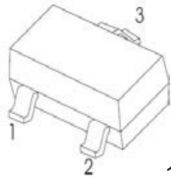


FEATURES

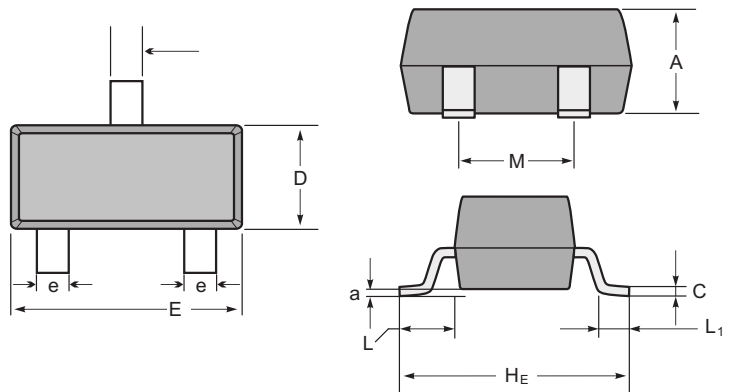
- High breakdown voltage
- Low collector-emitter saturation voltage
- Complementary to MMBTA92 (PNP)



1.BASE
2.EMITTER
3.COLLECTOR

Marking

Type number	Marking code
MMBTA92	2D



SOT-23 mechanical data

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

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

Parameter	Symbol	Value	Unit
Collector–Base Voltage	V _{CB0}	-300	V
Collector–Emitter Voltage	V _{CE0}	-300	V
Emitter–Base Voltage	V _{EBO}	-5	V
Collector Current — Continuous	I _C	-0.2	A
Collector Current-Peak	I _{CM}	-0.5	A
Collector Power Dissipation	P _C	0.3	W
Thermal Resistance, junction to Ambient	R _{thJA}	357	°C/W
Junction Temperature	T _J	150	°C
Storage Temperature	T _{stg}	-55~+150	°C

MMBTA92

ELECTRICAL CHARACTERISTICS ($T_a=25^{\circ}\text{C}$ unless otherwise specified)

Parameter	Symbol	Test conditions	Min	Max	Unit
Collector-base breakdown voltage	$V_{(BR)CBO}$	$I_C = -100\mu\text{A}$, $I_E = 0$	-300		V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	$I_C = -1\text{mA}$, $I_B = 0$	-300		V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	$I_E = -100\mu\text{A}$, $I_C = 0$	-5		V
Collector cut-off current	I_{CBO}	$V_{CB} = -200\text{V}$, $I_E = 0$		-0.25	μA
Emitter cut-off current	I_{EBO}	$V_{EB} = -5\text{V}$, $I_C = 0$		-0.1	μA
DC current gain	$h_{FE(1)}$	$V_{CE} = -10\text{V}$, $I_C = -1\text{mA}$	60		
	$h_{FE(2)}$	$V_{CE} = -10\text{V}$, $I_C = -10\text{mA}$	100	200	
	$h_{FE(3)}$	$V_{CE} = -10\text{V}$, $I_C = -30\text{mA}$	60		
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C = -20\text{mA}$, $I_B = -2\text{mA}$		-0.2	V
Base-emitter saturation voltage	$V_{BE(sat)}$	$I_C = -20\text{mA}$, $I_B = -2\text{mA}$		-0.9	V
Transition frequency	f_T	$V_{CE} = -20\text{V}$, $I_C = -10\text{mA}$ $f = 30\text{MHz}$	50		MHz

RATING AND CHARACTERISTIC CURVES (MMBTA92)

