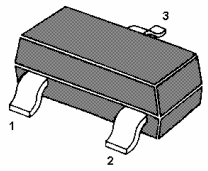
MMBTSC1621

NPN Silicon Epitaxial Planar Switching Transistor

SOT-23



1.BASE 2.EMITTER 3.COLLECTOR

SOT-23 Plastic Package

Absolute Maximum Ratings (T_a = 25 °C)

	Symbol	Value	Unit
Collector Base Voltage	V_{CBO}	40	V
Collector Emitter Voltage	V_{CES}	40	V
Collector Emitter Voltage	V_{CEO}	15	V
Emitter Base Voltage	V_{EBO}	4.5	V
Collector Current	I_C	500	mA
Power Dissipation	P_{tot}	200	mW
Thermal Resistance Form junction to ambient in free air	R_{thj-a}	500	K/W
Junction Temperature	T_j	150	°C
Storage Temperature Range	T_S	-55 to +150	°C

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Characteristics at T_{amb}=25 °C

	Symbol	Min.	Typ.	Max.	Unit
DC Current Gain					
at V_{CE}=1V, I_C=10mA	h_{FE}	40	-	120	-
at V_{CE}=1V, I_C=10mA, Ta= -55 °C	h_{FE}	20	-	-	-
at V_{CE}=2V, I_C=100mA	h_{FE}	20	-	-	-
Small Signal Current Gain					
at V_{CE}=10V, I_C=1mA, f=100MHz	h_{fe}	5	-	-	-
Collector Cutoff Current					
at V_{CB}=20V	I_{CBO}	-	-	0.4	µA
at V_{CB}=20V, Tj=125 °C		-	-	30	mA
Collector Saturation Voltage					
at I_C=10mA, I_B=1mA	$V_{CE(sat)}$	-	-	0.25	V
Base Saturation Voltage					
at I_C=10mA, I_B=1mA	$V_{BE(sat)}$	0.7	-	0.85	V
Collector Emitter Breakdown Voltage					
at I_C=10mA	$V_{(BR)CEO}$	15	-	-	V
Collector Emitter Breakdown Voltage					
at I_C=10mA	$V_{(BR)CES}$	40	-	-	V
Collector Base Breakdown Voltage					
at I_C=10mA	$V_{(BR)CBO}$	40	-	-	V
Emitter Base Breakdown Voltage					
at I_E=10mA	$V_{(BR)EBO}$	4.5	-	-	V
Output Capacitance					
at V_{CB}=5V, f=1MHz	C_{ob}	-	-	4	pF
Storage Time					
at I_{Con}=I_{Bon}= -I_{Boff}=10mA	t_s	-	5	13	ns
Turn-on Time					
at I_C=10mA, I_{Bon}=3mA, V_{CC}=3V	t_{on}	-	8	12	ns
Turn-off Time					
at I_C=10mA, I_{Bon}=3mA, I_{Boff}=1.5mA, V_{CC}=3V	t_{off}	-	10	18	ns