

MS1409
**RF & MICROWAVE TRANSISTOR
VHF COMMUNICATIONS**
HDWXUHV

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

6&5,37,21:

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.


25°C

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

7KHUPDO 'DWD

$R_{TH(J-CASE)}$	Thermal Resistance Junction-case	25	°C/W
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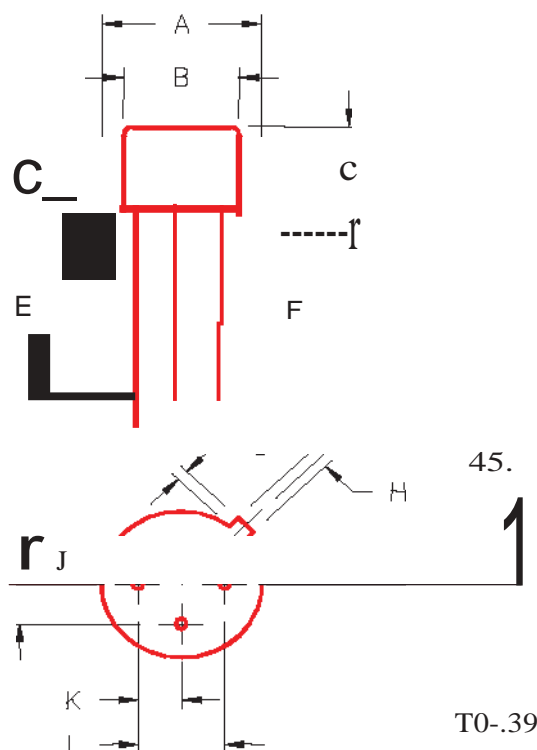
Symbol	Test Conditions	Value			Unit
		Min.	Typ.	Max.	
BVebo	$I_E = 0.10 \text{ mA}$ $I_C = 0 \text{ mA}$	4.0	---	---	V
BVcbo	$I_C = 0.3 \text{ mA}$ $I_E = 0 \text{ mA}$	65	---	---	V
BVceo	$I_C = 3 \text{ mA}$ $I_S = 0 \text{ mA}$	40	---	---	V
Iceo	$V_{CE} = 30 \text{ V}$	---	---	0.1	mA
H _{FE}	$V_{CE} = 5 \text{ V}$ $I_C = 100 \text{ mA}$	20	---	200	B

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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

PACKAGE MECHANICAL DATA

PACKAGE STYLE M246



	MINIMUM INCHES/MM	MAXIMUM INCHES/MM		MINIMUM INCHES/MM	MAXIMUM INCHES/MM
A	..350/8,89	.370/9,40	J	.095/2,41	.105/2,67
B	.315/8,00	..335/8,51	K	.095/2,41	.105/2,67
C		.260/6,60	L	.190/4,8.3	.210/5,33
D	.015/0,38	.045/1,14			
E	.500/12,70				
F	.016/0,41	.019/0,48			
G	.029/0,74	.040/1,02			
H	.028/0,71	.034/0,86			