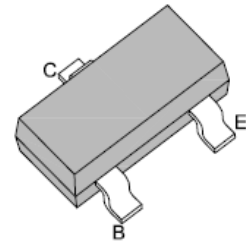


SMD High Voltage Transistor (NPN)

Features

- This device is designed for application as a video output to drive color CRT and other high voltage applications.
- 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°C unless noted otherwise)*

Symbol	Description	MMBTA42	Unit
	Marking Code	1D	
V_{CB0}	Collector-Base Voltage	300	V
V_{CE0}	Collector-Emitter Voltage	300	V
V_{EB0}	Emitter-Base Voltage	6	V
I_c	Collector Current	500	mA
P_{tot}	Power Dissipation up to T _A =25°C	250	mW
T_J	Junction Temperature	150	°C
T_{STG}	Storage Temperature Range	-55 to +150	°C

SMD High Voltage Transistor (NPN)

MMBTA42

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

Symbol	Description	MMBTA42		Unit	Conditions
		Min.	Max.		
h_{FE}	D.C. Current Gain	25	-		V _{CE} =10V, I _C =1mA
		40	-		V _{CE} =10V, I _C =10mA
		40	-		V _{CE} =10V, I _C =30mA
V_{(BR)CEO}	Collector-Emitter Breakdown Voltage	300	-	V	I _C =1mA, I _B =0
V_{(BR)CBO}	Collector-Base Breakdown Voltage	300	-	V	I _C =100μA, I _E =0
V_{(BR)EBO}	Emitter-Base Breakdown Voltage	6	-	V	I _E =100μA, I _C =0
V_{CE(sat)}	Collector-Emitter Saturation Voltage	-	0.5	V	I _C =20mA, I _B =2mA
V_{BE(sat)}	Base-Emitter Saturation Voltage	-	0.9	V	I _C =20mA, I _B =2mA
I_{EBO}	Collector-Emitter Cut-off Current	-	0.1	μA	V _{BE} =6V, I _C =0
I_{CBO}	Collector-Base Cut-off Current	-	0.1	μA	V _{CB} =200V, I _E =0
f_T	Current Gain-Bandwidth Product	50	-	MHz	V _{CE} =20V, I _C =10mA, f=35MHz
C_{re}	Feedback Capacitance	-	3	pF	V _{CB} =20V, I _E =0, f=1.0MHz,

SMD High Voltage Transistor (NPN)

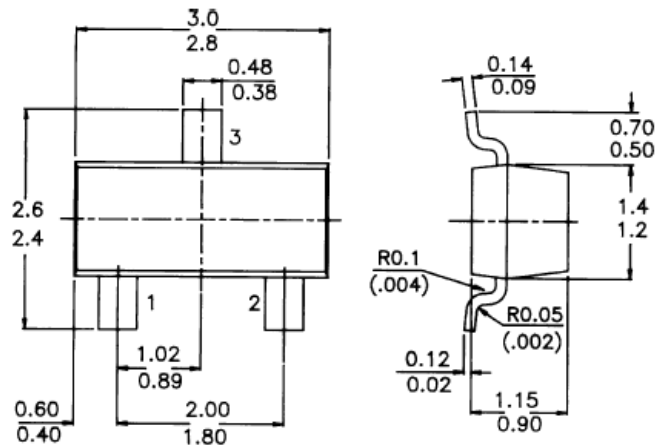
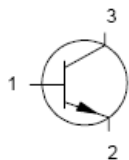
MMBTA42

Dimensions in mm

SOT-23

Pin configuration

- 1 = BASE
- 2 = EMITTER
- 3 = COLLECTOR



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