

140 COMMERCE DRIVE MONTGOMERYVILLE, PA 18936-1013 PHONE: (215) 631-9840 FAX: (215) 631-9855

SD1014-02 **RF & MICROWAVE TRANSISTORS** HF SSB APPLICATIONS Features 175 MHz .380 4LSTUD (M135) **12.5 VOLTS** epoxy sealed **GOLD METALIZATION** Pout = 15 W MINIMUM $G_{P} = 6.3 \text{ dB}$ **PIN CONNECTION COMMON EMITTER CONFIGURATION** 1 **DESCRIPTION:** The SD1014-02 is a 12.5 V Class C epitaxial silicon NPN planar 2 4 transistor designed primarily for VHF mobile and marine 3 transmitters. Emitter ballasting is employed to achieve excellent ruggedness under severe load mismatch conditions. 3 base 1 collector 4 emitter 2 emitter **ABSOLUTE MAXIMUM RATINGS**

Symbol	Parameter	Value	Unit	
V _{сво}	Collector-Base Voltage	36	V	
V _{CEO}	Collector-Emitter Voltage	18	V	
V _{EBO}	Emitter-Base Voltage	4.0	V	
I _C	Device Current	2.5	Α	
P _{DISS}	Power Dissipation	31	W	
ΤJ	Junction Temperature	+200	°C	
Tstg	Storage Temperature	-65 to +150	О°	

THERMAL DATA

R _{TH(J-C)}	Junction-case Thermal Resistance	5.6	°C/W
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SD1014-02

ELECTRICAL SPECIFICATIONS (Tcase = 25° C)

STATIC

Symbol	Test Conditions		Value			l Init
			Min.	Тур.	Max.	Unit
BV _{CES}	I _C = 10mA	$V_{BE} = 0V$	36			v
BV _{CEO}	I _C = 20mA	I _B = 0mA	18			v
BV _{EBO}	I _E = 2mA	I _c = 0mA	4.0			v
I _{CBO}	V _{CB} = 15V	I _E = 0mA			0.5	mA
h _{FE}	$V_{CE} = 5V$	I _c = 500mA	5		200	

DYNAMIC

Symbol	Test Conditions			Value			
			Min.	Тур.	Max.	Onit	
Pout	f = 175MHz	$V_{CC} = 12.5V$	P _{IN} = 3.5W	15			W
G₽	f = 175MHz	V _{cc} = 12.5V	P _{IN} = 3.5W	6.3			dB
ης	f = 175MHz	$V_{CC} = 12.5V$	P _{IN} = 3.5W	60			%
Сов	f = 1 MHz	$V_{CB} = 15V$				85	pF

IMPEDANCE DATA

FREQ	$Z_{IN}(\Omega)$	$Z_{CL}(\Omega)$		
175 MHz	1.0 - j1.4	3.3 + j1.2		

 $P_{IN} = 3W, V_{CE} = 12.5V$



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PACKAGE MECHANICAL DATA

PACKAGE STYLE M135



	MINIMUM	MAXIMUM		MINIMUM	MAXIMUM
	INCHES/MM	INCHES/MM		INCHES/MM	INCHES/MM
Α	.220/5,59	.230/5,84	1	.155/3,94	.175/4,45
В	.980/24,89		J		.750/19,05
С	.370/9,40	.385/9,78			
D	.004/0,10	.007/0,18			
Ε	.320/8,13	.330/8,38			
F	.100/2,54	.130/3,30			
G	.450/11,43	.490/12,45			
Н	.090/2,29	.100/2,54			

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