

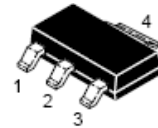
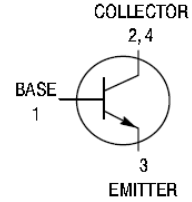


Features

- Epitaxial planar die construction
- Low collector to emitter saturation voltage $V_{CE(sat)}$

Mechanical Data

- Case: SOT-223
- Molding compound: UL flammability classification rating 94V-0
- Terminal s: Tin-plated; solderability per MIL-STD-202, Method 208



SOT-223

Ordering Information

Part Number	Package	Shipping Quantity	Marking Code
2SD2413R□	SOT-223	4000pcs / Tape & Reel	1S

Note for □: none is for Lead-free package
 "G" is for Halogen Free package

Maximum Ratings (@ $T_A = 25^\circ\text{C}$ unless otherwise specified)

Parameter	Symbol	Value	Unit
Collector-Base Breakdown Voltage	V_{CBO}	400	V
Collector-Emitter Breakdown Voltage	V_{CEO}	400	V
Emitter-Base Breakdown Voltage	V_{EBO}	5	V
Collector Current (Continuous)	I_C	0.1	A
Collector Current (Pulse)	I_{CM}	0.2	A

Thermal Characteristics

Parameter	Symbol	Value	Unit
Power Dissipation (Collector)	P_D	1	W
Thermal Resistance (Junction-to-Ambient)	$R_{\theta JA}$	125	$^\circ\text{C/W}$
Junction Temperature	T_J	-55 ~ +150	$^\circ\text{C}$
Storage Temperature Range	T_{STG}	-55 ~ +150	$^\circ\text{C}$

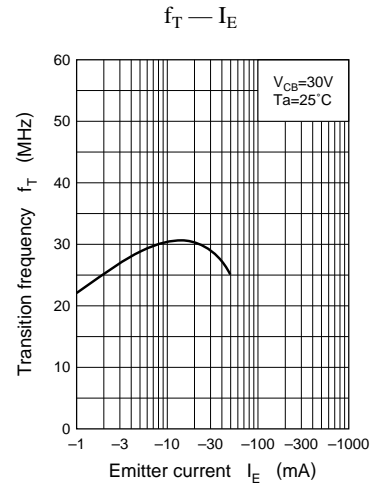
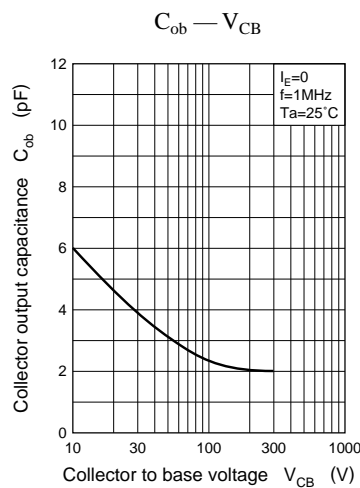
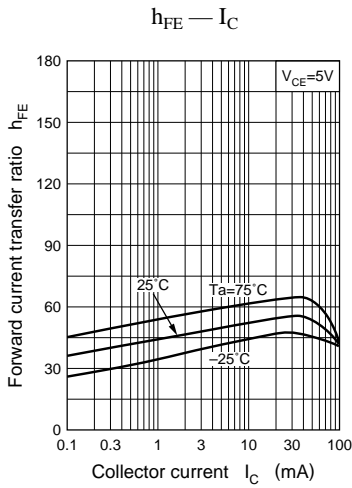
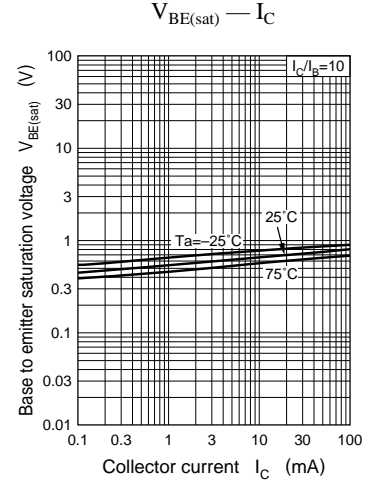
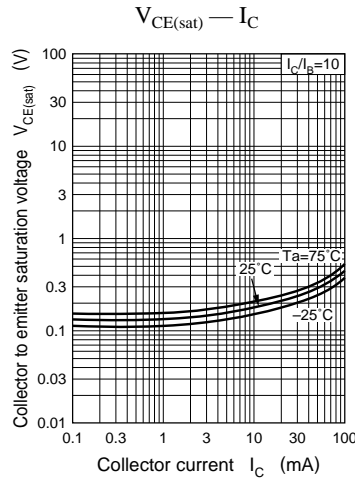
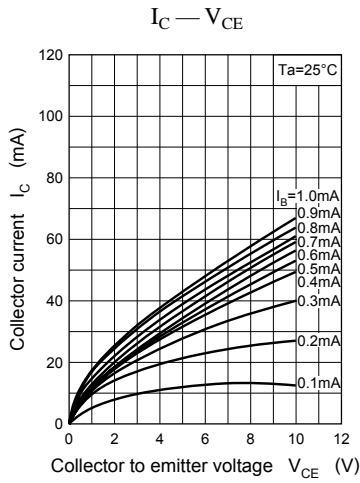


Electrical Characteristics (@ $T_A = 25^\circ\text{C}$ unless otherwise specified)

Parameter	Symbol	Test Condition	Min.	Typ.	Max.	Unit
Collector-Base Breakdown Voltage	$V_{(BR)CBO}$	$I_C = 100\mu\text{A}, I_E = 0$	400	-	-	V
Collector-Emitter Breakdown Voltage	$V_{(BR)CEO}$	$I_C = 0.5\text{A}, I_B = 0$	400	-	-	V
Emitter-Base Breakdown Voltage	$V_{(BR)EBO}$	$I_E = 100\mu\text{A}, I_C = 0$	5	-	-	V
DC Current Gain	h_{FE}	$V_{CE} = 5\text{V}, I_C = 30\text{mA}$	30	-	-	-
Collector-emitter Saturation Voltage	$V_{CE(sat)}$	$I_C = 50\text{mA}, I_B = 5\text{mA}$	-	-	1.5	V
Base-emitter Saturation Voltage	$V_{BE(sat)}$	$I_C = 50\text{mA}, I_B = 5\text{mA}$	-	-	1.5	V
Output Capacitance	C_{OBO}	$V_{CB} = 30\text{V}, I_E = 0, f = 1\text{MHz}$	-	-	7	pF
Transition Frequency	f_T	$I_C = 20\text{mA}, V_{CE} = 30\text{V}$ $f = 200\text{MHz}$	-	40	-	MHZ

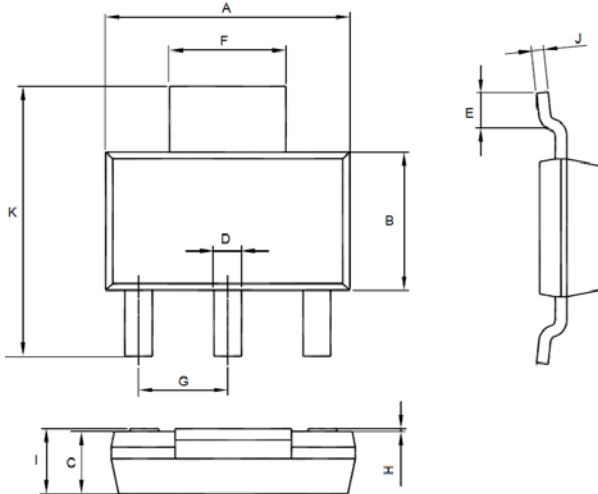


Ratings and Characteristic Curves (@ $T_A = 25^\circ\text{C}$ unless otherwise specified)





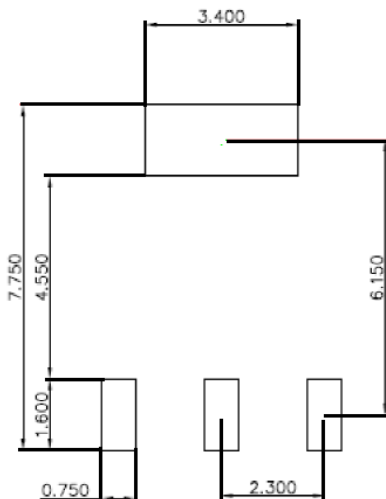
Package Outline Dimensions (Unit: mm)



SOT-223		
Dimension	Min.	Max.
A	6.10	6.50
B	3.30	3.70
C	1.50	1.70
D	0.66	0.82
E	0.90	1.15
F	2.90	3.10
G	2.20	2.40
H	0.02	0.10
I	1.52	1.80
J	0.20	0.40
K	6.70	7.30

Mounting Pad Layout (Unit: mm)

SOT-223



Package	Reel	Reel Size	Box	Box Size(mm)	Carton	Carton Size(mm)
SOT -223	2500pcs	13inch	2500pcs	336×336×48	20,000pcs	445×355×365