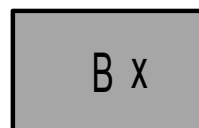
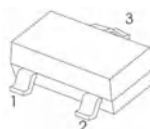


FEATURES

Low Cob.Cob=2.0pF (Typ.)

SOT-23



1.BASE
2.EMITTER
3.COLLECTOR

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

MAXIMUM RATINGS (Ta=25°C unless otherwise noted)

Parameter	Symbol	Rating	Unit
Collector-base voltage	V _{CBO}	60	V
Collector-emitter voltage	V _{CEO}	50	V
Emitter-base voltage	V _{EB0}	7	V
Collector current	I _c	0.15	A
Collector power dissipation	P _c	0.2	W
Junction temperature	T _j	150	°C
Storage temperature	T _{stg}	-55 to +150	°C

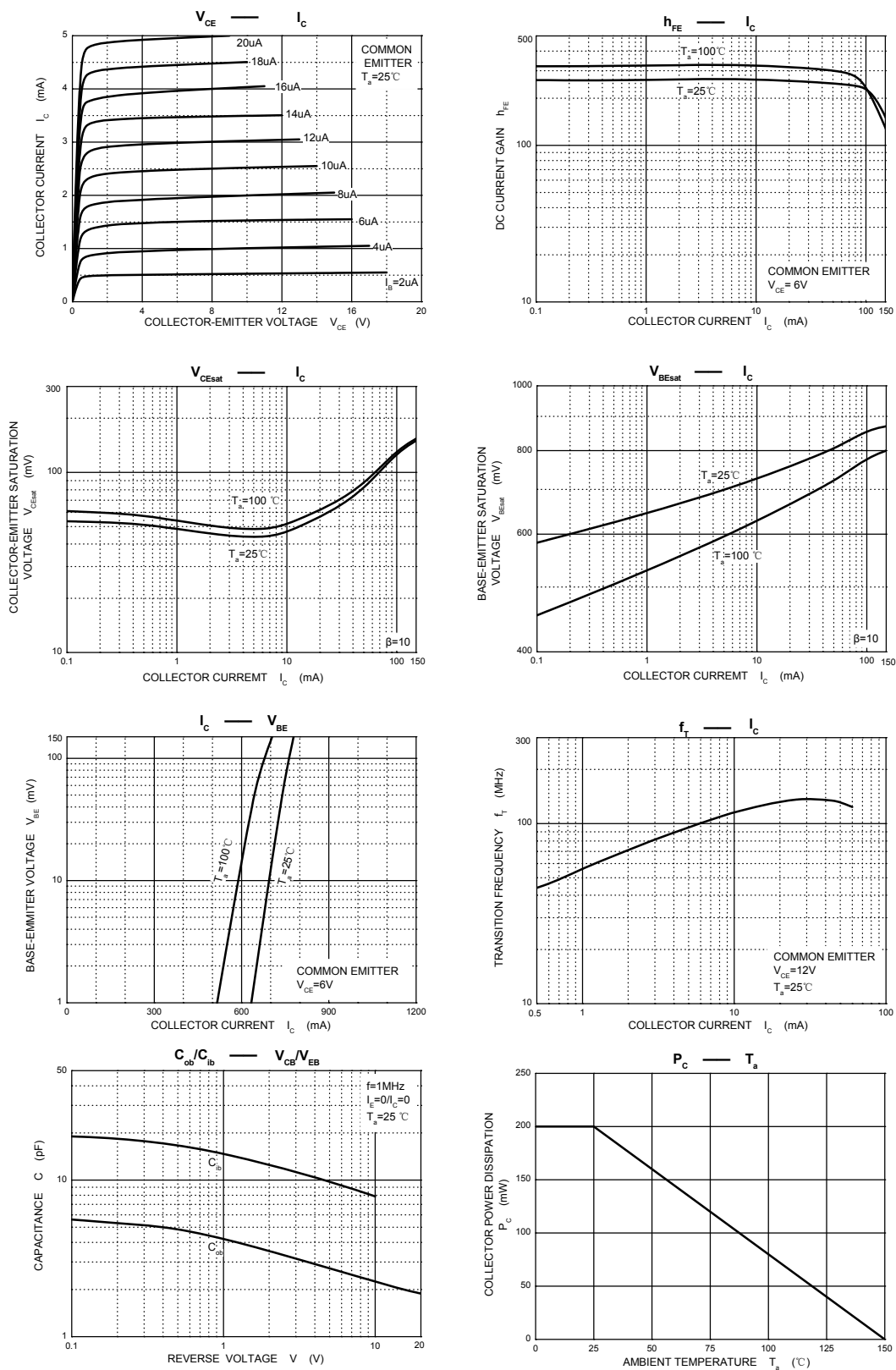
ELECTRICAL CHARACTERISTICS (TA = 25°C unless otherwise noted.)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Collector- base breakdown voltage	V _{CBO}	I _C = 50 μ A, I _E = 0	60			V
Collector- emitter breakdown voltage	V _{CEO}	I _C = 1 mA, I _B = 0	50			
Emitter - base breakdown voltage	V _{EBO}	I _E = 50 μ A, I _C = 0	7			
Collector-base cut-off current	I _{CBO}	V _{CB} = 60 V , I _E = 0			100	nA
Emitter cut-off current	I _{EBO}	V _{EB} = 7V , I _C =0			100	
Collector-emitter saturation voltage	V _{CE(sat)}	I _C =50 mA, I _B =5mA			0.4	V
Base - emitter saturation voltage	V _{BE(sat)}	I _C =50 mA, I _B =5mA			1.2	
DC current gain	h _{FE}	V _{CE} = 6V, I _C = 1mA	120		560	
Collector output capacitance	C _{ob}	V _{CB} = 12V, I _E = 0, f=1MHz		2	3.5	pF
Transition frequency	f _T	V _{CE} = 12V, I _E = -2mA, f=100MHz	80			MHz

hFE Classification

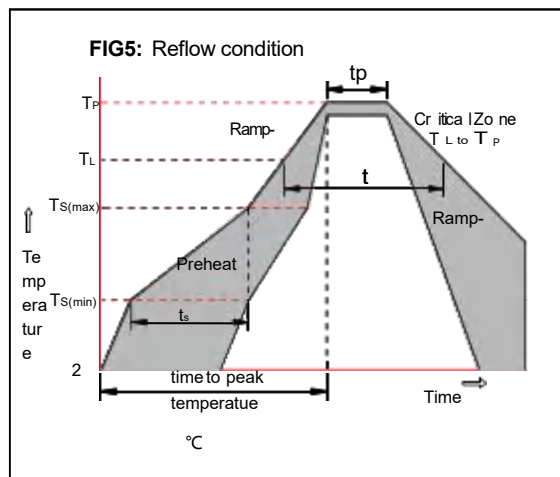
Type	2SC2412/K-Q	2SC2412/K-R	2SC2412/K-S
Range	120-270	180-390	270-560
Marking	BQ	BR	BS

RATING AND CHARACTERISTIC CURVES



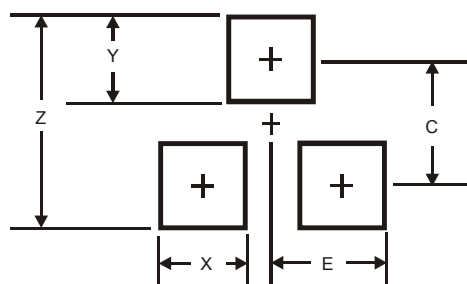
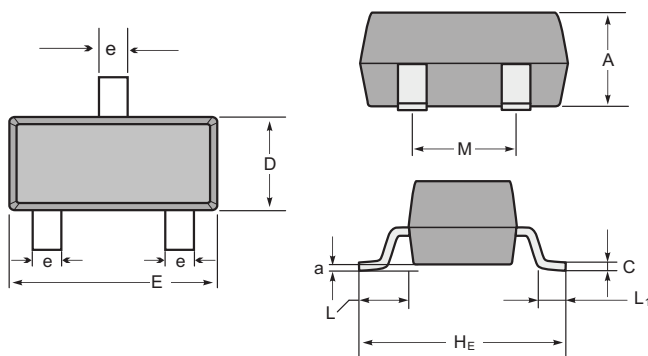
Soldering parameters

Reflow Condition		Pb-Free assembly (see as below)
Pre Heat	-Temperature Min ($T_{s(min)}$)	+150°C
	-Temperature Max($T_{s(max)}$)	+200°C
	-Time (Min to Max) (ts)	60-180 secs.
Average ramp up rate (Liquid us Temp (T_L) to peak)		3°C/sec. Max
$T_{s(max)}$ to T_L - Ramp-up Rate		3°C/sec. Max
Reflow	-Temperature(T_L)(Liquid us)	+217°C
	-Temperature(t_L)	60-150 secs.
Peak Temp (T_P)		+260(+0/-5)°C
Time within 5°C of actual Peak Temp (t_P)		30 secs. Max
Ramp-down Rate		6°C/sec. Max
Time 25°C to Peak Temp (T_P)		8 min. Max
Do not exceed		+260°C



Package Dimensions & Suggested Pad Layout

SOT23

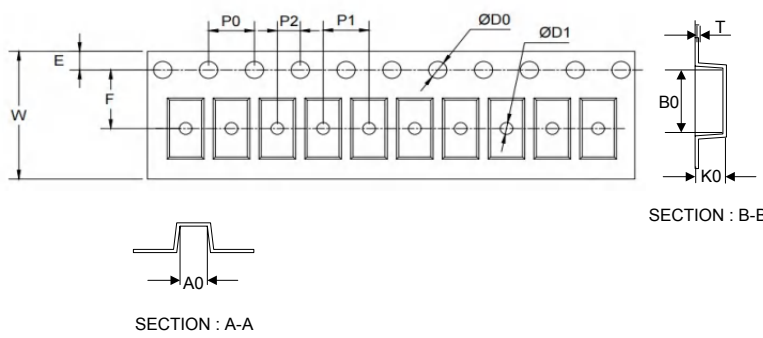


SOT-23 mechanical data

UNIT	A	C	D	E	H _E	e	M	L	L ₁	a
mm	max	1.1	0.15	1.4	3.0	2.6	0.5	1.95	0.55 (ref)	0.36 (ref)
	min	0.9	0.08	1.2	2.8	2.2	0.3	1.7		0.15
mil	max	43	6	55	118	102	20	77	22 (ref)	14 (ref)
	min	35	3	47	110	87	12	67		6

Dimensions	SOT23
Z	2.9
X	0.8
Y	0.9
C	2.0
E	1.35

Tape & reel specification

Tape	Symbol	Dimension (mm)
	P0	4.00±0.10
	P1	4.00±0.10
	P2	2.00±0.10
	D0	1.55±0.10
	D1	1.05±0.10
	E	1.55±0.10
	F	3.60±0.10
	W	8.00±0.10
	A0	3.80±0.20
	B0	3.25±0.20
	K0	1.45±0.10
	T	0.25±0.05
	D2	178.0±3.0
	D3	55Min.
	D4	R24.0±3.0
	G	R82.0±3.0
	I	13.0±2.0
	W1	11.0±3.0
	Quantity: 3000PCS	