

SOT-323 Plastic-Encapsulate Transistors

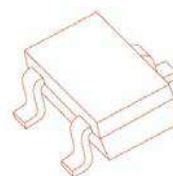
TRANSISTOR (NPN)

Features:

- Epitaxial planar die construction
- Complementary PNP Type available (MMBT2907A)

MARKING: 1P 、 P1

SOT-323



1. BASE
2. EMITTER
3. COLLECTOR

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

Symbol	Parameter	Value	Unit
V _{CBO}	Collector-Base Voltage	75	V
V _{CEO}	Collector-Emitter Voltage	40	V
V _{EBO}	Emitter-Base Voltage	6	V
I _C	Collector Current -Continuous	600	mA
P _C	Collector Dissipation	200	mW
T _J	Junction Temperature	150	°C
T _{stg}	Storage Temperature	-55~+150	°C

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

Parameter	Symbol	Test conditions	Min	Typ	Max	Unit
Collector-base breakdown voltage	V _{(BR)CBO}	I _C = 10μA, I _E =0	75			V
Collector-emitter breakdown voltage	V _{(BR)CEO}	I _C = 10mA, I _B =0	40			V
Emitter-base breakdown voltage	V _{(BR)EBO}	I _E =10μA, I _C =0	6			V
Collector cut-off current	I _{CBO}	V _{CB} =70 V, I _E =0			100	nA
Collector cut-off current	I _{CEO}	V _{CE} =35V, I _B =0			100	nA
Emitter cut-off current	I _{EBO}	V _{EB} = 3V, I _C =0			100	nA
DC current gain	h _{FE(1)}	V _{CE} =10V, I _C =0.1mA	35			
	h _{FE(2)}	V _{CE} =10V, I _C = 1mA	50			
	h _{FE(3)}	V _{CE} =10V, I _C = 10mA	75			
	h _{FE(4)}	V _{CE} =10V, I _C = 150mA	100		300	
	h _{FE(5)}	V _{CE} =10V, I _C = 500mA	40			
	h _{FE(6)}	V _{CE} =1V, I _C = 150mA	35			
Collector-emitter saturation voltage	V _{CE(sat)}	I _C =500 mA, I _B = 50mA I _C =150 mA, I _B =15mA			1 0.3	V
Base-emitter saturation voltage	V _{BE(sat)}	I _C =500 mA, I _B = 50mA I _C =150 mA, I _B =15mA			2.0 1.2	V
Transition frequency	f _T	V _{CE} =20V, I _C = 20mA f=100MHz	300			MHz
Output Capacitance	C _{ob}	V _{CB} =10V, I _E = 0, f=1MHz			8	pF
Delay time	t _d	V _{CC} =30V, V _{BE(off)} =-0.5V			10	ns
Rise time	t _r	I _C =150mA, I _{B1} = 15mA			25	ns
Storage time	t _s	V _{CC} =30V, I _C =150mA			225	ns
Fall time	t _f	I _{B1} =-I _{B2} =15mA			60	ns

Typical Characteristics

