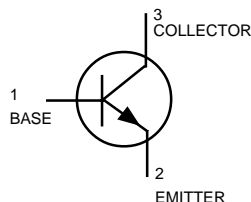
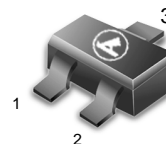


# General Purpose Transistors

NPN Silicon



**2SC2412K\*LT1**



CASE 318-07, STYLE 6  
SOT-23 (TO-236AB)

## MAXIMUM RATINGS

Rating	Symbol	Value	Unit
Collector–Emitter Voltage	$V_{CEO}$	50	V
Collector–Base Voltage	$V_{CBO}$	60	V
Emitter–Base Voltage	$V_{EBO}$	7.0	V
Collector Current — Continuous	$I_C$	150	mAdc
Collector power dissipation	$P_C$	0.2	W
Junction temperature	$T_j$	150	°C
Storage temperature	$T_{stg}$	-55 ~ +150	°C

## DEVICE MARKING

2SC2412K\*LT1 =G1F

## ELECTRICAL CHARACTERISTICS ( $T_A = 25^\circ\text{C}$ unless otherwise noted.)

Characteristic	Symbol	Min	Typ	Max	Unit
Collector–Emitter Breakdown Voltage ( $I_C = 1\text{ mA}$ )	$V_{(BR)CEO}$	50	—	—	V
Emitter–Base Breakdown Voltage ( $I_E = 50\ \mu\text{A}$ )	$V_{(BR)EBO}$	7	—	—	V
Collector–Base Breakdown Voltage ( $I_C = 50\ \mu\text{A}$ )	$V_{(BR)CBO}$	60	—	—	V
Collector Cutoff Current ( $V_{CB} = 60\text{ V}$ )	$I_{CBO}$	—	—	0.1	$\mu\text{A}$
Emitter cutoff current ( $V_{EB} = 7\text{ V}$ )	$I_{EBO}$	—	—	0.1	$\mu\text{A}$
Collector-emitter saturation voltage ( $I_C / I_B = 50\text{ mA} / 5\text{ mA}$ )	$V_{CE(sat)}$	—	—	0.4	V
DC current transfer ratio ( $V_{CE} = 6\text{ V}, I_C = 1\text{ mA}$ )	$h_{FE}$	120	—	560	—
Transition frequency ( $V_{CE} = 12\text{ V}, I_E = -2\text{ mA}, f = 30\text{ MHz}$ )	$f_T$	—	180	—	MHz
Output capacitance ( $V_{CB} = 12\text{ V}, I_E = 0\text{ A}, f = 1\text{ MHz}$ )	$C_{ob}$	—	2.0	3.5	pF

$h_{FE}$  values are classified as follows:

*	Q	R	S
$h_{FE}$	120~270	180~390	270~560

2SC2412K\*LT1

Fig.1 Grounded emitter propagation characteristics

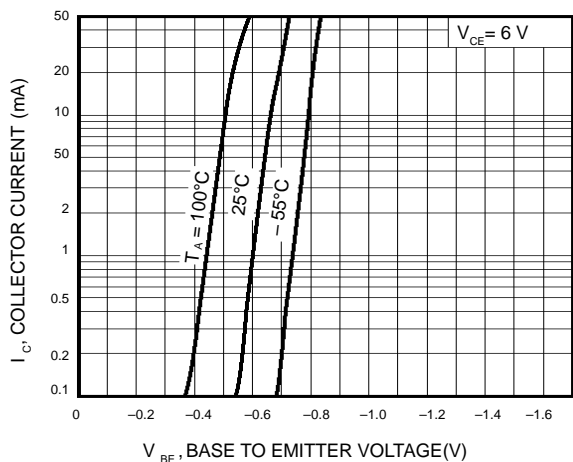


Fig.2 Grounded emitter output characteristics(I)

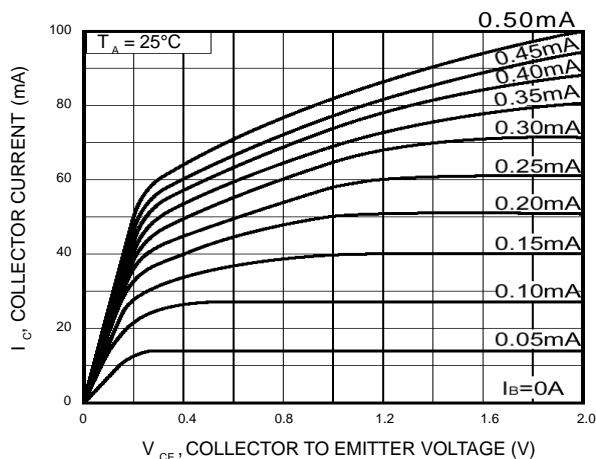


Fig.3 Grounded emitter output characteristics(II)

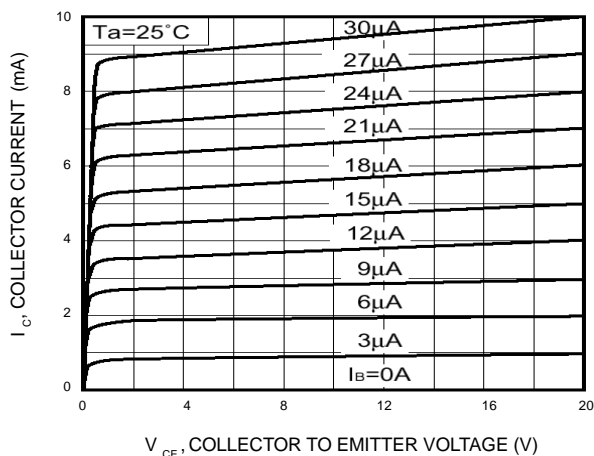


Fig.4 DC current gain vs. collector current (I)

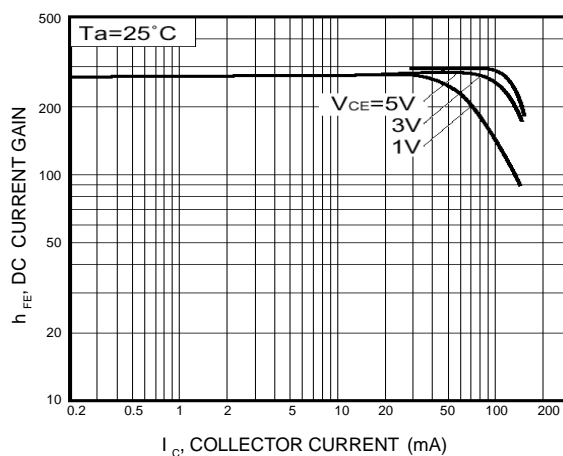


Fig.5 DC current gain vs. collector current (II)

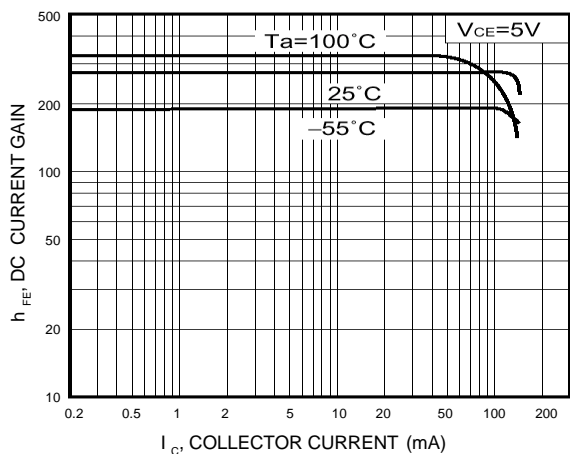
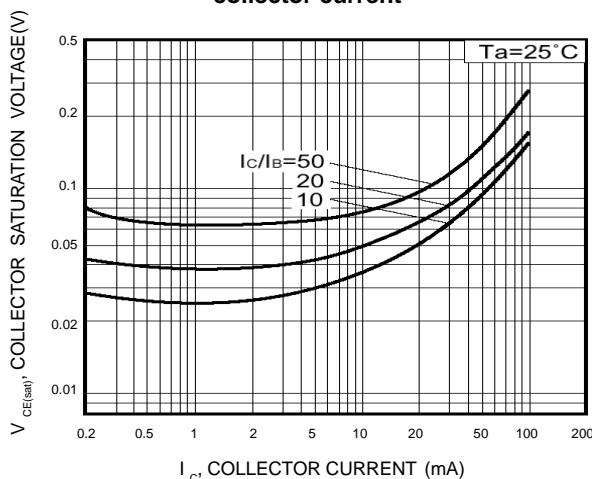


Fig.6 Collector-emitter saturation voltage vs. collector current



2S2412K\*LT1

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

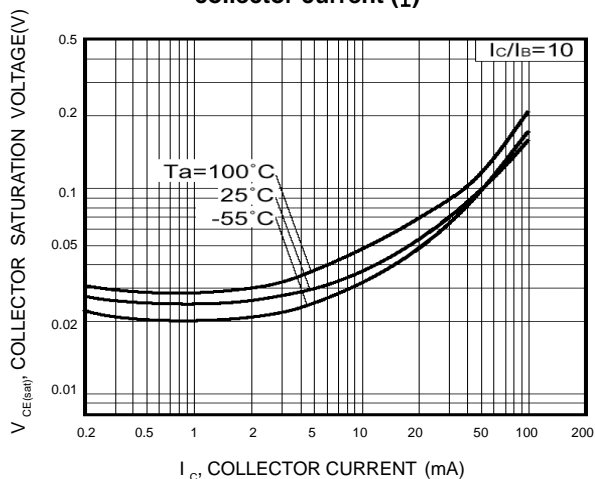


Fig.8 Collector-emitter saturation voltage vs. collector current (II)

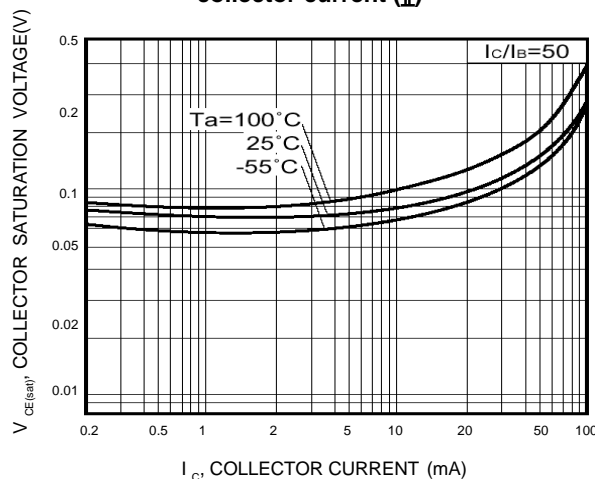


Fig.9 Gain bandwidth product vs. emitter current

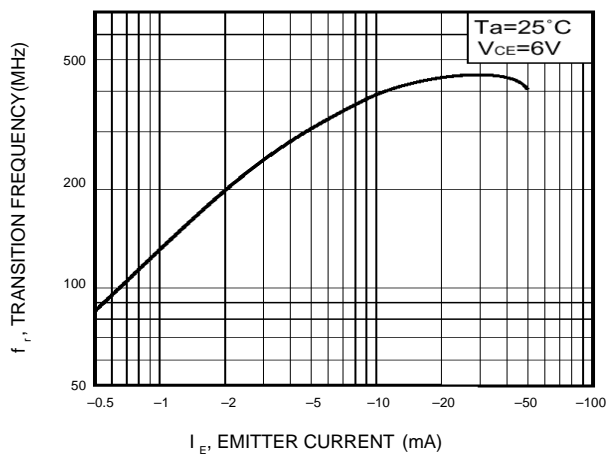


Fig.10 Collector output capacitance vs. collector-base voltage  
Emitter input capacitance vs. emitter-base voltage

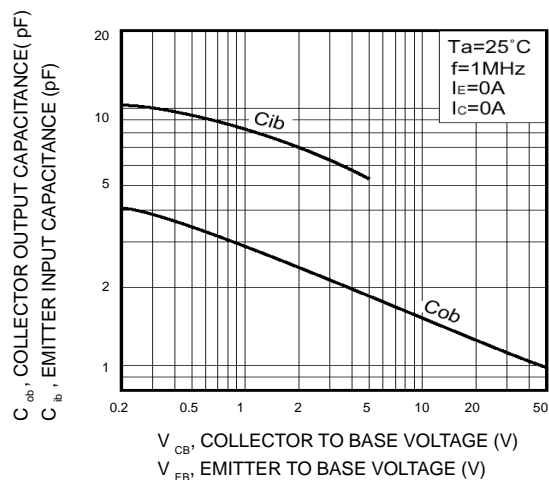


Fig.11 Base-collector time constant vs. emitter current

