

NPN SILICON HIGH FREQUENCY TRANSISTOR

DESCRIPTION:

The **ASI MRF1001A** is a High Frequency Transistor Designed for Amplifier and Oscillator Applications.

MAXIMUM RATINGS

I_C	200 mA
V_{CE}	20 V
P_{DISS}	1.0 W @ $T_C = 25^\circ C$
T_J	$-65^\circ C$ to $+200^\circ C$
T_{STG}	$-65^\circ C$ to $+200^\circ C$
θ_{JC}	175 $^\circ C/W$

PACKAGE STYLE TO-39

SYMBOL	DIMENSIONS			
	INCHES		MILLIMETERS	
	MIN.	MAX.	MIN.	MAX.
ϕa	0.190	0.210	4.83	5.33
A	0.240	0.260	6.10	6.60
ϕb	0.016	0.021	0.406	0.533
ϕb_2	0.016	0.019	0.406	0.483
ϕD	0.350	0.370	8.89	9.40
ϕD_1	0.315	0.335	8.00	8.51
h	0.009	0.125	0.229	3.18
i	0.028	0.034	0.711	0.864
k	0.029	0.040	0.737	1.02
l	0.500		12.70	
l_1		0.050		1.27
l_2	0.250		6.35	
P	0.100		2.54	
Q				
a	45° NOMINAL			
β	90° NOMINAL			

1 = Emitter 2 = Base
3 = Collector

CHARACTERISTICS $T_C = 25^\circ C$

SYMBOL	TEST CONDITIONS			MINIMUM	TYPICAL	MAXIMUM	UNITS
BV_{CEO}	$I_C = 5.0$ mA			20			V
BV_{CBO}	$I_C = 1.0$ mA			30			V
BV_{EBO}	$I_C = 100$ μA			3.5			V
I_{CBO}	$V_{CB} = 10$ V				50		μA
I_{EBO}	$V_{EB} = 3.5$ V					100	μA
h_{FE}	$V_{CE} = 5.0$ V	$I_C = 50$ mA		50		300	---
$V_{CE(SAT)}$	$I_C = 50$ mA	$I_B = 10$ mA			100		V
f_t	$V_{CE} = 14$ V	$I_C = 90$ mA	$f = 300$ MHz		3.0		GHz
G_{Umax}	$V_{CC} = 14$ V	$I_C = 90$ mA	$P_{out} = 1.0$ W		11.5		dB
MAG	$f = 300$ MHz				11.7		dB
$ S_{21} ^2$				10	11.13		dB