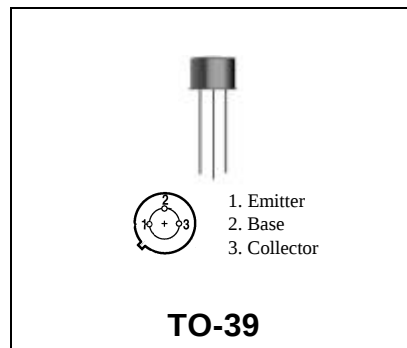


MRF5943C**RF & MICROWAVE DISCRETE
LOW POWER TRANSISTORS****Features**

- Maximum Available Gain = 17dB @ 300MHz
- High f_T – 1.2 GHz typical

**DESCRIPTION:**

Designed for general-purpose RF amplifier applications, such as pre-drivers, drivers, and oscillators.

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

Symbol	Parameter	Value	Unit
V _{CEO}	Collector-Emitter Voltage	30	V
V _{CBO}	Collector-Base Voltage	40	V
V _{EBO}	Emitter-Base Voltage	3.5	V
I _C	Collector Current	400	mA
P _D	Total Device Dissipation	1.0	W
T _{STG}	Storage Temperature	-65 to +150	°C

Thermal Data

R _{TH(J-C)}	Thermal Resistance, Junction – Case	125	°C/W
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ELECTRICAL SPECIFICATIONS (Tcase = 25°C)

STATIC

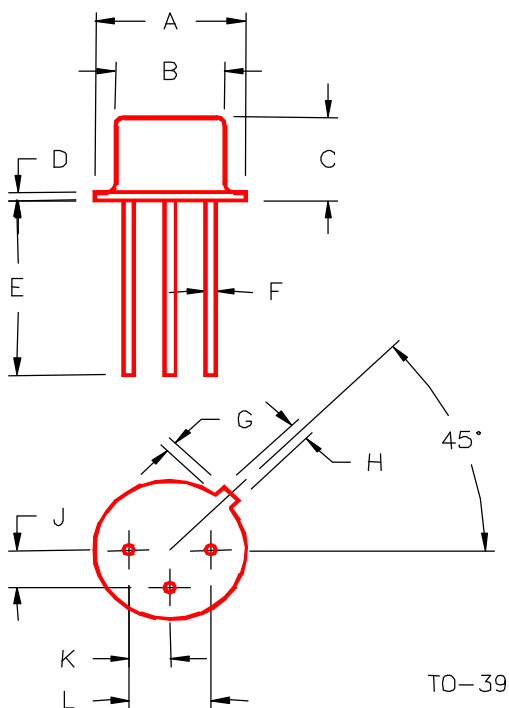
Symbol	Test Conditions	Value			Unit
		Min.	Typ.	Max.	
BV_{CEO}	$I_C = 5 \text{ mA}$, $I_B = 0$	30	-	-	V
BV_{CBO}	$I_C = 0.1 \text{ mA}$, $I_E = 0$	40	-	-	V
BV_{EBO}	$I_E = 0.1 \text{ mA}$, $I_C = 0$	3.5	-	-	V
I_{CBO}	$V_{CB} = 15 \text{ V}$, $V_{BE} = 0 \text{ V}$	-	-	50	μA
I_{CEO}	$V_{CE} = 20 \text{ V}$, $V_{BE} = 0 \text{ V}$	-	-	10	μA
h_{FE}	$I_C = 50 \text{ mA}$, $V_{CE} = 15 \text{ V}$	25	-	300	

DYNAMIC

Symbol	Test Conditions	Value			Unit
		Min.	Typ.	Max.	
Ftau	Current-Gain Bandwidth Product ($I_C = 35 \text{ mA}$, $V_{CE} = 15 \text{ Vdc}$, $f = 100 \text{ MHz}$)	-	1.2	-	GHz
NF	$I_C = 35 \text{ mA}$, $V_{CE} = 15 \text{ V}$, $f = 200 \text{ MHz}$	-	5.5	-	dB
$G_{U \text{ max}}$	$I_C = 10 \text{ mA}$, $V_{CE} = 15 \text{ V}$, $f = 200 \text{ MHz}$	-	12	-	dB

PACKAGE MECHANICAL DATA

PACKAGE STYLE M246



	MINIMUM INCHES/MM	MAXIMUM INCHES/MM		MINIMUM INCHES/MM	MAXIMUM INCHES/MM
A	.350/8,89	.370/9,40	J	.095/2,41	.105/2,67
B	.315/8,00	.335/8,51	K	.095/2,41	.105/2,67
C	.240/6,10	.260/6,60	L	.190/4,83	.210/5,33
D	.015/0,38	.045/1,14			
E	.500/12,70				
F	.016/0,41	.019/0,48			
G	.029/0,74	.040/1,02			
H	.028/0,71	.034/0,86			