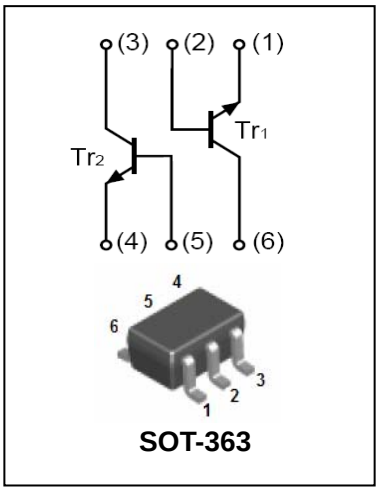
Dual NPN Small Signal Surface Mount Transistor UMX1N

FEATURES

- Two 2SC2412K chips in a SOT-363 package.
- Mounting possible with SOT-363 automatic machines.
- Transistor elements are independent, eliminating Interference.

Lead-free



SOT-363

APPLICATIONS

- Dual NPN small signal surface mount transistor.

ORDERING INFORMATION

Type No.	Marking	Package Code
UMX1N	X1	SOT-363

MAXIMUM RATING @ Ta=25℃ unless otherwise specified

Symbol	**Parameter**	**Value**	**Unit**
V_{CBO}	Collector-Base Voltage	60	V
V_{CEO}	Collector-Emitter Voltage	50	V
V_{EBO}	Emitter-Base Voltage	7	V
I_C	Collector Current -Continuous	150	mA
P_D	Power Dissipation	150	mW
T_j, T_{stg}	Junction and Storage Temperature	-55 to +150	℃

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ELECTRICAL CHARACTERISTICS @ Ta=25℃ unless otherwise specified

Parameter	Symbol	Test conditions	MIN	MAX	UNIT
Collector-base breakdown voltage	$V_{(BR)CBO}$	I_C=50μA I_E=0	60	-	V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	I_C=1mA I_B=0	50	-	V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	I_E=50μA I_C=0	7	-	V
Collector cut-off current	I_{CBO}	V_{CB}=60V I_E=0	-	0.1	μA
Emitter cut-off current	I_{EBO}	V_{CB}=7V I_C=0	-	0.1	μA
DC current gain	h_{FE}	V_{CE}=6V I_C=1mA	120	560	-
Collector-emitter saturation voltage	$V_{CE(sat)}$	I_C=50mA I_B=5mA	-	0.4	V
Transition frequency	f_T	V_{CE}=12V,I_E=-2mA,f=100MHz	180		MHz
Output Capacitance	C_{obo}	V_{CB}=12V,f=1.0MHz,I_E=0	-	3.5	pF

TYPICAL CHARACTERISTICS @ Ta=25℃ unless otherwise specified

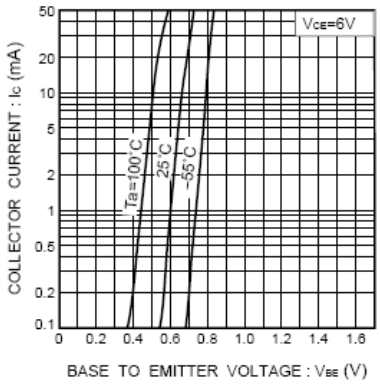

Fig.1 Grounded emitter propagation characteristics

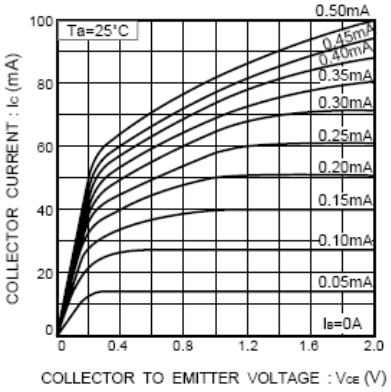

Fig.2 Grounded emitter output characteristics (I)

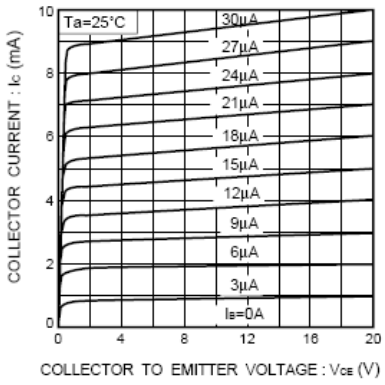

Fig.3 Grounded emitter output characteristics (II)

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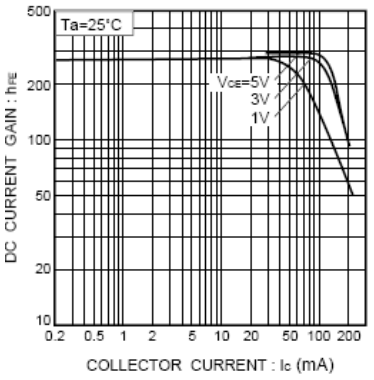

Fig.4 DC current gain vs. collector current (I)

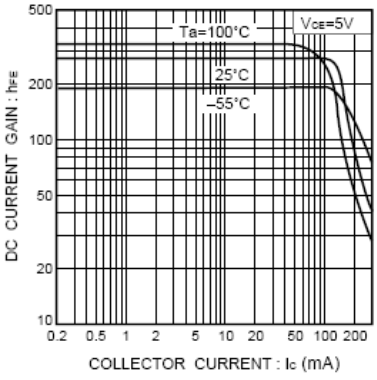

Fig.5 DC current gain vs. collector current (II)

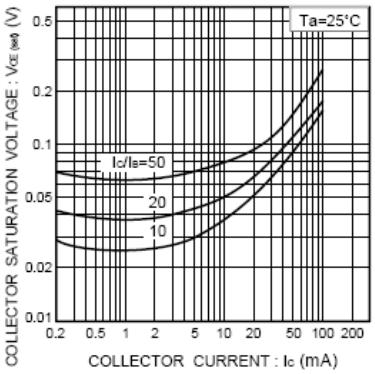

Fig.6 Collector-emitter saturation voltage vs. collector current

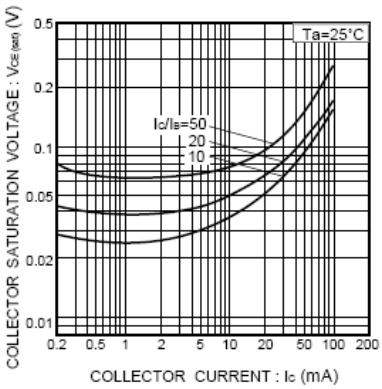

Fig.7 Collector-emitter saturation voltage vs. collector current (I)

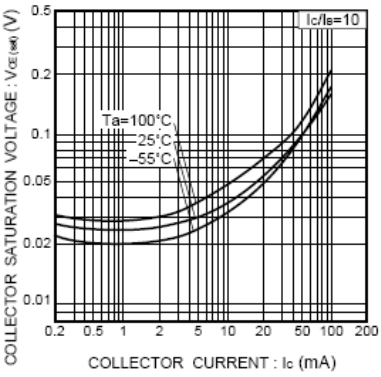

Fig.8 Collector-emitter saturation voltage vs. collector current (II)

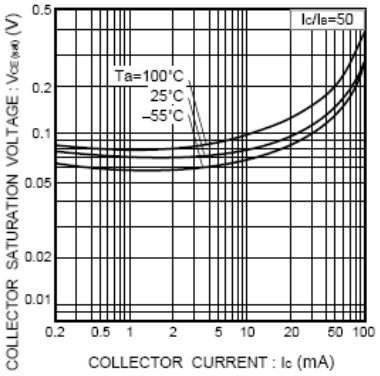

Fig.9 Collector-emitter saturation voltage vs. collector current (III)

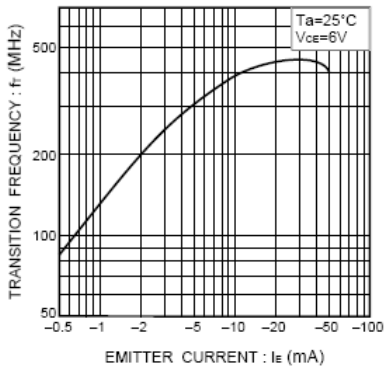

Fig.10 Gain bandwidth product vs. emitter current

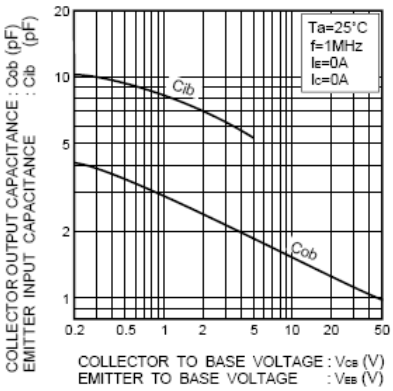

Fig.11 Collector output capacitance vs. collector-base voltage
Emitter input capacitance vs. emitter-base voltage

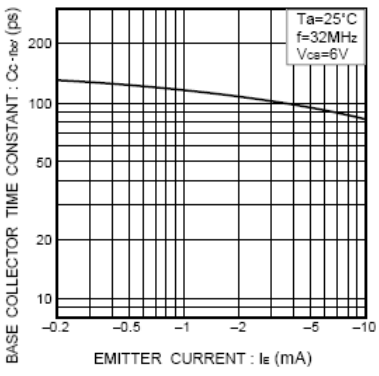

Fig.12 Base-collector time constant vs. emitter current

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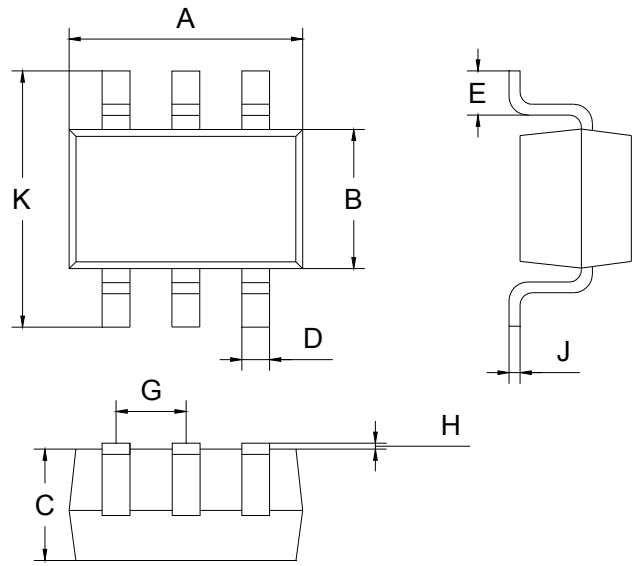
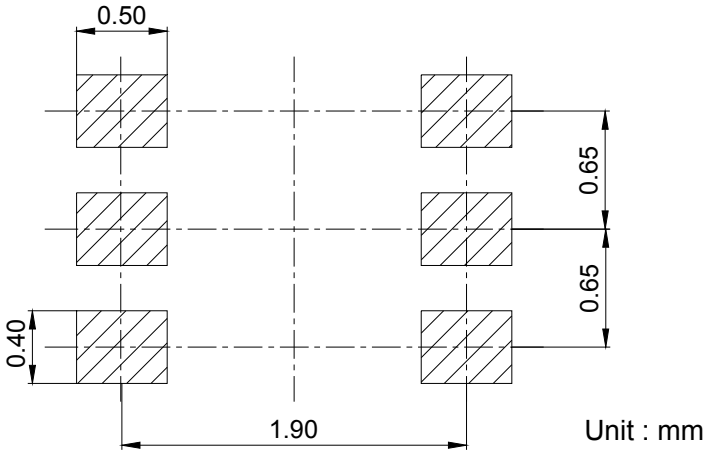
PACKAGE OUTLINE

Plastic surface mounted package SOT-363



SOT-363		
Dim	Min	Max
A	2.00	2.20
B	1.15	1.35
C	0.95 Typical	
D	0.25 Typical	
E	0.25	0.40
G	0.60	0.70
H	0.02	0.10
J	0.10 Typical	
K	2.2	2.4
All Dimensions in mm		

SOLDERING FOOTPRINT



PACKAGE INFORMATION

Device	Package	Shipping
UMX1N	SOT-363	3000/Tape&Reel