Elektronische Bauelemente

MMBTA44

400V, 0.2A

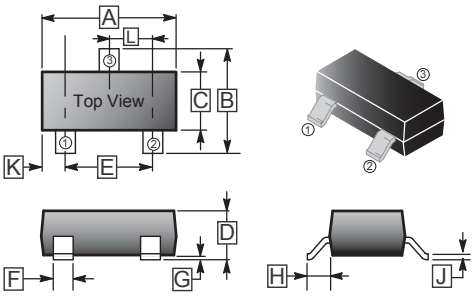
NPN Silicon Epitaxial Transistor

RoHS Compliant Product
A suffix of "-C" specifies halogen & lead-free

FEATURES

- High Voltage Transistor

SOT-23



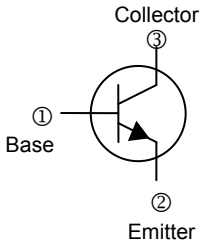
REF.	Millimeter		REF.	Millimeter	
	Min.	Max.		Min.	Max.
A	2.70	3.04	G	-	0.18
B	2.10	2.80	H	0.40	0.60
C	1.20	1.60	J	0.08	0.20
D	0.89	1.40	K	0.6 REF.	
E	1.78	2.04	L	0.85	1.15
F	0.30	0.50			

MARKING

3D

PACKING INFORMATION

Package	MPQ	Leader Size
SOT-23	3K	7 inch



MAXIMUM RATINGS (T_A = 25°C unless otherwise specified)

Parameter	Symbol	Rating	Unit
Collector - Base Voltage	V_{CBO}	400	V
Collector - Emitter Voltage	V_{CEO}	400	V
Emitter - Base Voltage	V_{EBO}	6	V
Collector Current - Continuous	I_C	0.2	A
Collector Current -Pulsed	I_{CM}	0.3	A
Collector Power Dissipation	P_C	350	mW
Thermal Resistance From Junction To Ambient	$R_{\theta JA}$	357	°C / W
Junction, Storage Temperature	T_J, T_{STG}	150, -55~150	°C

ELECTRICAL CHARACTERISTICS (T_A = 25°C unless otherwise specified)

Parameter	Test Conditions	Symbol	Min.	Typ.	Max.	Unit
Collector-Base Breakdown Voltage	I_C =100μA, I_E =0	$V_{(BR)CBO}$	400	-	-	V
Collector-Emitter Breakdown Voltage[1]	I_C =1mA, I_B =0	$V_{(BR)CEO}$	400	-	-	V
Emitter-Base Breakdown Voltage	I_E =10μA, I_C =0	$V_{(BR)EBO}$	6	-	-	V
Collector Cut-Off Current	V_{CB} =400V, I_E =0	I_{CBO}	-	-	0.1	μA
Emitter Cut-Off Current	V_{EB} =4V, I_C =0	I_{EBO}	-	-	0.1	μA
DC Current Gain [1]	V_{CE} =10V, I_C =1mA	h_{FE}	40	-	-	
	V_{CE} =10V, I_C =10mA		50	-	200	
	V_{CE} =10V, I_C =50mA		45	-	-	
	V_{CE} =10V, I_C =100mA		40	-	-	
Collector-Emitter Saturation Voltage [1]	I_C =1mA, I_B =0.1mA	$V_{CE(sat)}$	-	-	0.4	V
	I_C =10mA, I_B =1mA		-	-	0.5	
	I_C =50mA, I_B =5mA		-	-	0.75	
Base-Emitter Saturation Voltage [1]	I_C =10mA, I_B =1mA	$V_{BE(sat)}$	-	-	0.75	V
Output Capacitance	V_{CB} =20V, I_E =0, f=1MHz	C_{obo}	-	-	7	pF
Input Capacitance	V_{EB} =0.5V, I_C =0, f=1MHz	C_{ibo}	-	-	130	pF

Note:
1. Pulse test: pulse width ≤300μs, duty cycle≤ 2.0%.

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CHARACTERISTIC CURVES

