Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!

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ADVANCED POWER TECHNOLOGY RF®

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MRF545

RF & MICROWAVE DISCRETE LOW POWER TRANSISTORS

Features

- Silicon PNP, high Frequency, high breakdown Transistor
- Maximum Unilateral Gain = 14 dB (typ) @ f = 200 MHz
- High Collector Base Breakdown Voltage - BVCBO = 100 V (min)
- High F_T - 1400 MHz

1. Emitter
2. Base
3. Collector

TO-39

DESCRIPTION:
Designed primarily for use in high frequency and medium and high resolution color video display monitors as well as other applications requiring high breakdown characteristics.

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

Symbol	Parameter	Value	Unit
V_{CEO}	Collector-Emitter Voltage	70	Vdc
V_{CBO}	Collector-Base Voltage	100	Vdc
V_{EBO}	Emitter-Base Voltage	3.0	Vdc
I_C	Collector Current	400	mA

Thermal Data

P_D	Total Device Dissipation @ T_A = 25ºC Derate above 25ºC	3.5 20	Watts mW/ ºC
Tstg	Storage Temperature Range	-65 to +200	ºC

ELECTRICAL SPECIFICATIONS (Tcase = 25°C)

STATIC

(off)

Symbol	Test Conditions	Value			Unit
		Min.	Typ.	Max.	
BVCEO	Collector-Emitter Breakdown Voltage (IC = 1.0 mAdc, IB = 0)	70	-	-	Vdc
BVCBO	Collector-Base Breakdown Voltage (IC= 100 μAdc, IE=0)	100	-	-	Vdc
BVEBO	Emitter-Base Breakdown Voltage (IE = 100 μAdc, IC = 0)	3.0	-	-	Vdc
ICBO	Collector Cutoff Current (VCE = 80 Vdc, IE = 0 Vdc)	-	-	20	μA
ICES	Collector Cutoff Current (VCE = 80 Vdc, IE = 0 Vdc)	-	1.0	100	μA

(on)

HFE	DC Current Gain (IC = 50 mAdc, VCE = 6.0 Vdc)	15	-	-	

DYNAMIC

Symbol	Test Conditions	Value			Unit
		Min.	Typ.	Max.	
COB	Output Capacitance (VCB = 10Vdc, IE=0, f=1 MHz)	-	2.5	-	pF
CIB	Input Capacitance (VEB = 3Vdc, IE=0, f=1 MHz)	-	5.4	-	pF
CCB	Junction Capacitance (VCB = 10Vdc, IE=0, f=1 MHz)	-	2.8	3.2	pF
f_T	Current-Gain - Bandwidth Product (IC = 50 mAdc, VCE = 25 Vdc, f = 250 MHz)	1000	1400	-	MHz

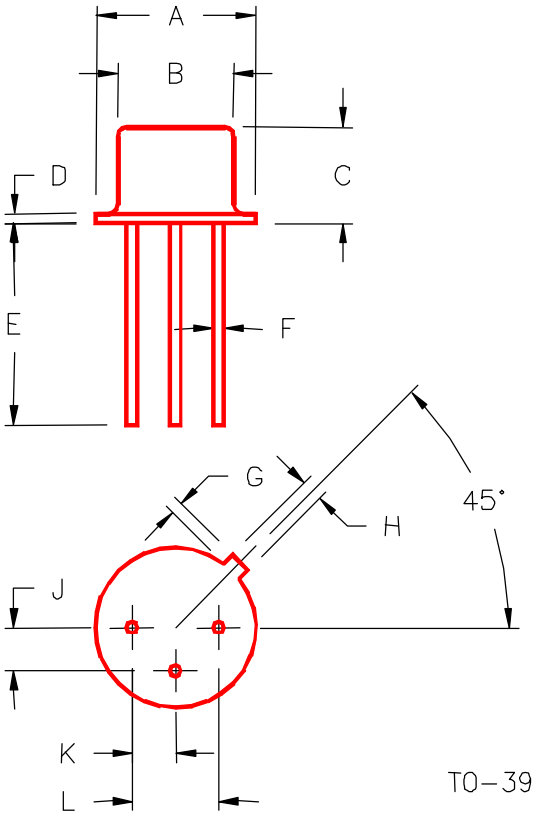
FUNCTIONAL

Symbol	Test Conditions		Value			Unit
			Min.	Typ.	Max.	
$G_{U\ max}$	Maximum Unilateral Gain	IC = 50 mAdc, VCE = 25Vdc, f = 200 MHz	-	14	-	dB
MAG	Maximum Available Gain	IC = 50 mAdc, VCE = 25Vdc, f = 200 MHz	-	14.5	-	dB
$\|S_{21}\|^2$	Insertion Gain	IC = 50 mAdc, VCE = 25Vdc, f = 200 MHz	11.5	12.5	-	dB

Table 1. Common Emitter S-Parameters, @ VCE = 25 V, IC = 50 mA

f	S11		S21		S12		S22	
(MHz)	|S11|	∠ϕ	|S21|	∠ϕ	|S12|	∠ϕ	|S22|	∠ϕ
100	0.139	-105	7.43	101	0.031	83	0.573	-19
200	0.162	-168	4.35	80	0.066	82	0.508	-23
300	0.522	130	1.7	75	0.113	85	0.493	-29
400	0.260	129	2.23	63	0.154	85	0.487	-43
500	0.275	133	1.74	54	0.188	71	0.445	-53
600	0.262	123	1.49	46	0.226	74	0.495	-69
700	0.333	118	0.951	45	0.925	75	0.456	-71
800	0.327	122	1.3	35	0.379	66	0.424	-85
900	0.517	97	1.21	30	0.402	61	0.393	-109
1000	0.463	115	1.07	27	0.437	63	0.375	-115

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			