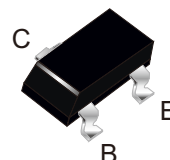


FEATURES

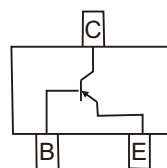
- Epoxy meets UL-94 V-0 flammability rating
- Complementary to MMBTA43
- Power Dissipation of 350mW
- High Stability and High Reliability

SOT-23



MECHANICAL DATA

- Case: SOT-23(TO-236)
- Terminals: Plated solderable per MIL-STD-750, method 2026
- Mounting Position: Any
- Marking: YW



MAXIMUM RATINGS($T_A=25^{\circ}\text{C}$ Unless otherwise specified)

Parameter	Symbol	Unit	Value
Collector-Emitter Voltage	V_{CEO}	V	-200
Collector-Base Voltage	V_{CBO}	V	-200
Emitter-Base Voltage	V_{EBO}	V	-5.0
Collector Current, Continuous	I_C	mA	-500
Power Dissipation	P_D	mW	350
Operation Junction Temperature	T_J	$^{\circ}\text{C}$	-55 to +150
Storage Temperature	T_{STG}	$^{\circ}\text{C}$	-55 to +150
Thermal resistance From junction to ambient	$R_{\theta JA}$	$^{\circ}\text{C}/\text{W}$	357

MMBTA93

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

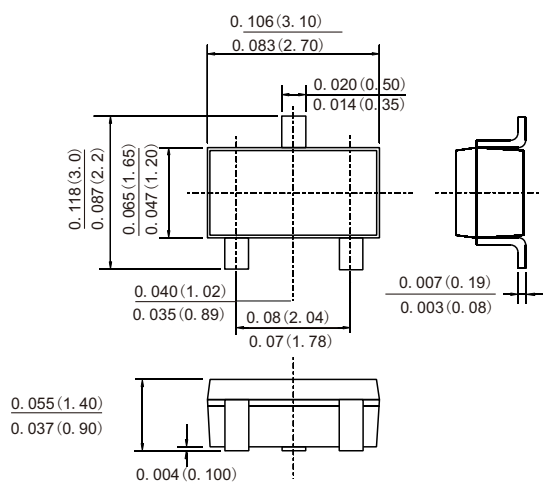
Parameter	Symbol	Unit	Conditions	Min	Max
Collector-Emitter Breakdown Voltage	$V_{(BR)CEO}$	V	$I_C=-1\text{mA}, I_B=0$	-200	---
Collector-Base Breakdown Voltage	$V_{(BR)CBO}$	V	$I_C=-100\mu\text{A}, I_E=0$	-200	---
Emitter-Base Breakdown Voltage	$V_{(BR)EBO}$	V	$I_E=-100\mu\text{A}, I_C=0$	-5.0	---
Collector cut-off Current	I_{CBO}	nA	$V_{CB}=-200\text{V}, I_E=0$	---	-250
Collector cut-off Current	I_{CEO}	nA	$V_{CE}=-200\text{V}, I_B=0$	---	-250
Emitter cut-off Current	I_{EBO}	nA	$V_{EB}=-5\text{V}, I_C=0$	---	-100
DC Current Gain	$h_{FE(1)}$		$I_C=-10\text{mA}, V_{CE}=-10\text{V}$	40	---
	$h_{FE(2)}$		$I_C=-1\text{mA}, V_{CE}=-10\text{V}$	25	---
	$h_{FE(3)}$		$I_C=-30\text{mA}, V_{CE}=-10\text{V}$	25	---
Collector-Emitter Saturation Voltage	$V_{CE(\text{set})}$	V	$I_C=-20\text{mA}, I_B=-2\text{mA}$	---	-0.5
Base-Emitter Saturation Voltage	$V_{BE(\text{set})}$	V	$I_C=-20\text{mA}, I_B=-2\text{mA}$	---	-0.9
Output Capacitance	C_{ob}	pF	$V_{CB}=20\text{V}, f=1.0\text{MHz}, I_E=0$	---	8
Current Gain-Bandwidth Product	f_T	MHZ	$I_C=-10\text{mA}, V_{CE}=-20\text{V}$ $f=30\text{MHz}$	50	---

AVAILABLE PACK INFORMATION

Product code	Pack	Reel Size (mm)	Quantity (Pcs/reel)	Quantity (pcs/box)	Quantity (pcs/carton)
MMBTA93	T/R	Φ180	3K	30K	120K

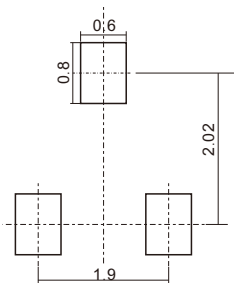
Outline Dimensions

SOT-23



Dimensions in inches and (millimeters)

Suggested pad layout



Dimensions in millimeters

Friendship Reminder

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