

NPN General Purpose Transistor		
<p>FEATURES</p> <ul style="list-style-type: none"> • Ideal for Medium Power Amplification and Switching • Complementary PNP Type available(MMBT2907A) <p>MECHANICAL DATA</p> <ul style="list-style-type: none"> • Case: SOT-23 Plastic • Case material: “Green” molding compound, UL flammability classification 94V-0, (No Br. Sb. Cl) • Lead Free in RoHS 2002/95/EC Compliant 		

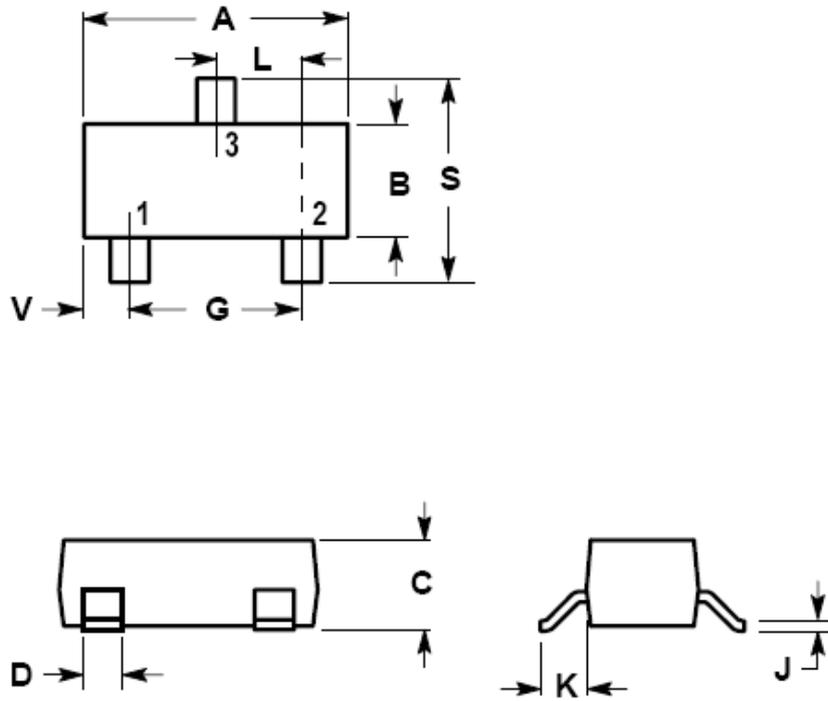
Maximum Ratings @ T_A = 25°C

Characteristic	Symbol	Value	Unit
Collector-Base Voltage	V _{CB0}	75	V
Collector-Emitter Voltage	V _{CEO}	40	V
Emitter-Base Voltage	V _{EBO}	6	V
Collector Current -Continuous	I _C	600	mA
Collector Power Dissipation	P _C	250	mW
Thermal Resistance, Junction to Ambient	R _{θJA}	500	°C/W
Junction Temperature	T _J	150	°C
Storage Temperature Range	T _{STG}	-55~+150	°C

Electrical Characteristics @ T_A = 25°C unless otherwise specified

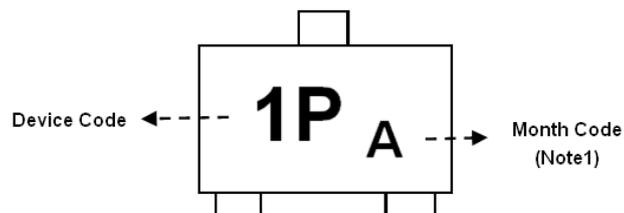
Characteristic	Test Condition	Symbol	Min.	Typ.	Max.	Unit
Collector-base breakdown voltage	I _C =10μA, I _E =0	V _{CB0}	75			V
Collector-emitter breakdown voltage	I _C =10mA, I _B =0	V _{CEO}	40			V
Emitter-base breakdown voltage	I _E =10μA, I _C =0	V _{EBO}	6			V
Collector-base cut-off current	V _{CB} =60V, I _E =0	I _{CB0}			0.01	uA
Collector-emitter cut-off current	V _{CE} =30V, V _{BE(off)} =3V	I _{CEX}			0.01	uA
Emitter-base cut-off current	V _{EB} =3V, I _C =0	I _{EBO}			0.1	uA
DC current gain	V _{CE} =10V, I _C =150mA	h _{FE1}	100		300	
	V _{CE} =10V, I _C =0.1mA	h _{FE2}	40			
	V _{CE} =10V, I _C =500mA	h _{FE3}	42			
Collector-emitter saturation voltage	I _C =500mA, I _B =50mA	V _{CE(sat)1}			1	V
	I _C =150mA, I _B =15mA	V _{CE(sat)2}			0.3	V
Base-emitter saturation voltage	I _C =500mA, I _B =50mA	V _{BE(sat)1}			2	V
	I _C =150mA, I _B =15mA	V _{BE(sat)2}			1.2	V
Transition frequency	V _{CE} =2V, I _C =20mA, f=100MHz	f _T	300			MHz
Delay time	V _{CC} =30V, V _{BE(off)} =-0.5V	T _d			10	nS
Rise time	I _C =150mA, I _{B1} =15mA	T _r			25	nS
Storage time	V _{CC} =30V, I _C =150mA	T _s			225	nS
Fall time	I _{B1} =-I _{B2} =15mA	T _f			60	nS

SOT-23 Outline Dimension



Symbol	Dimension In Millimeters	
	Min	Max.
A	2.80	3.04
B	1.20	1.40
C	0.89	1.11
D	0.37	0.50
G	1.78	2.04
J	0.085	0.177
K	0.35	0.69
L	0.89	1.02
S	2.10	2.64
V	0.45	0.60

Device Marking:



Note1:

Odd Year	J	O	L	C	K	B	P	D	M	E	G	F
Even Year	W	N	Y	T	R	H	A	I	U	X	Z	S

Electrical characteristic curves

Fig.1 DC Current Gain vs. Collector Current

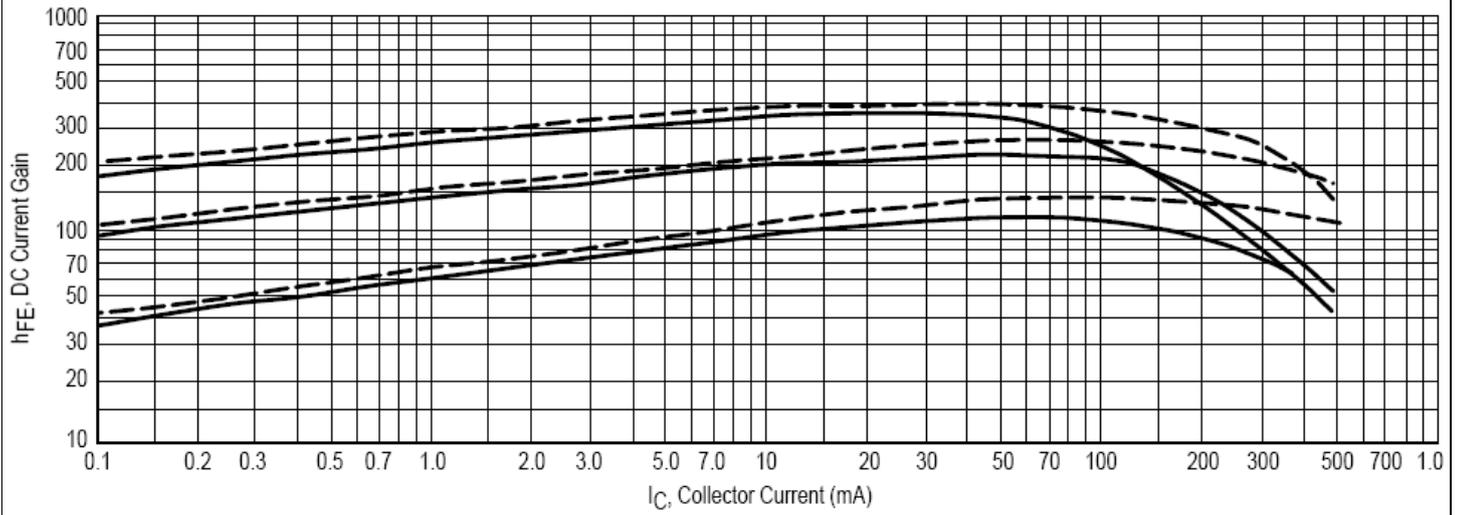
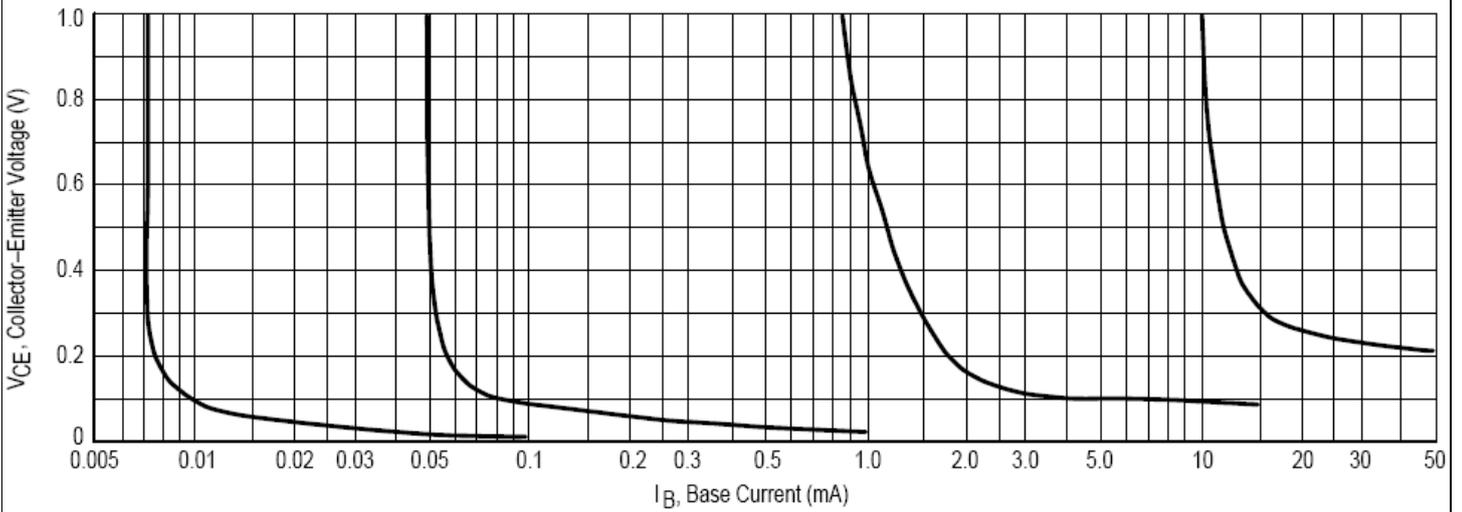


Fig.2 Collector Saturation Region



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