

Features

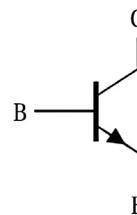
- Small reverse transfer capacitance: $C_{re} = 0.55\text{pF (typ.)}$

Applications

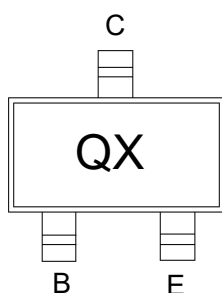
- Low noise figure: $N_F = 2\text{dB (typ.)}$ ($f = 100\text{ MHz}$)



SOT-323 top view



Schematic diagram



Marking and pin assignment

X:Rank



Halogen-Free

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

Symbol	Parameter	Value	Unit
V_{CBO}	Collector-Base Voltage	40	V
V_{CEO}	Collector-Emitter Voltage	30	V
V_{EBO}	Emitter-Base Voltage	4	V
I_C	Collector Current	20	mA
P_C	Collector Power Dissipation	100	mW
T_J, T_{stg}	Operation Junction and Storage Temperature Range	$-55 \sim +150$	$^\circ\text{C}$

Ordering Information (Example)

Type	Package	Marking	Minimum Package(pcs)	Inner Box Quantity(pcs)	Outer Carton Quantity(pcs)	Delivery Mode
2SC4215	SOT-323	QR/QO/QY	3,000	45,000	180,000	7" reel

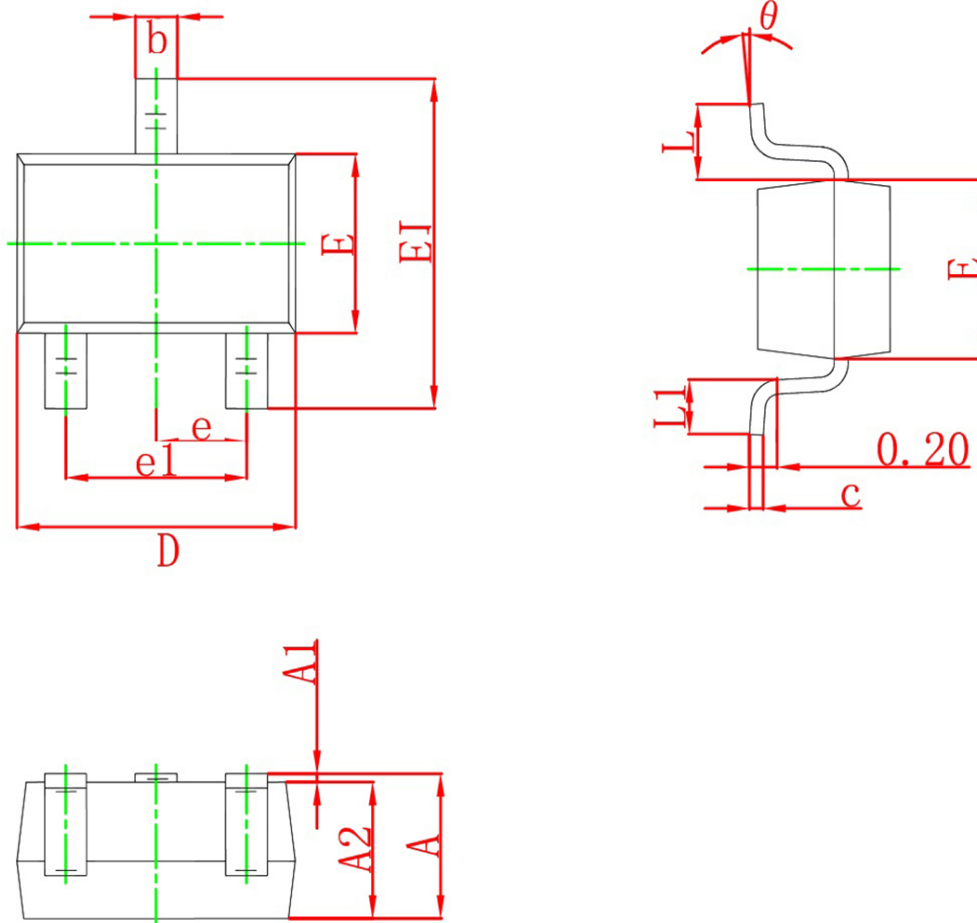
Electrical Characteristics (Ta=25°C unless otherwise specified)

Symbol	Parameter	Condition	Min	Typ	Max	Unit
$V_{(BR)CBO}$	Collector-base breakdown voltage	$I_C=100\mu A, I_E=0$	40	--	--	V
$V_{(BR)CEO}$	Collector-emitter breakdown voltage	$I_C=1mA, I_B=0$	30	--	--	V
$V_{(BR)EBO}$	Emitter-base breakdown voltage	$I_E=100\mu A, I_C=0$	4	--	--	V
I_{CBO}	Collector cut-off current	$V_{CB}=40V, I_E=0$	--	--	0.1	μA
I_{EBO}	Emitter cut-off current	$V_{EB}=4V, I_C=0$	--	--	0.5	μA
H_{FE}	DC current gain	$V_{CE}=6V, I_C=1mA$	40	--	200	
$C_{c, rbb'}$	Collector-base time constant	$V_{CE}=6V, I_C=1mA, f=30MHz$	--	--	25	ps
C_{re}	Reverse transfer capacitance	$V_{CB}=10V, f=1MHz$	--	0.55	--	pF
NF	Noise figure	$V_{CC}=6V, I_C=1mA, f=100MHz$	--	2	5	dB
G_{pe}	Power gain		17	23	--	dB
f_T	Transition frequency	$V_{CE}=6V, I_C=1mA$	260	550	--	MHz

Classification of hFE

Rank	R	O	Y
Marking	QR	QO	QY
Range	40-80	70-140	100-200

SOT-323 Package information



Symbol	Dimensions in Millimeters(mm)		Dimensions In Inches	
	Min	Max	Min	Max
A	0.900	1.100	0.035	0.043
A1	0.000	0.100	0.000	0.004
A2	0.900	1.000	0.035	0.039
b	0.200	0.400	0.008	0.016
c	0.080	0.150	0.003	0.006
D	2.000	2.200	0.079	0.087
E	1.150	1.350	0.045	0.053
E1	2.150	2.450	0.085	0.096
e	0.650TYP		0.026TYP	
e1	1.200	1.400	0.047	0.055
L	0.525REF		0.021REF	
L1	0.260	0.460	0.010	0.018
θ	0°	8°	0°	8°