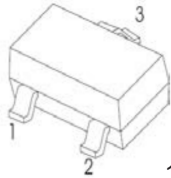




FEATURES

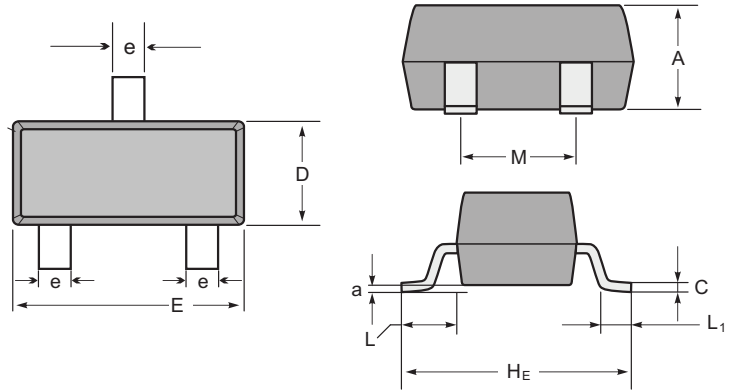
- Epitaxial planar die construction
- Complementary NPN Type available (MMBT2222A)



1.BASE
2.EMITTER
3.COLLECTOR

Marking

Type number	Marking code
MMBT2907A	2F



SOT-23 mechanical data

UNIT		A	C	D	E	HE	e	M	L	L ₁	a
mm	max	1.1	0.15	1.4	3.0	2.6	0.5	1.95	0.55 (ref)	0.36 (ref)	0.0
	min	0.9	0.08	1.2	2.8	2.2	0.3	1.7			0.15
mil	max	43	6	55	118	102	20	77	22 (ref)	14 (ref)	0.0
	min	35	3	47	110	87	12	67			6

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

Parameter	Symbol	Value	Unit
Collector–Base Voltage	V_{CBO}	-60	V
Collector–Emitter Voltage	V_{CEO}	-60	V
Emitter–Base Voltage	V_{EBO}	-5	V
Collector Current — Continuous	I_C	-600	mA
Total Device Dissipation	P_D	250	mW
Thermal Resistance From Junction To Ambient	R_{thJA}	500	°C/W
Operation Junction and Storage Temperature Range	T_J, T_{stg}	-55~+150	°C

MMBT2907A

CLASSIFICATION OF $h_{FE}(1)$

HFE	100-300	
RANK	L	H
RANGE	100-200	200-300

ELECTRICAL CHARACTERISTICS (TA = 25°C unless otherwise noted.)

Parameter	Symbol	Test conditions	Min	Typ	Max	Unit
Collector-base breakdown voltage	$V_{(BR)CBO}$	$I_C = -10\mu A, I_E = 0$	-60			V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	$I_C = -10mA, I_B = 0$	-60			V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	$I_E = -10\mu A, I_C = 0$	-5			V
Collector cut-off current	I_{CBO}	$V_{CB} = -50V, I_E = 0$			-20	nA
Base cut-off current	I_{EBO}	$V_{EB} = -3V, I_C = 0$			-10	nA
Collector cut-off current	I_{CEX}	$V_{CE} = -30V, V_{BE} = -0.5V$			-50	nA
DC current gain	h_{FE1}	$V_{CE} = -10V, I_C = -150mA$	100		300	
	h_{FE2}	$V_{CE} = -10V, I_C = -0.1mA$	75			
	h_{FE3}	$V_{CE} = -10V, I_C = -1mA$	100			
	h_{FE4}	$V_{CE} = -10V, I_C = -10mA$	100			
	h_{FE5}	$V_{CE} = -10V, I_C = -500mA$	50			
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C = -150mA, I_B = -15mA$			-0.4	V
	$V_{CE(sat)}$	$I_C = -500mA, I_B = -50mA$			-1.6	V
Base-emitter saturation voltage	$V_{BE(sat)}$	$I_C = -150mA, I_B = -15mA$			-1.3	V
	$V_{BE(sat)}$	$I_C = -500mA, I_B = -50mA$			-2.6	V
Transition frequency	f_T	$V_{CE} = -20V, I_C = -50mA, f = 100MHz$	200			MHz
Delay time	t_d	$V_{CE} = -30V, I_C = -150mA, I_{B1} = -15mA$			10	ns
Rise time	t_r				25	ns
Storage time	t_s	$V_{CE} = -6V, I_C = -150mA$			225	ns
Fall time	t_f	$I_{B1} = -I_{B2} = -15mA$			60	ns

RATING AND CHARACTERISTIC CURVES (MMBT2907A)

