

NPN SILICON HIGH FREQUENCY TRANSISTOR

DESCRIPTION:

The **ASI MRF5943C** is a High Frequency Transistor for General Purpose Amplifier Applications.

MAXIMUM RATINGS

I_C	400 mA
V_{CEO}	30 V
V_{CBO}	40 V
V_{EBO}	3.5 V
P_{DISS}	1.0 W @ $T_A = 25^\circ\text{C}$ 3.5 W @ $T_C = 25^\circ\text{C}$
T_J	-65°C to $+200^\circ\text{C}$
T_{STG}	-65°C to $+150^\circ\text{C}$
θ_{JC}	125 $^\circ\text{C/W}$

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

SYMBOL	TEST CONDITIONS		MINIMUM	TYPICAL	MAXIMUM	UNITS
BV_{CEO}	$I_C = 5.0\text{ mA}$		30			V
BV_{CBO}	$I_C = 1.0\text{ mA}$		40			V
BV_{EBO}	$I_E = 100\text{ }\mu\text{A}$		3.5			V
I_{CBO}	$V_{CB} = 15\text{ V}$				50	μA
I_{CEO}	$V_{CE} = 20\text{ V}$				10	μA
h_{FE}	$V_{CE} = 15\text{ V}$	$I_C = 50\text{ mA}$	25		300	---
N_F	$V_{CE} = 15\text{ V}$	$I_C = 35\text{ mA}$ $f = 200\text{ MHz}$		5.5		dB
$G_{U\text{ max}}$	$V_{CE} = 15\text{ V}$	$I_C = 35\text{ mA}$ $f = 200\text{ MHz}$		11.4		dB