

NPN SILICON HIGH FREQUENCY TRANSISTOR

DESCRIPTION:

The **ASI MRF517** is Designed for High Linearity Class A Amplifier Applications in the 100 to 500 MHz Frequency Range.

MAXIMUM RATINGS

I_C	150 mA
V_{CBO}	35 V
P_{DISS}	2.5 W @ $T_C = 50^\circ\text{C}$ 20 mW/ $^\circ\text{C}$ @ $T_C = 50^\circ\text{C}$
T_J	-65°C to $+200^\circ\text{C}$
T_{STG}	-65°C to $+200^\circ\text{C}$
θ_{JC}	50 $^\circ\text{C}/\text{W}$

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
j	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 (CASE)

CHARACTERISTICS $T_A = 25^\circ\text{C}$

SYMBOL	TEST CONDITIONS	MINIMUM	TYPICAL	MAXIMUM	UNITS
BV_{CEO}	$I_C = 5.0\text{ mA}$ $R_{BE} = 330\ \Omega$	20 25			V
BV_{CBO}	$I_C = 100\ \mu\text{A}$	35			V
BV_{EBO}	$I_E = 100\ \mu\text{A}$	2.5			V
I_{CBO}	$V_{CB} = 15\text{ V}$			100	μA
h_{FE}	$V_{CB} = 10\text{ V}$ $I_C = 50\text{ mA}$	40		200	---
f_t	$V_{CB} = 15\text{ V}$ $I_C = 50\text{ mA}$ $f = 200\text{ MHz}$		2700		MHz
C_{OB}	$V_{CB} = 10\text{ V}$ $f = 1.0\text{ MHz}$		3.0		pF
G_{PE}	$V_{CB} = 15\text{ V}$ $I_C = 50\text{ mA}$ $f = 500\text{ MHz}$	11.5			dB
NF			4.0		dB
I_{P3}			+33		dBm