Single Bipolar Transistor

RoHS Compliant

Features

- Very Low Equivalent Resistance,
- SOT23 NPN Rsilicon planar

Absolute Maximum Ratings Ta = 25°C

Parameter	Symbol	Rating	Unit
Collector - Base Voltage	V_{CBO}	40	V
Collector-emitter voltage	V_{CEO}		
Emitter - Base Voltage	V_{EBO}	5	
Peak collector current	I_{CM}	1	A
Collector current	I_C	2	
Power Dissipation	P_{tot}	500	mW
Operating and storage temperature range	T_J, T_{stg}	-55 to +150	°C

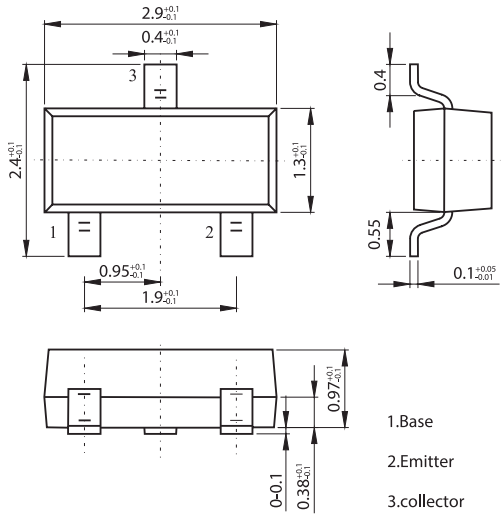
Electrical Characteristics (T_A = 25°C

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Collector- base breakdown voltage	$V_{(BR)CBO}$	I_C= 100 µA	40			V
Collector- emitter breakdown voltage *	$V_{(BR)CEO}$	I_C= 10 mA				
Emitter - base breakdown voltage	$V_{(BR)EBO}$	I_E= 100µA	5			
Collector cutoff current	I_{CBO}	V_{CB}=30V, V_{CES}= 30			100	nA
Emitter cut-off current	I_{EBO}	V_{EB}=4V				
Collector-emitter saturation voltage *	$V_{CE(sat)}$	I_C=500 mA, I_B=50mA I_C=1A, I_B=100mA			0.3 0.5	V
Base-emitter saturation voltage *	$V_{BE(sat)}$	I_C= 1 A, I_B= 100mA			1.1	
Base-emitter voltage *	$V_{BE(on)}$	I_C= 1A V_{CE}=5V			1	
Static Forward Current Transfer Ratio *	h_{FE}	I_C= 1mA, V_{CE}= 5V	300			
		I_C= 500mA, V_{CE}= 5V			900	
		I_C= 1A, V_{CE}= 5V	200			
		I_C= 2A V_{CE}= 5V	35			
Current-gain-bandwidth product	f_T	Ic=50mA, V_{CE}= 10V, f=100MHz	150			MHz
Output capacitance	C_{obo}	V_{CB}= 10V, f=1MHz			10	pF

* Pulse test: tp≤300 ìs; d≤0.02

Single Bipolar Transistor

Diagram



Dimensions : Millimetres

Part Number Table

Description	Part Number
Single Bipolar Transistor, Medium Power, 2A, 40V, SOT 23	FMMT491A