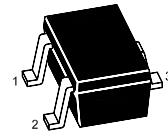


# MMBTSC4226W

## NPN Silicon Epitaxial Planar Transistor

For VHF, UHF low noise amplifier



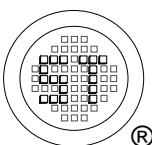
1.Base 2.Emitter 3.Collector  
SOT-323 Plastic Package

### Absolute Maximum Ratings ( $T_a = 25\text{ }^\circ\text{C}$ )

Parameter	Symbol	Value	Unit
Collector Base Voltage	$V_{CBO}$	20	V
Collector Emitter Voltage	$V_{CEO}$	12	V
Emitter Base Voltage	$V_{EBO}$	3	V
Collector Current	$I_C$	100	mA
Power Dissipation	$P_{tot}$	150	mW
Junction Temperature	$T_j$	150	$^\circ\text{C}$
Storage Temperature Range	$T_{stg}$	- 65 to + 150	$^\circ\text{C}$

### Characteristics at $T_a = 25\text{ }^\circ\text{C}$

Parameter	Symbol	Min.	Max.	Unit	
DC Current Gain at $V_{CE} = 3\text{ V}$ , $I_C = 7\text{ mA}$	Current Gain Group Q	$h_{FE}$	40	80	-
	R	$h_{FE}$	70	140	-
	S	$h_{FE}$	125	250	-
Collector Base Cutoff Current at $V_{CB} = 10\text{ V}$	$I_{CBO}$	-	1	$\mu\text{A}$	
Emitter Base Cutoff Current at $V_{EB} = 1\text{ V}$	$I_{EBO}$	-	1	$\mu\text{A}$	
Collector Base Breakdown Voltage at $I_C = 10\text{ }\mu\text{A}$	$V_{(BR)CBO}$	20	-	V	
Collector Emitter Breakdown Voltage at $I_C = 1\text{ mA}$	$V_{(BR)CEO}$	12	-	V	
Emitter Base Breakdown Voltage at $I_E = 10\text{ }\mu\text{A}$	$V_{(BR)EBO}$	3	-	V	
Collector Emitter Saturation Voltage at $I_C = 10\text{ mA}$ , $I_B = 5\text{ mA}$	$V_{CE(sat)}$	-	0.5	V	
Transition Frequency at $V_{CE} = 3\text{ V}$ , $I_C = 7\text{ mA}$	$f_T$	3	-	GHz	
Feed Back Capacitance at $V_{CB} = 3\text{ V}$ , $f = 1\text{ MHz}$	$C_{re}$	-	1.5	pF	



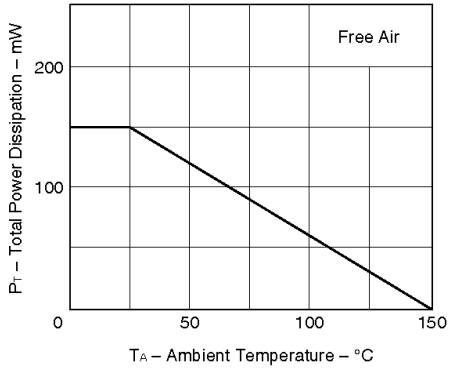
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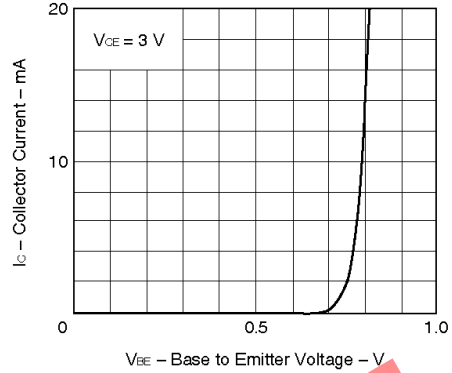
Dated: 08/08/2012 Rev: 01

# MMBTSC4226W

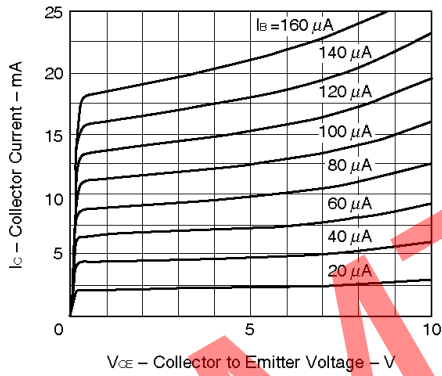
TOTAL POWER DISSIPATION vs. AMBIENT TEMPERATURE



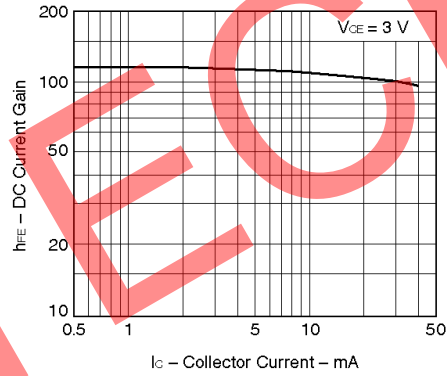
COLLECTOR CURRENT vs. BASE TO EMITTER VOLTAGE



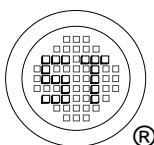
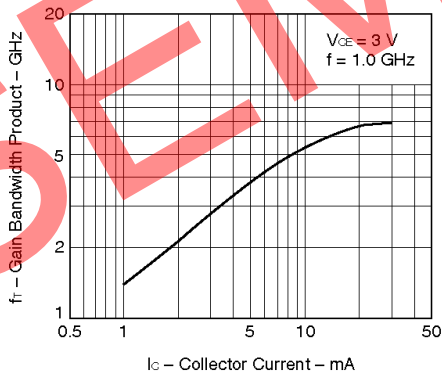
COLLECTOR CURRENT vs. COLLECTOR TO EMITTER VOLTAGE



DC CURRENT GAIN vs. COLLECTOR CURRENT



GAIN BANDWIDTH PRODUCT vs. COLLECTOR CURRENT



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