鼎德丰
DING DE FENG

NPN Silicon Transistor

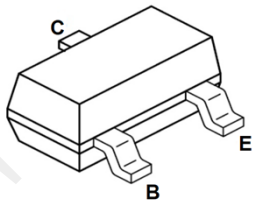
MMBTA42

Package: SOT-23

Complement to MMBTA92

Maximum Ratings (Ta = 25°)

Parameter	Symbol	Rating	Unit
Collector-base voltage	BV_{CBO}	300	V
Collector-emitter voltage	BV_{CEO}	300	V
Emitter-base voltage	BV_{EBO}	6	V
Collector current	I_{CM}	500	mA
Collector Power Dissipation	P_C	350	mW
Junction Temperature	Tj	150	℃
Storage Temperature	Tstg	-55～+150	℃



SOT-23

Electrical Characteristics（Ta=25℃）

Parameter	Symbol	Test Condition	Min	Typ	Max	Unit
Collector-Base Breakdown Voltage	BV_{CBO}	I_C=100 μ A，I_E=0	300			V
Collector-Emitter Breakdown Voltage	BV_{CEO}	I_C=1mA，I_B=0	300			V
Emitter-Base Breakdown Voltage	BV_{EBO}	I_E=100 μ A，I_C=0	6			V
collector-base cut-off current	I_{CBO}	V_{CB}=200V，I_E=0			0.1	μA
collector-emitter cut-off current	I_{CEO}	V_{CE}=200V，I_B=0			0.1	μA
emitter-base cut-off current	I_{EBO}	V_{EB}=6V，I_C=0			0.1	μA
DC current gain	H_{FE1}	V_{CE}=10V，I_B=1mA	25			
	H_{FE2}	V_{CE}=10V，I_B=10mA	40		240	
	H_{FE3}	V_{CE}=10V，I_B=30mA	40			
collector-emitter saturation voltage	$V_{CE(SAT)}$	I_C=20mA，I_B=2mA			0.5	V
Base-Emitter Saturation Voltage	$V_{BE(SAT)}$	I_C=20mA，I_B=2mA			0.9	V
Transition frequency	f_T	V_{CE}=20V，I_B=10mA, = 100 MHz	50			MHz