Microsemi
RF PRODUCTS DIVISION

MS1403

RF & MICROWAVE TRANSISTORS

PRODUCT PREVIEW

DESCRIPTION

The MS1403 is a 7.5 V epitaxial silicon NPN planar transistor designed primarily for VHF communications. It withstands very high VSWR under rated operating conditions.

IMPORTANT: For the most current data, consult *MICROSEMI*'s website: **http://www.microsemi.com**

KEY FEATURES

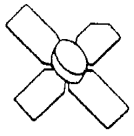
- 175 MHz
- 7.5 Volts
- Common Emitter
- P_{OUT} = 1.4 W Min.
- G_P = 7.0 dB Gain

APPLICATIONS/BENEFITS

- VHF Portable/Mobile Applications

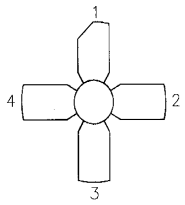
ABSOLUTE MAXIMUM RATINGS (T_{CASE} = 25°C)

Symbol	Parameter	Value	Unit
V_{CBO}	Collector-Base Voltage	36	V
V_{CER}	Collector-Emitter Voltage	16	V
V_{CES}	Collector-Emitter Voltage	36	V
V_{EBO}	Emitter-Base Voltage	4.0	V
I_C	Device Current	0.75	A
P_{DISS}	Power Dissipation	5.0	W
T_J	Junction Temperature	+200	°C
T_{STG}	Storage Temperature	-65 to +150	°C



.280 4LSL (M123)
epoxy sealed

PIN CONNECTION



1. Collector
2. Emitter
3. Base
4. Emitter

THERMAL DATA

$R_{TH(j-c)}$	Junction-Case Thermal Resistance	35	°C/W

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140 Commerce Drive, Montgomeryville PA 18936, (215) 631-9840, Fax: (215) 631-9855

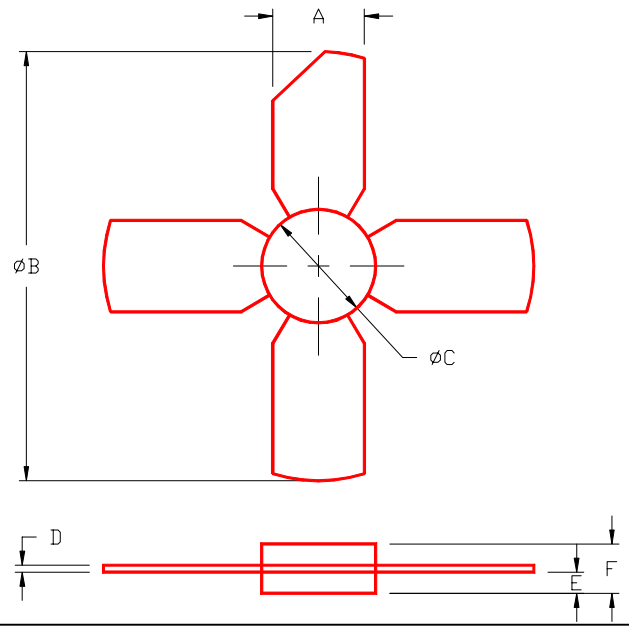
STATIC ELECTRICAL SPECIFICATIONS (T_{CASE} = 25°C)

Symbol	Test Conditions		MS1403			Units
			Min.	Typ.	Max.	
BV_{CES}	I_C = 5 mA	V_{BE} = 0 V	36	—	—	V
BV_{CEO}	I_C = 25 mA	I_B = 0 mA	16	—	—	V
BV_{EBO}	I_E = 1 mA	I_C = 0 mA	4.0	—	—	V
I_{CER}	V_{CE} =10 V	R_{BE} = 80Ω	—	—	0.5	mA
I_{CBO}	V_{CB} =15 V	I_E = 0 mA	—	—	1.0	mA
h_{FE}	V_{CE} = 5 V	I_C = 100 mA	40	—	200	—

DYMANIC ELECTRICAL SPECIFICATIONS (T_{CASE} = 25°C)

Symbol	Test Conditions		MS1403			Units
			Min.	Typ.	Max.	
P_{OUT}	f = 150 MHz	V_{CC} = 7.5 V	1.4	—	—	W
G_P	f = 150 MHz	V_{CC} = 7.5 V	11.5	—	—	dB
C_{OB}	f = 1 MHz	V_{CB} = 7.5 V	—	—	6.5	pF

PACKAGE STYLE M123



	MINIMUM INCHES/MM	MAXIMUM INCHES/MM		MINIMUM INCHES/MM	MAXIMUM INCHES/MM
A	.220/5,59	.230/5,84			
B	-----	1.055/26,8			
C	.275/6,99	.285/7,24			
D	.004/0,10	.006/0,15			
E	.050/1,27	.060/1,52			
F	.118/3,00	.130/3,30			

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NOTES

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