DESCRIPTION

The 2SC2412KQ~2SC2412KS are available in SOT-23 package

FEATURES

- Available in SOT-23 package

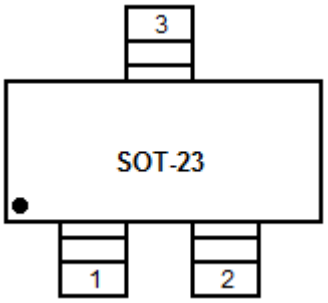
ORDERING INFORMATION

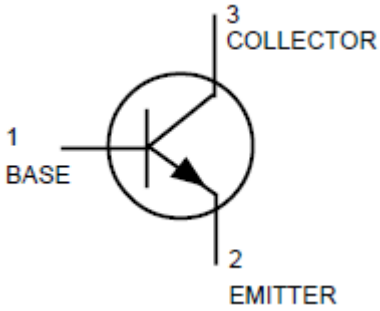
Package Type	Part Number
SOT-23	2SC2412KX
Note	X = Q, R, S See below hFE Classification Table SPQ: 3,000pcs/Reel
AiT provides all RoHS Compliant Products	

hFE CLASSIFICATION

Classification	Q	R	S
hFE	120~270	180~390	270~560

PIN DESCRIPTION





ABSOLUTE MAXIMUM RATINGS

V_{CEO}, Collector-Emitter Voltage	50V
V_{CBO}, Collector-Base Voltage	60V
V_{EBO}, Emitter-Base Voltage	7.0V
I_C, Collector Current-Continuous	150mAdc
P_C, Collector Power Dissipation	0.2W
T_J, Junction Temperature	150℃
T_{STG}, Storage Temperature	-55℃ ~ +150℃

Stresses above may cause permanent damage to the device. These are stress ratings only and functional operation of the device at these or any other conditions beyond those indicated in the Electrical Characteristics are not implied. Exposure to absolute maximum rating conditions for extended periods may affect device reliability.

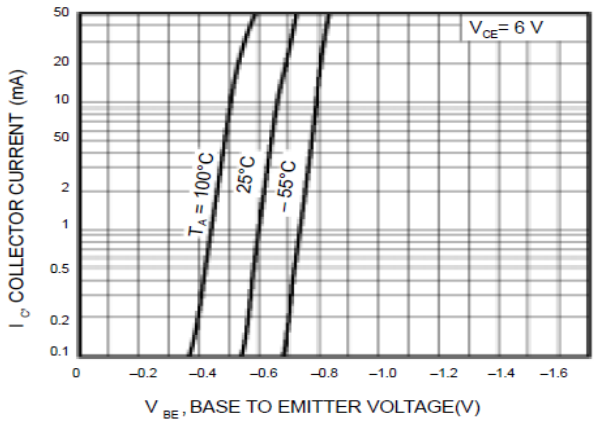
ELECTRICAL CHARACTERISTICS

T_A = 25°C, unless otherwise noted.

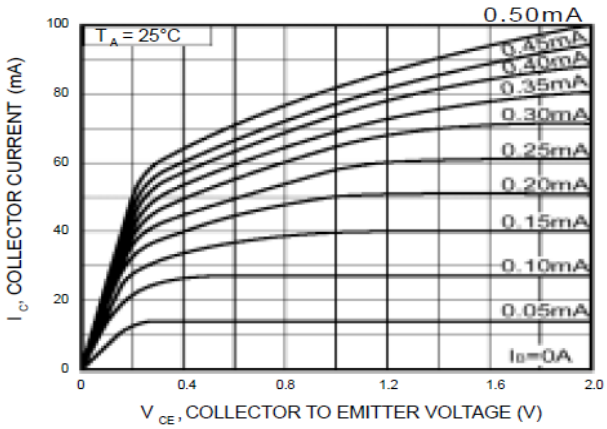
Parameter	Symbol	Characteristic		Min.	Typ.	Max.	Unit
Collector-Emitter Breakdown Voltage	$V_{(BR)CEO}$	I_C=1mA		50	-	-	V
Emitter-Base Breakdown Voltage	$V_{(BR)EBO}$	I_E=50μA		7	-	-	V
Collector-Base Breakdown Voltage	$V_{(BR)CBO}$	I_C=50μA		60	-	-	V
Collector Cutoff Current	I_{CBO}	V_{CB}=60V		-	-	0.1	μA
Emitter Cutoff Current	I_{EBO}	V_{EB}=7V		-	-	0.1	μA
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$	I_C/I_B=50mA/5mA		-	-	0.4	V
DC Current Transfer Ratio	h_{FE}	V_{CE} =6V, I_C=1mA	Q	120	-	270	-
			R	180	-	390	
			S	270	-	560	
Transition Frequency	f_T	V_{CB}=12V, I_E=-2mA, f=30MHz		-	180	-	MHz
Output Capacitance	C_{ob}	V_{CB}=12V, I_E=0A, f=1MHz		-	2.0	3.5	pF

TYPICAL CHARACTERISTICS

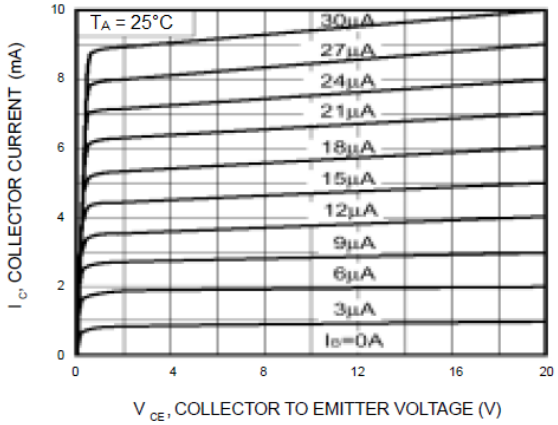
1. Grounded emitter propagation characteristics



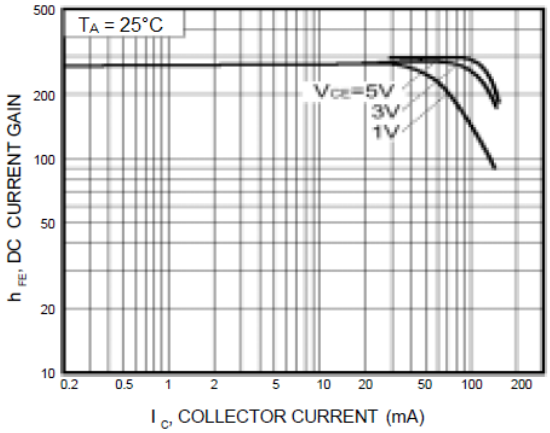
2. Grounded emitter output characteristics(I)



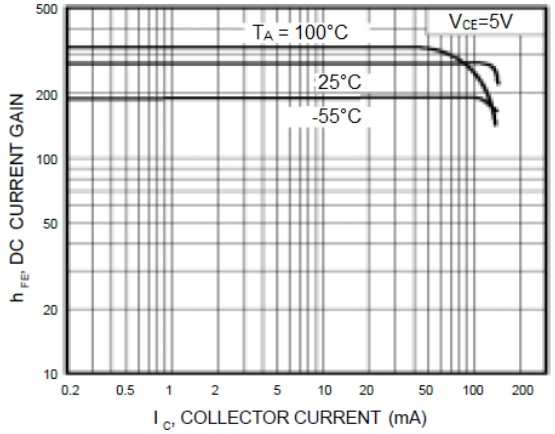
3. Grounded emitter output characteristics(II)



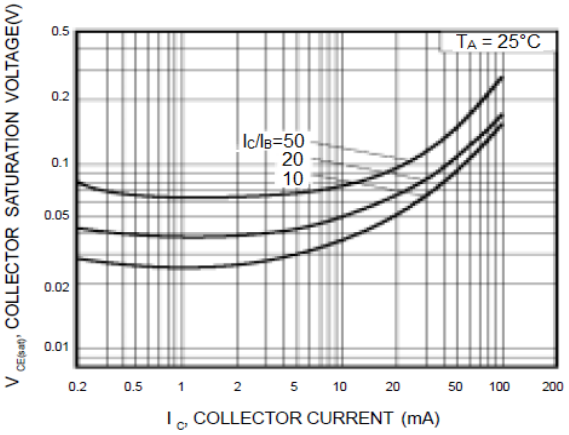
4. DC current gain vs. collector current (I)



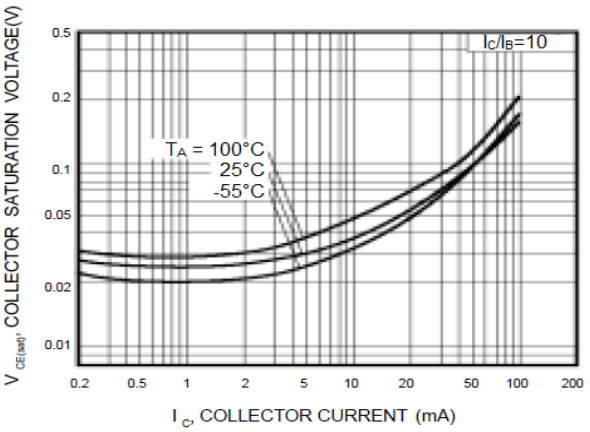
5. DC current gain vs. collector current (II)



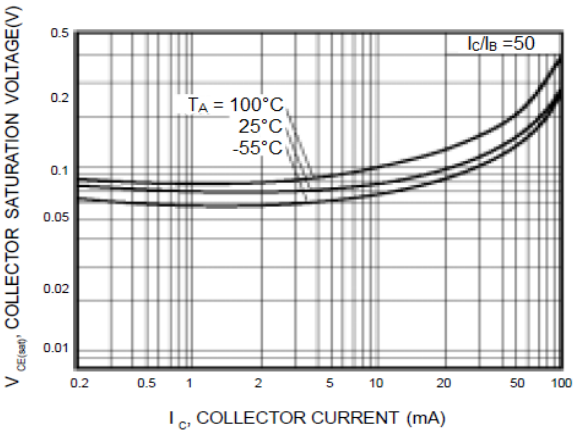
6. Collector-emitter saturation voltage vs. collector current



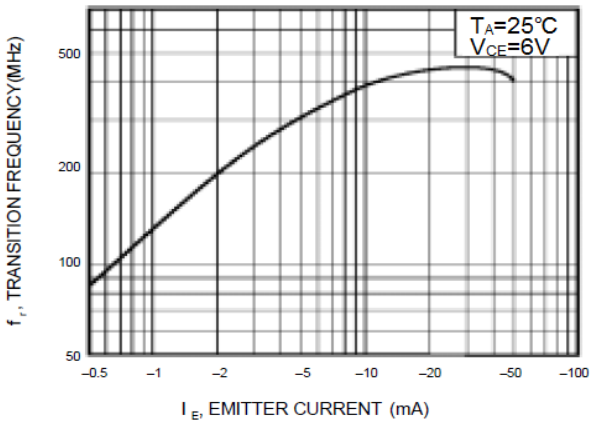
7. Collector-emitter saturation voltage vs. collector current (I)



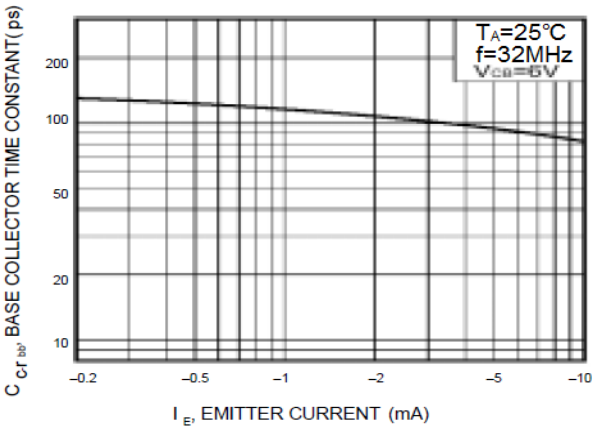
8. Collector-emitter saturation voltage vs. collector current (II)



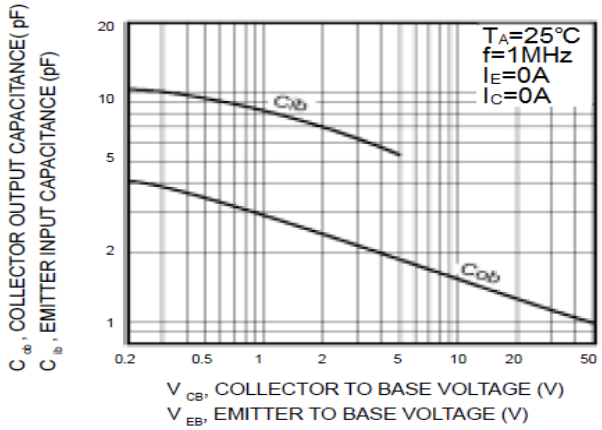
9. Gain bandwidth product vs. emitter current



10. Base-collector time constant vs. emitter current

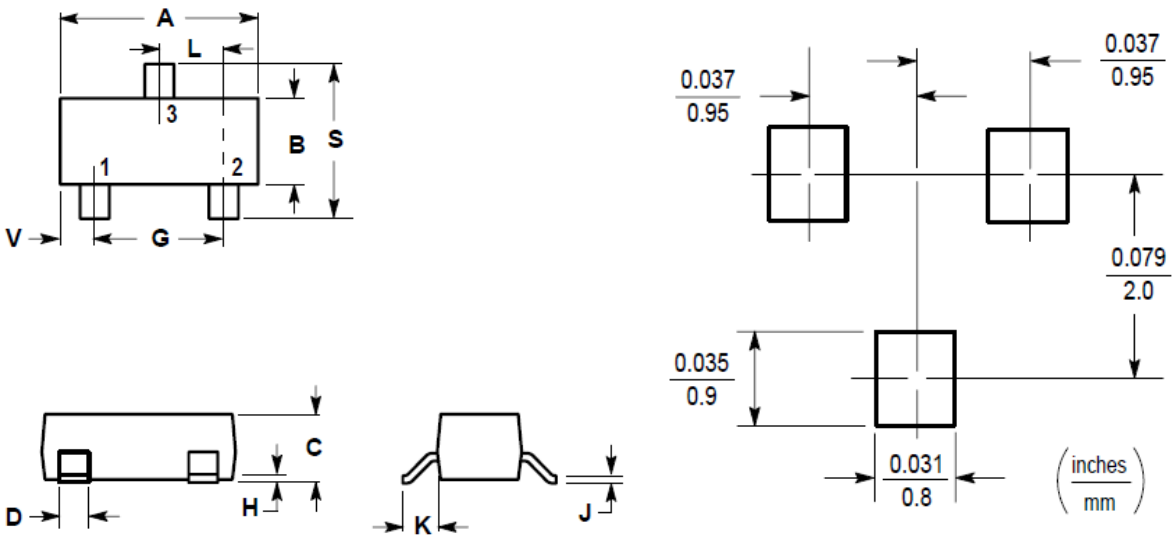


11. Collector output capacitance vs. collector-base voltage
Emitter input capacitance vs. emitter-base voltage



PACKAGE INFORMATION

Dimension in SOT-23 Package (Unit: mm)



DIM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	2.80	3.04	0.1102	0.1197
B	1.20	1.40	0.0472	0.0551
C	0.89	1.11	0.0350	0.0440
D	0.37	0.50	0.0150	0.0200
G	1.78	2.04	0.0701	0.0807
H	0.013	0.100	0.0005	0.0040
J	0.085	0.177	0.0034	0.0070
K	0.35	0.69	0.0140	0.0285
L	0.89	1.02	0.0350	0.0401
S	2.10	2.64	0.0830	0.1039
V	0.45	0.60	0.0177	0.0236

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