



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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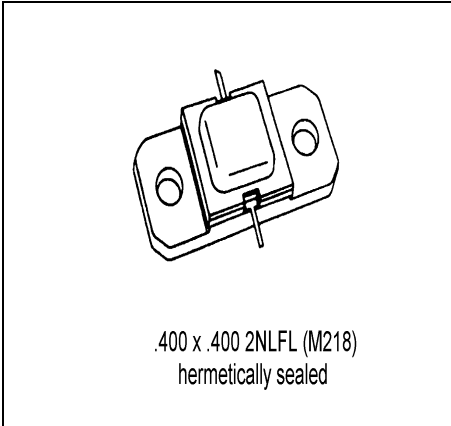


MSC1350M

**RF & MICROWAVE TRANSISTORS
AVIONICS APPLICATIONS**

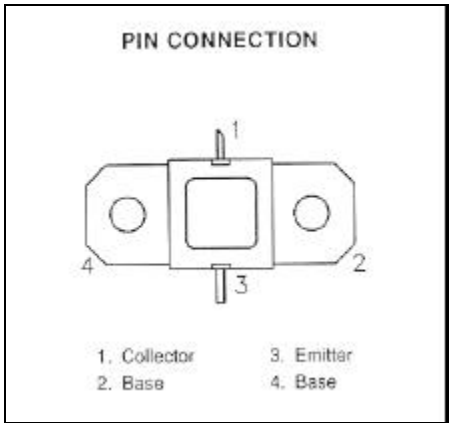
Features

- 1090 MHz
- COMMON BASE
- GOLD METALLIZATION
- CLASS C OPERATION
- POUT = 350 W MIN. WITH 7.0 dB GAIN
- WITHSTANDS 20:1 VSWR UNDER FULL LOAD



DESCRIPTION:

THE MSC1350M IS A SILICON NPN BIPOLAR DEVICE SPECIFICALLY DESIGNED FOR IFF AVIONICS APPLICATIONS. GOLD METALLIZATION AND EMITTER BALLASTING ASSURE HIGH RELIABILITY UNDER CLASS A LINEAR AMPLIFIER OPERATION. THE DEVICE IS CAPABLE OF WITHSTANDING A 20:1 VSWR AT ALL PHASE ANGLES UNDER FULL LOAD CONDITIONS.



ABSOLUTE MAXIMUM RATINGS (T_{case} = 25°C)

Symbol	Parameter	Value	Unit
V _{CC}	Collector-Supply Voltage*	55	V
I _C	Device Current*	19.8	A
P _{DISS}	Power Dissipation*	720	W
T _J	Junction Temperature	200	°C
T _{STG}	Storage Temperature	-65 to +200	°C

Thermal Data

R _{TH(J-C)}	Thermal Resistance Junction-case*	0.2	°C/W
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MSC1350M

*Applies only to rated RF Amplifier Operation

ELECTRICAL SPECIFICATIONS (T_{case} = 25 °C)

STATIC

Symbol	Test Conditions		Value			Unit
			Min.	Typ.	Max.	
BV _{CBO}	I _C = 10mA	I _E = 0mA	65	---	---	V
BV _{EBO}	I _E = 1mA	I _C = 0mA	3.5	---	---	V
BV _{CER}	I _C = 25mA	R _{BE} = 10Ω	65	---	---	V
I _{CES}	V _{CE} = 50 V		---	---	25	mA
h _{FE}	V _{CE} = 5 V	I _C = 1A	15	---	120	---

DYNAMIC

Symbol	Test Conditions			Value			Unit
				Min.	Typ.	Max.	
P _{OUT}	f = 1090 MHz	P _{IN} = 70W	V _{CC} = 50V	350	360	---	W
η _C	f = 1090 MHz	P _{IN} = 70W	V _{CC} = 50V	40	44	---	%
G _p	f = 1090 MHz	P _{IN} = 70W	V _{CC} = 50V	7.0	7.1	---	dB
Condition	Pulse Width = 10uS Duty Cycle = 1%						

IMPEDANCE DATA

FREQ	Z _{IN} (Ω)	Z _{CL} (Ω)
1025 MHz	5.0 + j5.0	7.0 - j2.5
1090 MHz	7.0 + j2.5	7.5 - j2.8
1150 MHz	3.6 + j2.5	6.8 - j2.7

V_{CC} = 50V
P_{IN} = 70W

PACKAGE MECHANICAL DATA

