

RF & MICROWAVE TRANSISTORS CATV-MATV AMPLIFIERS

Features

- NPN OVERLAY GEOMETRY
- CLASS A OPERATION
- EXCELLENT INTERMODULATION CHARACTERISTICS
- 40-880 MHz OPERATION
- COMMON EMITTER CONFIGURATION



Case : CB - 7 (TO 39)

DESCRIPTION:

THE MS1619 IS AN OVERLAY NPN SILICON TRANSISTOR IN A JEDEC TO-39 METAL CASE. THE MS1619 OFFERS EXTREMELY GOOD INTERMODULATION PROPERTIES AND HIGH POWER GAIN. THE DEVICE IS PRIMARILY INTENDED FOR FINAL AND DRIVER STAGES IN CHANNEL AND BAND-AERIAL AMPLIFIERS WITH HIGH OUTPUT POWER FROM 40 TO 880 MHz.

ABSOLUTE MAXIMUM RATINGS

Symbol	Parameter	Value	Unit
V_{CBO}	Collector-base Voltage ($I_E=0$)	40	V
V_{CER}	Collector-emitter Voltage ($R_{BF} \leq 50 \Omega$)	40	V
V_{CEO}	Collector-emitter Voltage ($I_B=0$)	25	V
V_{EBO}	Emitter-base Voltage ($I_C=0$)	3	V
I_C	Collector Current	150	mA
I_{CM}	Collector Peak Current	300	mA
P_{DISS}	Total Power Dissipation at $T_{amb} \leq 25^\circ C$ at $T_{case} \leq 125^\circ C$	0.7 1.5	W W
T_J T_{STG}	Junction and Storage Temperature	-65 to 200	$^\circ C$

Thermal Data

$R_{TH(J-CASE)}$	Thermal Resistance Junction-case	Max	50	$^\circ C/W$
$R_{TH(J-AMB)}$	Thermal Resistance Junction-ambient	Max	250	$^\circ C/W$

ELECTRICAL SPECIFICATIONS (Tcase = 25°C)

STATIC

Symbol	Test Conditions		Value			Unit
			Min.	Typ.	Max.	
Bvebo	I _C = 0.1 mA		3	---	---	V
Bvcer	I _C = 5 mA	R=10 Ω	40	---	---	V
HFE	I _C = 50 mA	V _{CE} =5V	25	---	---	V
NF	I _C = 30 mA	V _{CE} =15V f=200 MHz	---	6	---	dB
Cob	f =1.0 MHz	V _{CB} =15V	---	---	4	pf

DYNAMIC

Symbol	Test Conditions			Value			Unit
				Min.	Typ.	Max.	
P _{out}	f=200 MHz	V _{CE} =15V	I _{CQ} =70mA	130	150	---	mW
G _{pe}	f=200 MHz	V _{CE} =15V	I _{CQ} =70mA	---	16	---	dB

PACKAGE MECHANICAL DATA

