

SOT-23 Plastic-Encapsulate Transistors

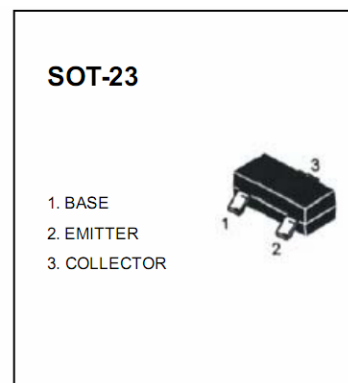
MMBTA42 TRANSISTOR (NPN)

FEATURES

Complementary to MMBTA92

MARKING:1D

MAXIMUM RATINGS (TA=25°C unless otherwise noted)



Symbol (符号)	Parameter (参数名称)	Value (额定值)	Units (单位)
VCBO	Collector-Base Voltage (集电极-基极电压)	180	V
VCEO	Collector-Emitter Voltage (集电极-发射极电压)	160	V
VEBO	Emitter-Base Voltage (发射极-基极电压)	5	V
IC	Collector Current -Continuous (集电极电流)	0.6	A
PC	Collector Power Dissipation (耗散功率)	0.3	W
Tj	Junction Temperature (结温)	150	°C
Tstg	Storage Temperature (储存温度)	-55-150	°C

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

Parameter (参数名称)	Symbol (符号)	Test conditions (测试条件)	MIN (最小值)	TYP (典型值)	MAX (最大值)	UNIT (单位)
Collector-base breakdown voltage 集电极-基极击穿电压	V(BR)CBO	IC= 100μA, IE=0	180			V
Collector-emitter breakdown voltage 集电极-发射极击穿电压	V(BR)CEO	IC= 1mA, IB=0	160			V
Emitter-base breakdown voltage 发射极-基极击穿电压	V(BR)EBO	IE=100μA, IC=0	5			V
Collector cut-off current 集电极-基极截止电流	ICBO	VCB=120 V, IE=0			1	μ A
Collector cut-off current 集电极-发射极截止电流	ICEO	VCE=120V, IB=0			10	μ A
Emitter cut-off current 发射极-基极截止电流	IEBO	VEB=5V, IC=0			1	μ A
DC current gain 直流电流增益	hFE	VCE=5V, IC= 10mA	100		400	
Collector-emitter saturation voltage 集电极-发射极饱和压降	VCE(sat)	IC=50mA, IB= 5mA			0.5	V
Base-emitter saturation voltage 发射极-基极饱和压降	VBE(sat)	IC=50mA, IB= 5mA			1	V

CLASSIFICATION OF hFE

Range	100-200	200-300	300-400	
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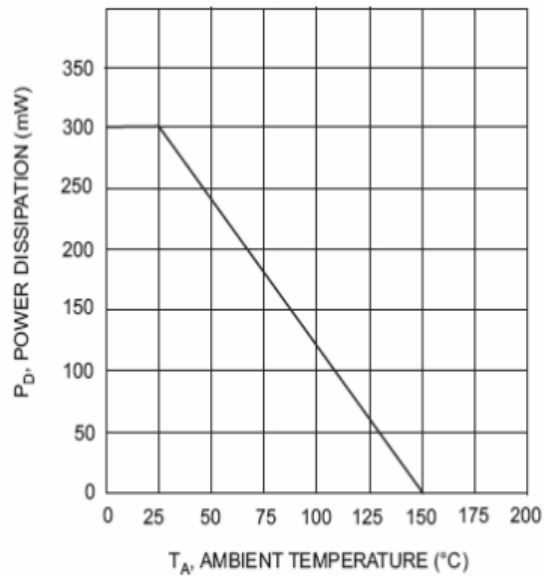


Fig. 1, Max Power Dissipation vs Ambient Temperature

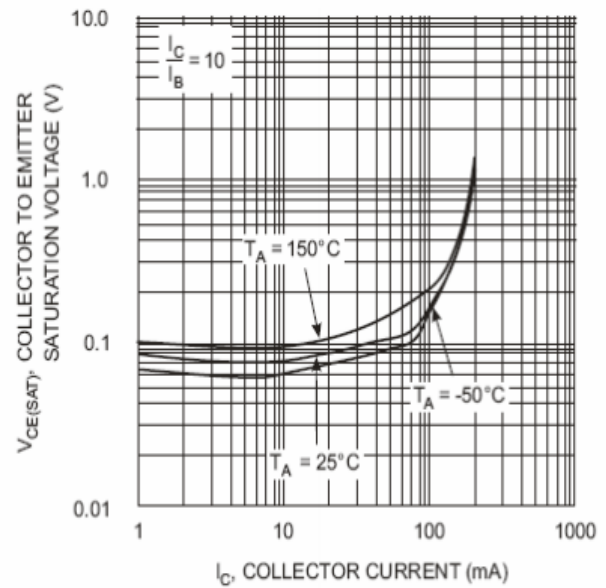


Fig. 2, Collector Emitter Saturation Voltage vs. Collector Current

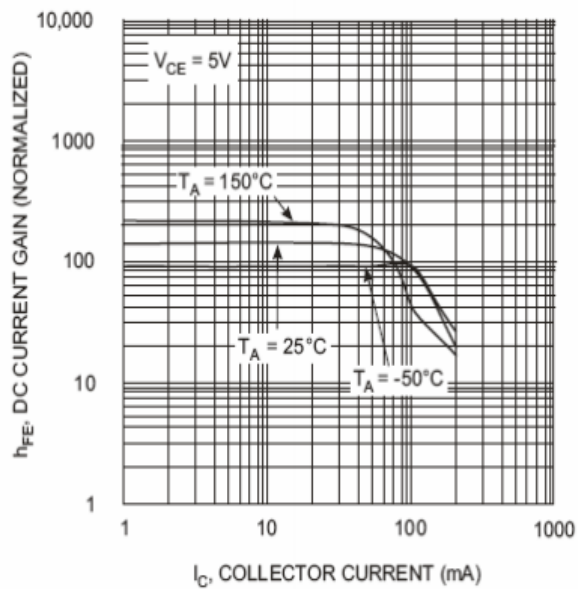


Fig. 3, DC Current Gain vs. Collector Current

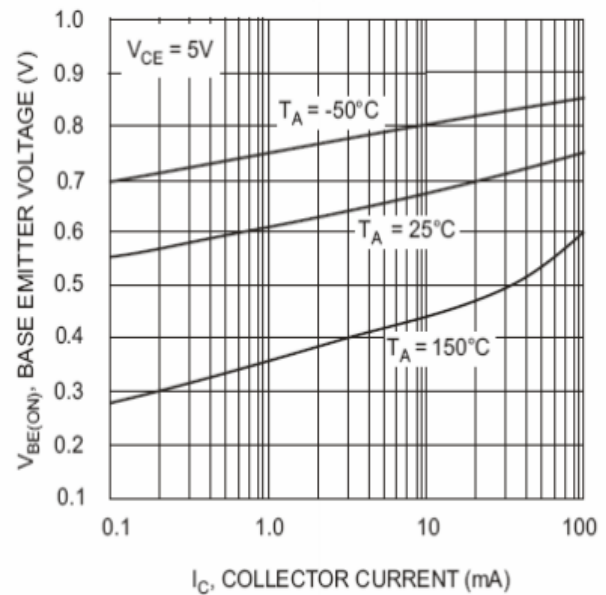


Fig. 4, Base Emitter Voltage vs. Collector Current