Elektronische Bauelemente

UMX1N

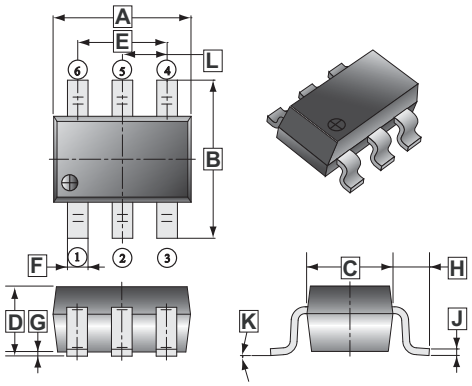
Dual NPN General Purpose Transistors

RoHS Compliant Product
A suffix of "-C" specifies halogen & lead-free

FEATURES

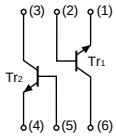
- Two 2SC2412K chips in a package.
- Mounting possible with SOT-363 automatic mounting machines.
- Transistor elements are independent, eliminating interference.
- Mounting cost and area can be cut in half.

SOT-363



REF.	Millimeter		REF.	Millimeter	
	Min.	Max.		Min.	Max.
A	2.00	2.20	G	0.100 REF.	
B	2.15	2.45	H	0.525 REF.	
C	1.15	1.35	J	0.08	0.15
D	0.90	1.10	K	8°	
E	1.20	1.40	L	0.650 TYP.	
F	0.15	0.35			

EQUIVALENT CIRCUIT



MARKING：X1

ABSOLUTE MAXIMUM RATINGS at Ta = 25°C

Parameter	Symbol	Value	Unit
Collector-base voltage	$V_{(BR)CBO}$	60	V
Collector-emitter voltage	$V_{(BR)CEO}$	50	V
Emitter-base voltage	$V_{(BR)EBO}$	7	V
Collector current	I_C	150	mA
Collector Power dissipation	P_C	150	mW
Junction & Storage temperature	T_J, T_{STG}	150, -55 ~ 150	℃

ABSOLUTE MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS at Ta = 25°C

Parameter	Symbol	Min.	Typ.	Max.	Unit	Test Conditions
Collector-base breakdown voltage	$V_{(BR)CBO}$	60	-	-	V	I_C= 50μA, I_E=0
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	50	-	-		I_C= 1mA , I_B= 0
Emitter-base breakdown voltage	$V_{(BR)EBO}$	7	-	-	V	I_E= 50μA , I_C= 0
Collector cut-off current	I_{CBO}	-	-	0.1	μA	V_{CB}= 60V, I_E=0
Emitter cut-off current	I_{EBO}	-	-	0.1	μA	V_{EB}= 7V, I_C= 0
DC current gain	h_{FE}	120	-	560		V_{CE}= 6V, I_C= 1mA
Collector-emitter saturation voltage	$V_{CE(sat)}$	-	-	0.4	V	I_C= 50mA, I_B= 5mA
Transition frequency	f_T	-	180	-	MHz	V_{CE}= 12V, I_C= 2mA, f=100MHz
Collector output capacitance	C_{ob}	-	2.0	3.5	pF	V_{CB}= 12V, I_E= 0, f=1MHz

CHARACTERISTICS CURVE

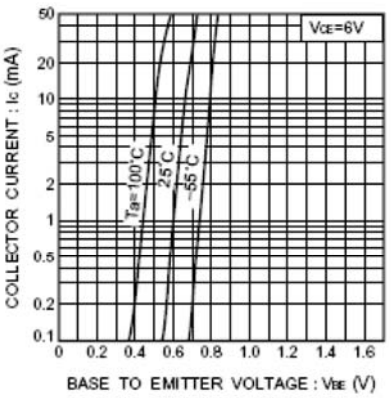


Fig.1 Grounded emitter propagation characteristics

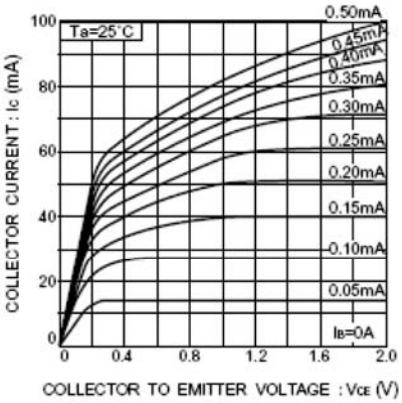


Fig.2 Grounded emitter output characteristics (I)

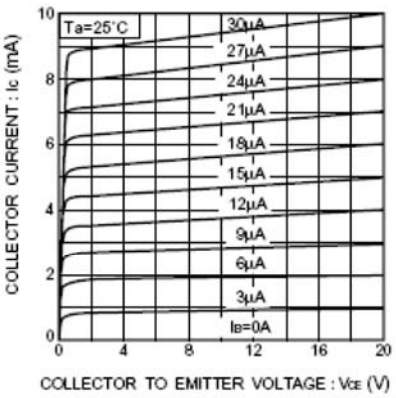


Fig.3 Grounded emitter output characteristics (II)

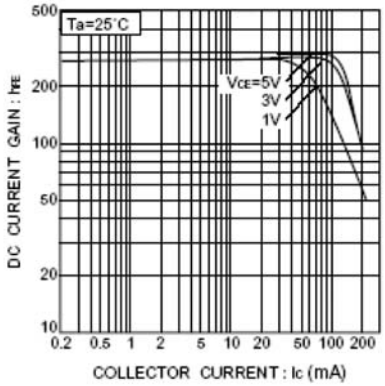


Fig.4 DC current gain vs. collector current (I)

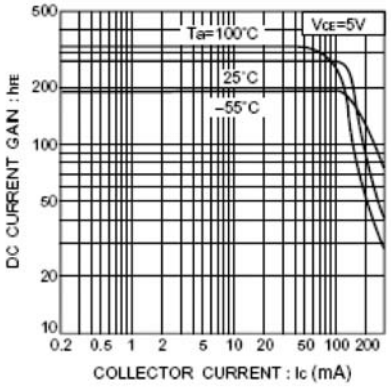


Fig.5 DC current gain vs. collector current (II)

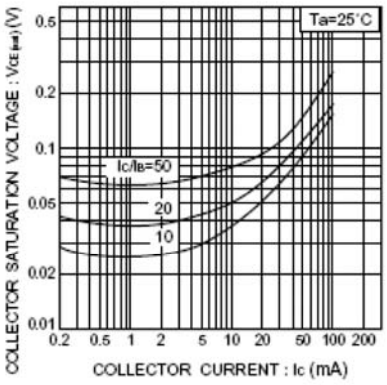


Fig.6 Collector-emitter saturation voltage vs. collector current

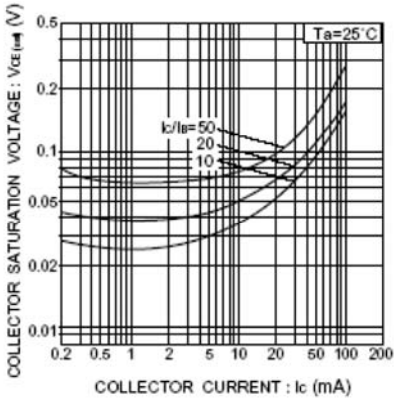


Fig.7 Collector-emitter saturation voltage vs. collector current (I)

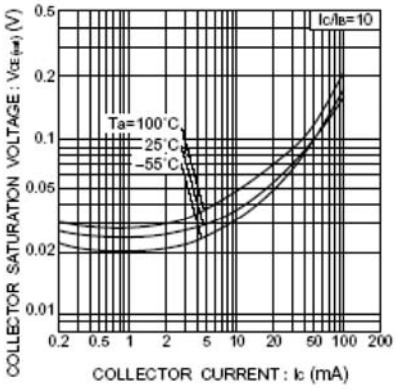


Fig.8 Collector-emitter saturation voltage vs. collector current (II)

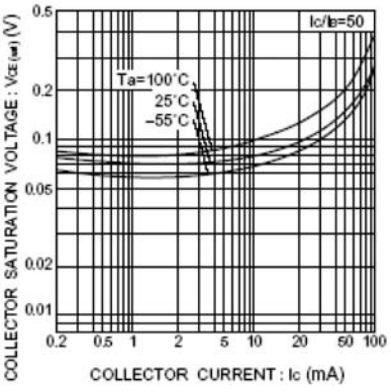


Fig.9 Collector-emitter saturation voltage vs. collector current (III)

CHARACTERISTICS CURVE

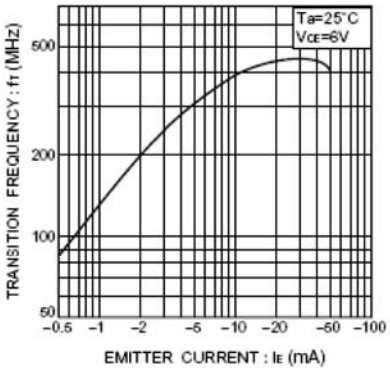


Fig.10 Gain bandwidth product vs. emitter current

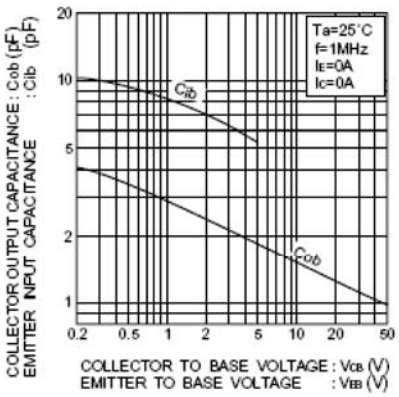


Fig.11 Collector output capacitance vs. collector-base voltage
Emitter input capacitance vs. emitter-base voltage

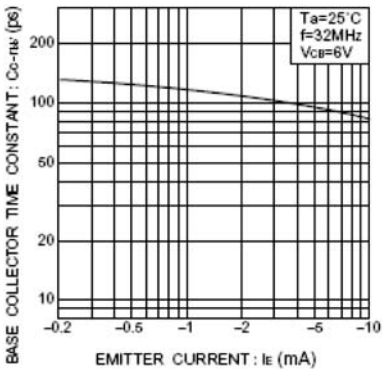


Fig.12 Base-collector time constant vs. emitter current