

General Purpose Transistor

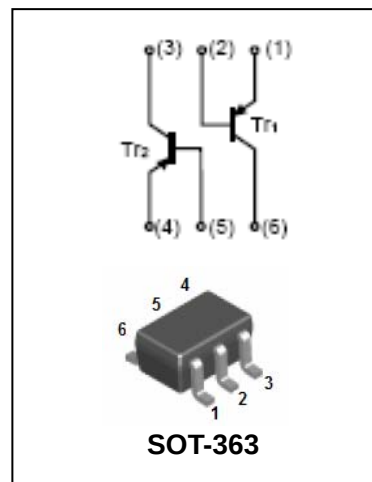
UMT1N

FEATURES

- Two 2SA1037AK chips in a SOT-363 package.
- Mounting possible with SOT-363 automatic machines.
- Transistor elements are independent, eliminating Interference.



Lead-free



APPLICATIONS

- Dual NPN small signal surface mount transistor.

ORDERING INFORMATION

Type No.	Marking	Package Code
UMT1N	T1	SOT-363

MAXIMUM RATING @ Ta=25°C 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	-6	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	°C

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UMT1N

ELECTRICAL CHARACTERISTICS @ Ta=25°C unless otherwise specified

Parameter	Symbol	Test conditions	MIN	Typ	MAX	UNIT
Collector-base breakdown voltage	$V_{(BR)CBO}$	$I_C = -50\mu A$ $I_E = 0$	-60	-	-	V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	$I_C = -1mA$ $I_B = 0$	-50	-	-	V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	$I_E = -50\mu A$ $I_C = 0$	-6	-	-	V
Collector cut-off current	I_{CBO}	$V_{CB} = -60V$ $I_E = 0$	-	-	-0.1	μA
Emitter cut-off current	I_{EBO}	$V_{CB} = -6V$ $I_C = 0$	-	-	-0.1	μA
DC current gain	h_{FE}	$V_{CE} = -6V$ $I_C = -1mA$	120	-	560	-
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C = -50mA$ $I_B = -5mA$	-	-	-0.5	V
Transition frequency	f_T	$V_{CE} = -12V$, $I_E = 2mA$, $f = 100MHz$	-	140	-	MHz
Output Capacitance	C_{obo}	$V_{CB} = -12V$, $f = 1.0MHz$, $I_E = 0$	-	4	5	pF

TYPICAL CHARACTERISTICS @ Ta=25°C unless otherwise specified

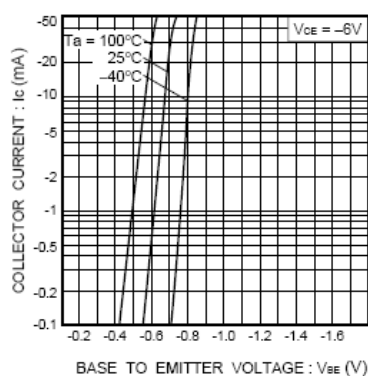


Fig.1 Grounded emitter propagation characteristics

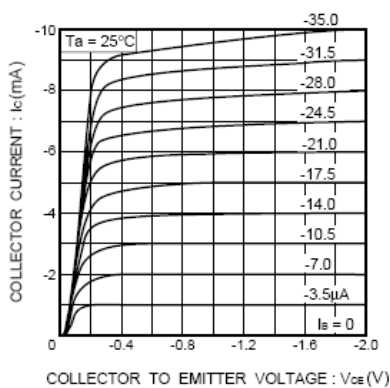


Fig.2 Grounded emitter output characteristics (I)

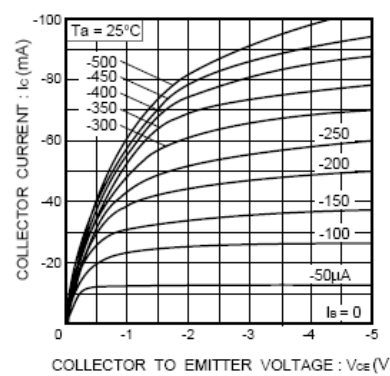


Fig.3 Grounded emitter output characteristics (II)

General Purpose Transistor

UMT1N

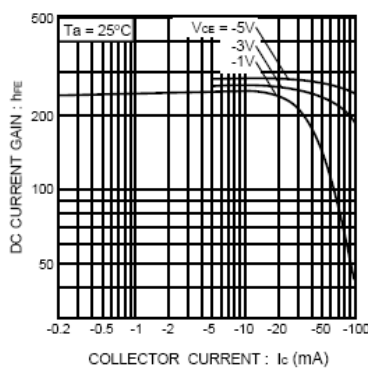


Fig.4 DC current gain vs. collector current (I)

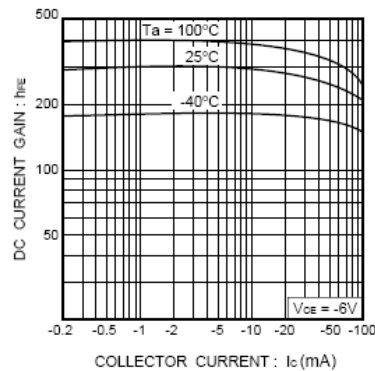


Fig.5 DC current gain vs. collector current (II)

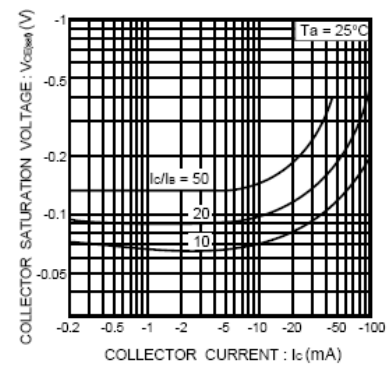


Fig.6 Collector-emitter saturation voltage vs. collector current (I)

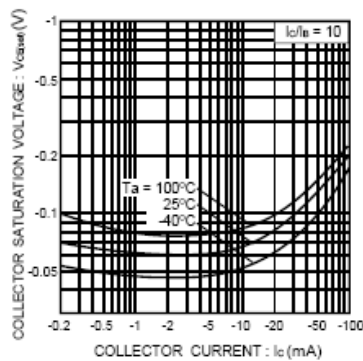


Fig.7 Collector-emitter saturation voltage vs. collector current (II)

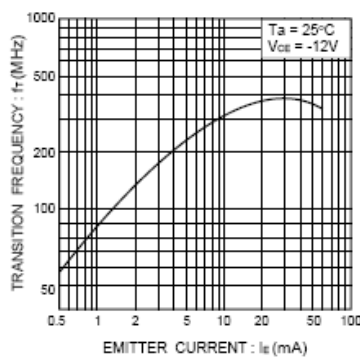


Fig.8 Gain bandwidth product vs. emitter current

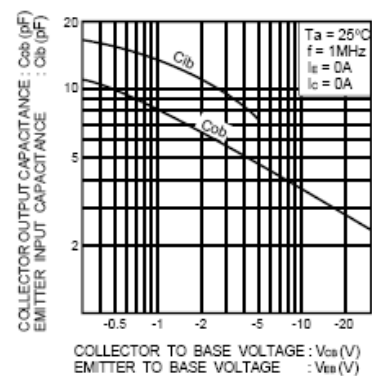


Fig.9 Collector output capacitance vs. collector-base voltage
Emitter input capacitance vs. emitter-base voltage



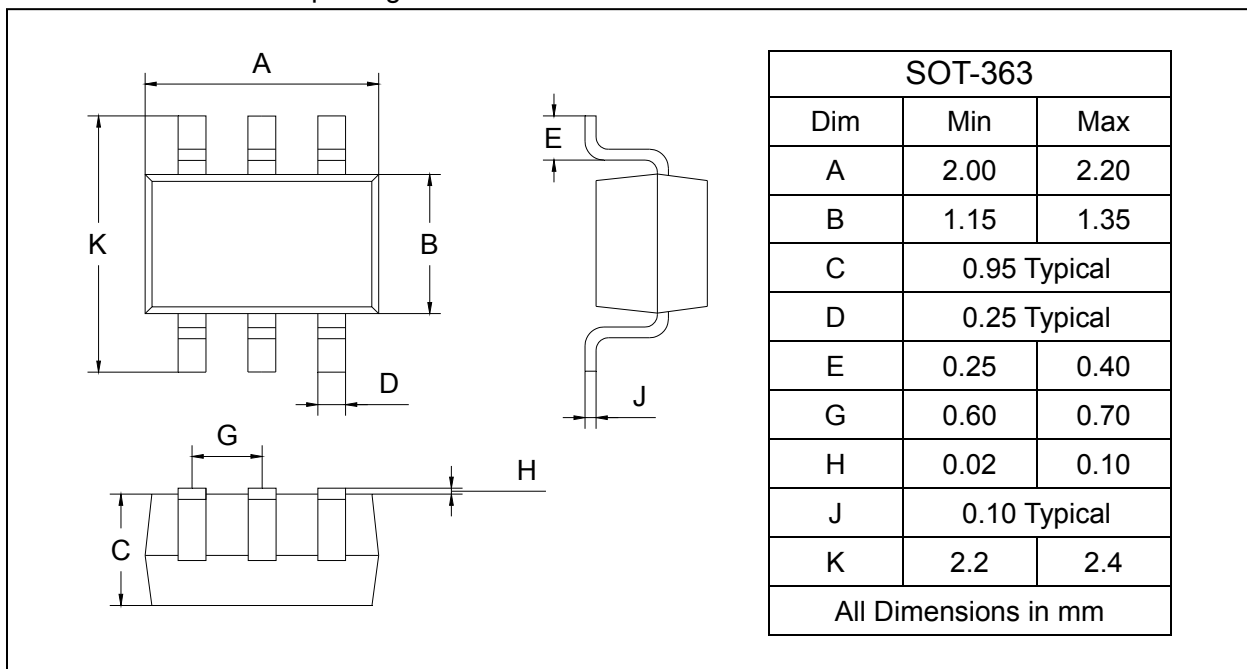
General Purpose Transistor

UMT1N

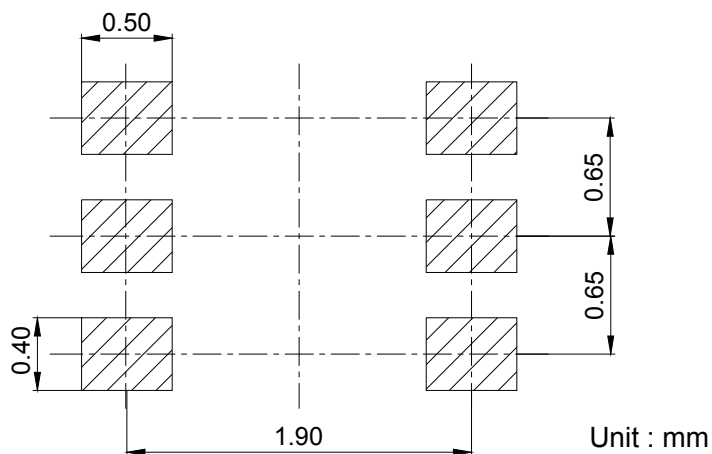
PACKAGE OUTLINE

Plastic surface mounted package

SOT-363



SOLDERING FOOTPRINT



PACKAGE INFORMATION

Device	Package	Shipping
UMT1N	SOT-363	3000/Tape&Reel