



Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



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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

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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.


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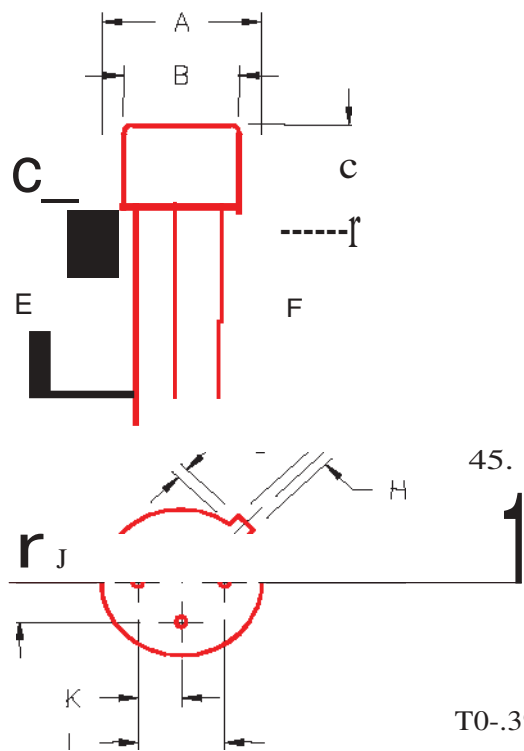
Symbol	Test Conditions	Value			Unit
		Min.	Typ.	Max.	
BVebo	$I_E = 0.10 \text{ mA}$ $I_C = 0 \text{ mA}$	4.0	---	---	V
BVcbo	$I_C = 0.3 \text{ mA}$ $I_E = 0 \text{ mA}$	65	---	---	V
BVceo	$I_C = 3 \text{ mA}$ $I_S = 0 \text{ mA}$	40	---	---	V
Iceo	$V_{CE} = 30 \text{ V}$	---	---	0.1	mA
H_{FE}	$V_{CE}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

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

PACKAGE MECHANICAL DATA

PACKAGE STYLE M246



T0-.39

	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
8	.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
O	.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			