MMBTA92

PNP HIGH VOLTAGE TRANSISTOR

VOLTAGE 300 Volts **POWER** 225 mWatts

FEATURES

- PNP silicon, planar design
- High voltage (max. 300V)
- Lead free in comply with EU RoHS 2002/95/EC directives.
- Green molding compound as per IEC61249 Std. . (Halogen Free)

MECHANICAL DATA

Case: SOT-23, Plastic

Terminals: Solderable per MIL-STD-750, Method 2026

Approx. Weight: 0.008 grams

Marking: A92

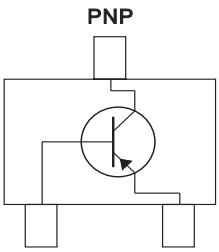
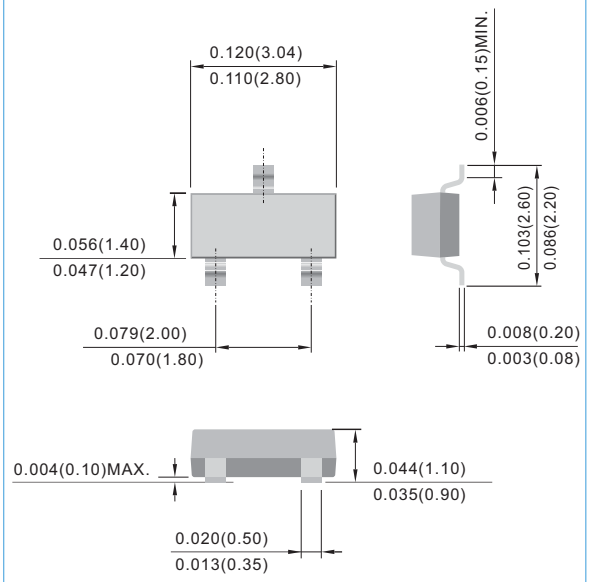


Fig.35

SOT-23 Unit : inch(mm)



ABSOLUTE RATINGS

PARAMETER	CONDITIONS	SYMBOL	MIN.	MAX.	UNIT
Collector-base voltage	open emitter	V_{CBO}	-	-300	V
Collector-emitter voltage	open base	V_{CEO}	-	-300	V
Emitter-base voltage	open collector	V_{EBO}	-	-5	V
Collector current (DC)		I_C	-	-500	mA
Peak collector current		I_{CM}	-	-600	mA
Peak base current		I_{BM}	-	-100	mA
Total power dissipation	T_{AMB}<25°C ; note1	P_{TOT}	-	225	mW
Storage temperature		T_{STG}	-65	+150	°C
Junction temperature		T_J	-	150	°C
Operating ambient temperature		T_{AMB}	-65	+150	°C

Note 1: Transistor mounted on FR-4 board 70 x 60 x 1mm.

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THERMAL CHARACTERISTICS

PARAMETER	CONDITIONS	SYMBOL	VALUE	UNIT
Thermal resistance from junction to ambient	note 1	$R_{\Theta JA}$	500	K/W

Note 1: Transistor mounted on FR-4 board 70 x 60 x 1mm.

CHARACTERISTICS
T_{AMB}=25°C unless otherwise specified

PARAMETER	CONDITIONS	SYMBOL	MIN.	MAX.	UNIT
Collector cut-off current	I_E=0;V_{CB}=-200V	I_{CBO}	-	-250	nA
Emitter cut-off current	I_C=0;V_{EB}=-3V	I_{EBO}	-	-100	nA
DC current gain	V_{CE}=-10V;note 2 I_C=-1mA I_C=-10mA I_C=-30mA	h_{FE}	 25 40 25	 - - -	-
Collector-emitter saturation voltage	I_C=-20mA;I_B=-2mA	$V_{CE(SAT)}$	-	-500	mV
Base-emitter saturation voltage	I_C=-20mA;I_B=-2mA	$V_{BE(SAT)}$	-	-900	mV
Collector capacitance	I_E=i_e=0;V_{CB}=-20V; f=1MHz	C_C	-	6	pF
Transition frequency	I_C=-10mA;V_{CE}=-20V; f=100MHz	f_T	50	-	MHz

Note 2: Pulse test : tp ≤ 300μs;δ<0.02

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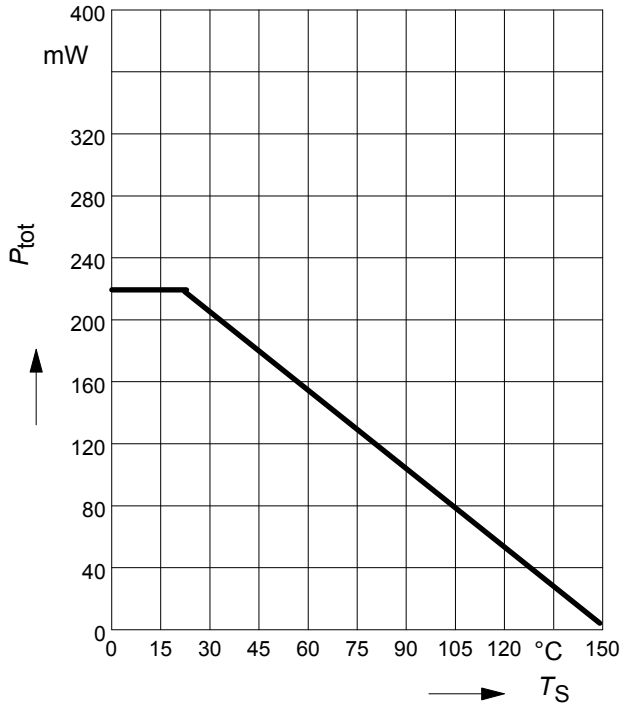
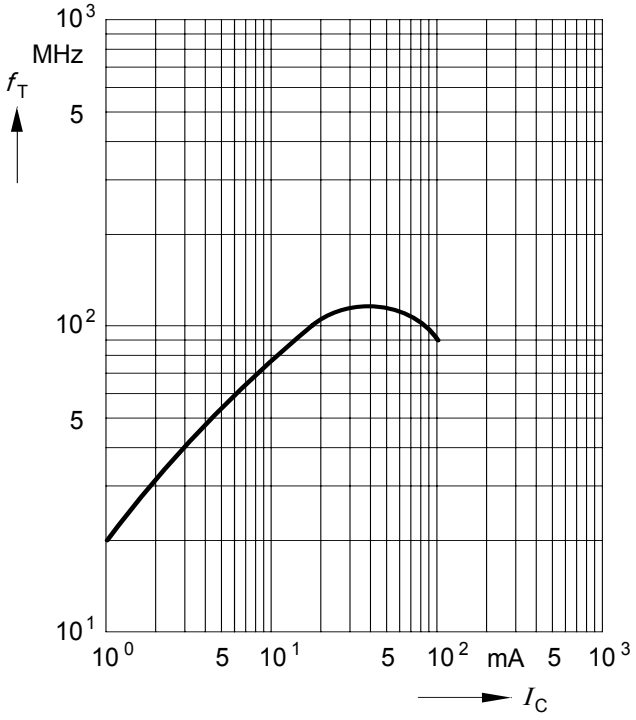
Total power dissipation $P_{tot} = f(T_S)$



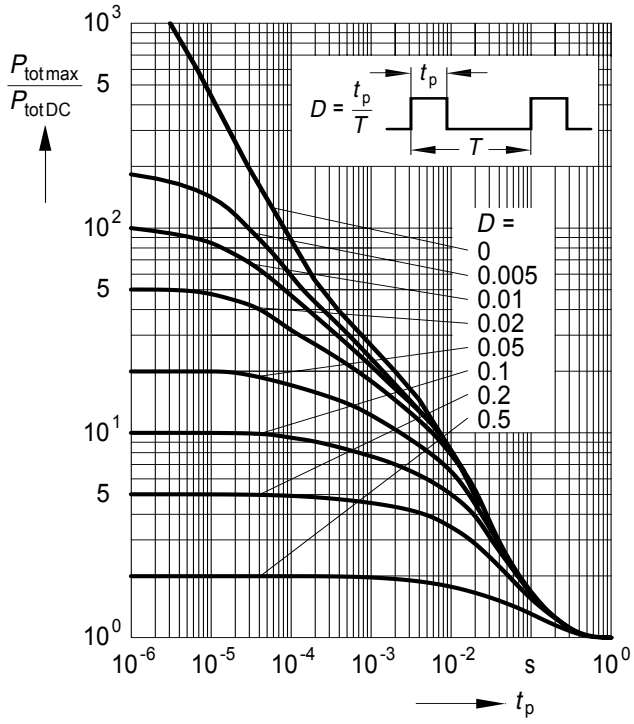
Transition frequency $f_T = f(I_C)$

V_{CE} = 20V, f = 100MHz



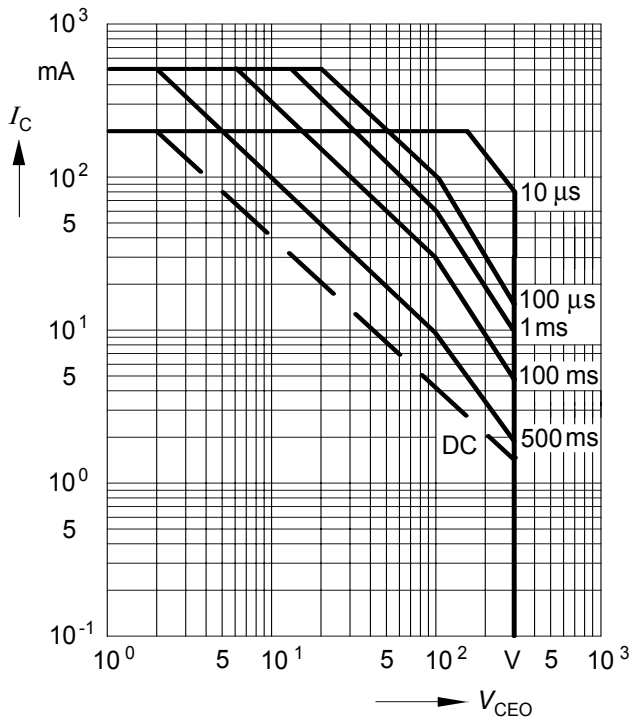
Permissible pulse load

$P_{totmax} / P_{totDC} = f(t_p)$



Operating range $I_C = f(V_{CEO})$

T_A = 25°C, D = 0



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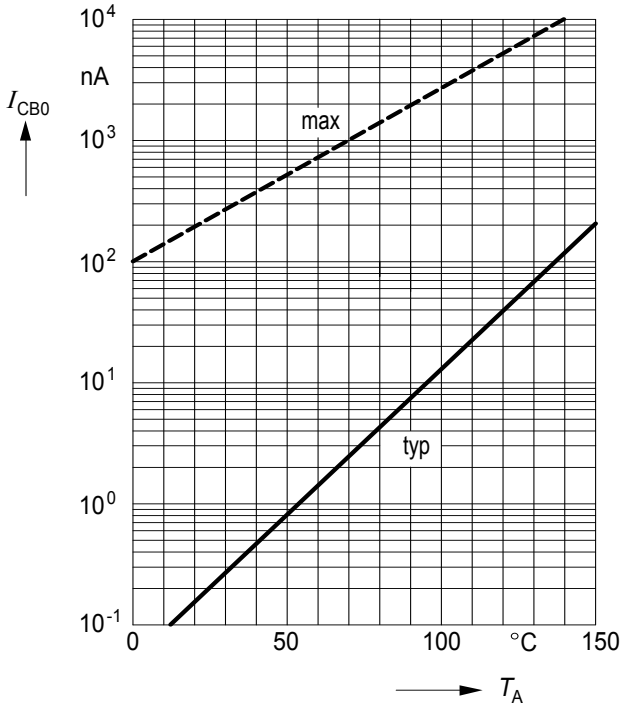
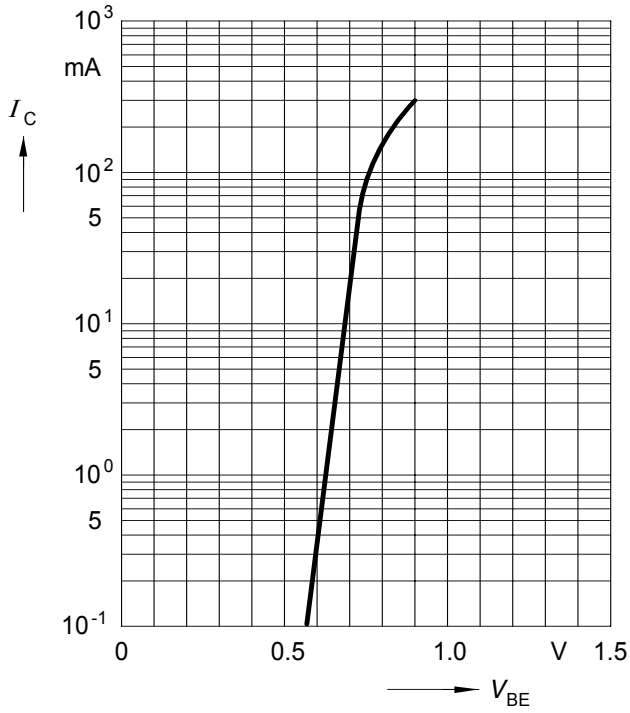
Collector cutoff current $I_{CBO} = f(T_A)$

V_{CB} = 200V



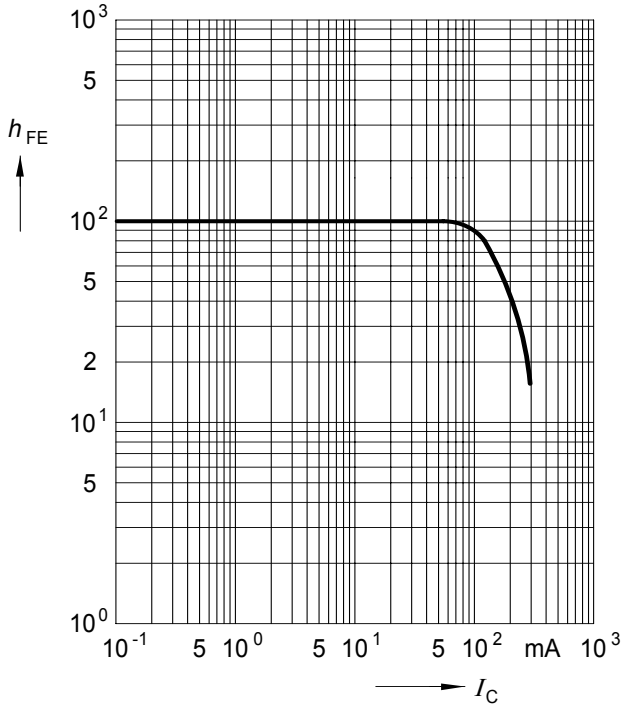
Collector current $I_C = f(V_{BE})$

V_{CE} = 10V

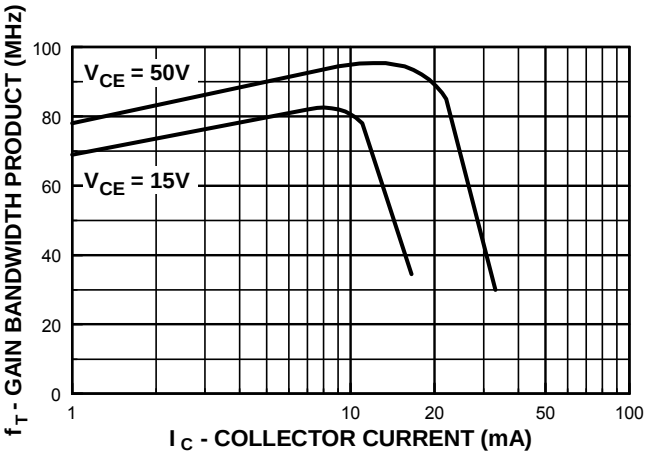


DC current gain $h_{FE} = f(I_C)$

V_{CE} = 10V



Gain Bandwidth Product vs Collector Current



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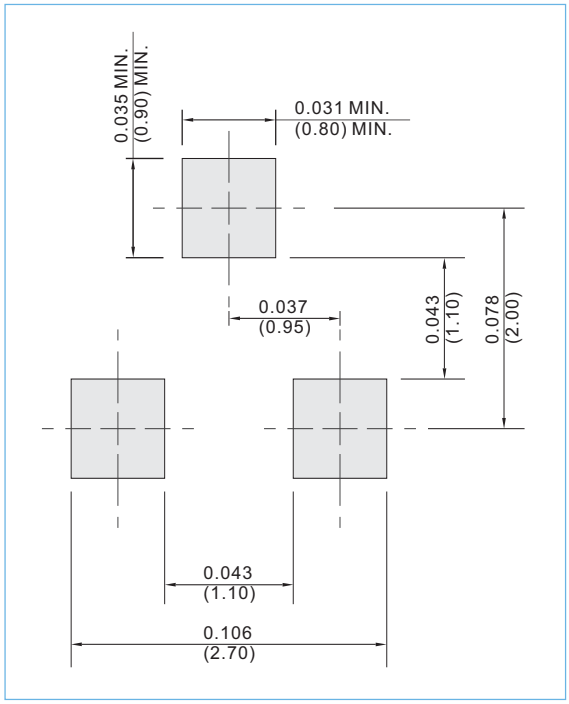
MOUNTING PAD LAYOUT

SOT-23 Unit : inch(mm)



ORDER INFORMATION

- Packing information

  T/R - 12K per 13" plastic Reel

  T/R - 3K per 7" plastic Reel

LEGAL STATEMENT

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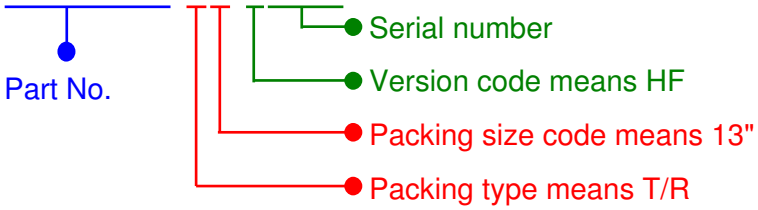
For example :

RB500V-40_R2_00001



Part No_packing code_Version

MMBTA92_R1_00001
MMBTA92_R1_10001
MMBTA92_R2_00001
MMBTA92_R2_10001

Packing Code XX				Version Code XXXXX		
Packing type	1st Code	Packing size code	2nd Code	HF or RoHS	1st Code	2nd~5th Code
T/B	A	N/A	0	HF	0	serial number
T/R	R	7"	1	RoHS	1	serial number
B/P	B	13"	2			
T/P	T	26mm	X			
TRR	S	52mm	Y			
TRL	L	PBCU	U			
FORMING	F	PBCD	D			