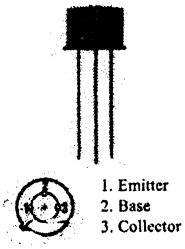
MS1409

RF & MICROWAVE TRANSISTOR VHF COMMUNICATIONS

- 175 MHz
- 28 VOLTS
- P_{OUT} = 2.5 W
- G_P = 10 dB MINIMUM
- COMMON EMITTER CONFIGURATION



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The MS1409 is a NPN silicon transistor designed for high power gain VHF and UHF communication applications. Gold metalization and diffused emitter ballast resistors provide superior long term reliability.

Symbol	Parameter	Value	Unit
V_{CBO}	Collector-base Voltage	65	V
V_{CEO}	Collector-emitter Voltage	40	V
V_{EBO}	Emitter-base Voltage	4.0	V
P_{DISS}	Total Power Dissipation	7.0	W
I_C	Collector Peak Current	1.0	A
T_J	Junction Temperature	200	°C
T_{STG}	Storage Temperature	-65 to 200	°C

$R_{TH(J\text{-}CASE)}$	Thermal Resistance Junction-case	25	°C/W

Quality Semi-Conductors

Symbol	Test Conditions		Value			Unit
			Min.	Typ.	Max.	
BVebo	I_E = 0.10 mA	I_C = 0 mA	4.0	---	---	V
BVcbo	I_C = 0.3 mA	I_E = 0 mA	65	---	---	V
BVceo	I_C = 3 mA	I_S = 0 mA	40	---	---	V
Iceo	V_{CE} = 30 V		---	---	0.1	mA
H_{FE}	V_{CE} = 5 V	I_C = 100 mA	20	---	200	B

Symbol	Test Conditions			Value			Unit
				Min.	Typ.	Max.	
P_{OUT}	f =175 MHz	P_{IN} = 0.25W	V_{CC} = 28V	2.5	---	---	W
η_C	f =175 MHz	P_{IN} = 0.25W	V_{CC} = 28V	50	---	---	%
G_P	f =175 MHz	P_{IN} = 0.25W	V_{CC} = 28V	10	---	---	dB
C_{OB}	f =1.0MHz	V_{CB}= 30V		---	---	10	pf