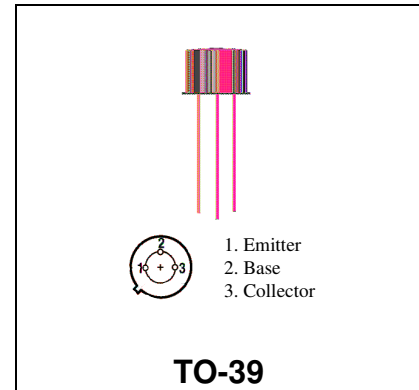


MS1409
**RF & MICROWAVE TRANSISTOR
VHF COMMUNICATIONS**
Features

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

DESCRIPTION:

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.


ABSOLUTE MAXIMUM RATINGS ($T_{CASE} = 25^{\circ}\text{C}$)

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	$^{\circ}\text{C}$
T_{STG}	Storage Temperature	-65 to 200	$^{\circ}\text{C}$

Thermal Data

$R_{TH(J-CASE)}$	Thermal Resistance Junction-case	25	$^{\circ}\text{C/W}$
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ELECTRICAL SPECIFICATIONS (T_{case} = 25°C)

STATIC

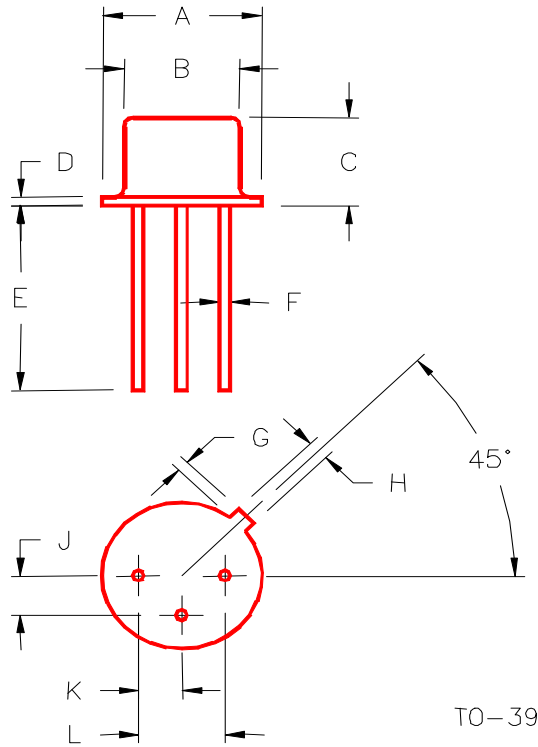
Symbol	Test Conditions	Value			Unit
		Min.	Typ.	Max.	
BVebo	I _E = 0.10 mA I _C = 0 mA	4.0	---	---	V
BVcbo	I _C = 0.3 mA I _E = 0 mA	65	---	---	V
BVceo	I _C = 3 mA I _S = 0 mA	40	---	---	V
I _{ceo}	V _{CE} = 30 V	---	---	0.1	mA
H _{FE}	V _{CE} = 5 V I _C = 100 mA	20	---	200	B

DYNAMIC

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	.190/4,83	.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			