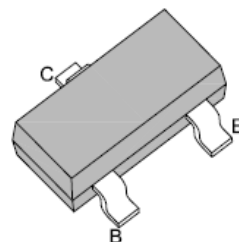


SMD Darlington Transistor (NPN)

Features

- This device is designed for applications requiring extremely High current gain at collector currents to 1.0A
- RoHS compliance



SOT-23



Mechanical Data

Case:	SOT-23, Plastic Package
Terminals:	Solderable per MIL-STD-202G, Method 208
Weight:	0.008 gram

Maximum Ratings ($T_{Ambient}=25^{\circ}C$ unless noted otherwise)

Symbol	Description	MMBTA13	MMBTA14	Unit
	Marking Code	1M	1N	
V_{CBO}	Collector-Base Voltage	30		V
V_{CES}	Collector-Emitter Voltage	30		V
V_{EB0}	Emitter-Base Voltage	10		V
I_C	Collector Current	300		mA
P_{tot}	Power Dissipation up to $T_A=25^{\circ}C$	250		mW
T_J	Junction Temperature	150		$^{\circ}C$
T_{STG}	Storage Temperature Range	-55 to +150		$^{\circ}C$

SMD Darlington Transistor (NPN)

MMBTA13/MMBTA14

Electrical Characteristics ($T_{Ambient}=25^{\circ}\text{C}$ unless noted otherwise)

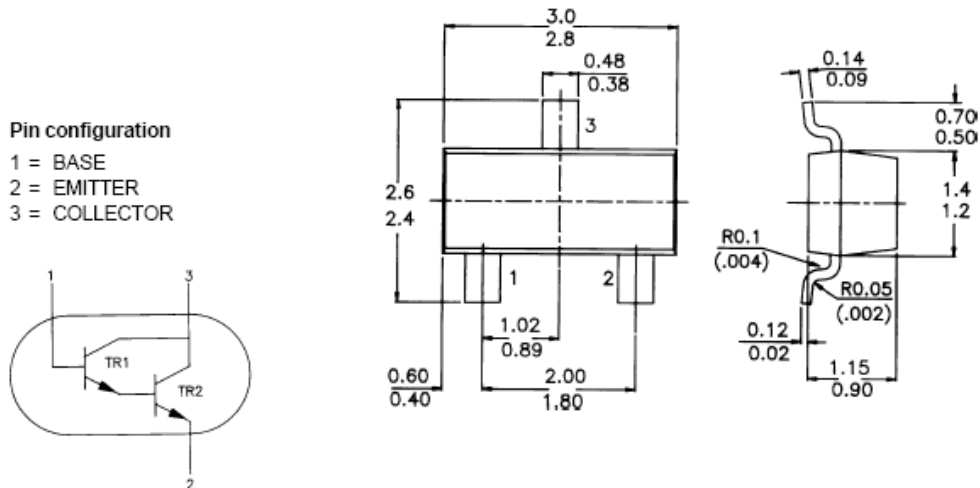
Symbol	Description		Min.	Max.	Unit	Conditions
h_{FE}	D.C. Current Gain	MMBTA13	5000	-		V _{CE} =5V, I _C =10mA
		MMBTA14	10000	-		
		MMBTA13	10000	-		V _{CE} =5V, I _C =100mA
		MMBTA14	20000	-		
V_{(BR)CES}	Collector-Emitter Breakdown Voltage		30	-	V	I _C =100μA, I _B =0
V_{CE(sat)}	Collector-Emitter Saturation Voltage		-	1.5	V	I _C =100mA, I _B =0.1mA
V_{BE(on)}	Base-Emitter on Voltage		-	2.0	V	V _{CE} =5V, I _C =100mA
I_{EBO}	Emitter-Base Cut-off Current		-	0.1	μA	V _{BE} =10V, I _C =0
I_{CBO}	Collector-Base Cut-off Current		-	0.1	μA	V _{CB} =30V, I _E =0
f_T	Current Gain-Bandwidth Product		125	-	MHz	V _{CE} =5V, I _C =10mA, f=100MHz

SMD Darlington Transistor (NPN)

MMBTA13/MMBTA14

Dimensions in mm

SOT-23



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