

TRANSI STOR (NPN) <u>SOT-23</u> 1.BASE 2.EMITTER 3.COLLECTOR Marking :1AM	SOT-23 Plastic-Encapsulate Transistors Features ※ Complimentary to MMBT3906 ※ Collector Current: $I_c=200\text{mA}$
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MAXIMUM RATINGS (Ta=25°C unless otherwise noted)

Parameter	Symbol	Value	Unit
Collector-Base Voltage	VCBO	60	V
Collector-Emitter Voltage	VCEO	40	V
Emitter-Base Voltage	VEBO	6	V
Collector Current	IC	200	mA
Collector Power Dissipation	PC	200	mW
Thermal Resistance From Junction To Ambient	R θ JA	625	°C/W
Junction Temperature	T _j	150	°C
Storage Temperature	T _{stg}	-55~+150	°C

ELECTRICAL CHARACTERISTICS (Ta=25°C unless otherwise specified)						
Parameter	Symbol	Test Condition	Min	Typ	Max	Unit
Collector-base breakdown voltage	V(BR)CBO	IC= 10µA, IE=0	60			V
Collector-emitter breakdown voltage	V(BR)CEO	IC= 1mA, IB=0	40			V
Emitter-base breakdown voltage	V(BR)EBO	IE= 10µA, IC=0	6			V
Collector cut-off current	ICBO	VCB= 60 V , IE=0			0.1	µA
Collector cut-off current	ICEO	VCE=30V, VEB(off)=3V			50	nA
Emitter cut-off current	IEBO	VEB= 6V , IC=0			0.1	µA
DC current gain	hFE	VCE=1V, IC= 10mA	100		300	
	hFE	VCE=1V, IC= 50mA	60			
	hFE	VCE=1V, IC= 100mA	40			
Collector-emitter saturation voltage	VCE(sat)	IC=50 mA, IB= 5mA			0.3	V
Base-emitter saturation voltage	VBE(sat)	IC=50 mA, IB= 5mA			0.95	V
Transition frequency	fT	VCE=20V, IC= 100mA f=100MHz	300			MHz
Delay time	td	VCC=3V, VBE=0.5V, IC=10mA, IB=1mA,			35	ns
Rise time	tr	VCC=3V, VBE=0.5V, IC=10mA, IB=1mA,			35	ns
Storage time	ts	VCC=3V, VBE=0.5V, IC=10mA, IB=1mA,			200	ns
Fall time	tf	VCC=3V, VBE=0.5V, IC=10mA, IB=1mA,			50	ns
CLASSIFICATION OF HFE						
HFE	100-300					

TYPICAL ELECTRICAL AND THERMAL CHARACTERISTICS

