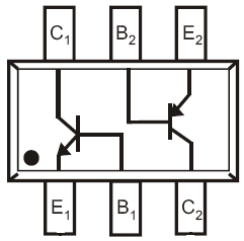
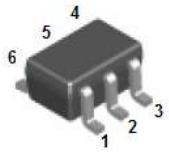
General purpose transistor UMZ1N

FEATURES

- Both a 2SA1037AK chip and 2SC2412K chip in SOT-363 package.
- Mounting cost and area can be cut in half.
- Transistor elements are independent,eliminating interference.

Lead-free





SOT-363

APPLICATIONS

- NPN/PNP epitaxial planar silicon transistor.

ORDERING INFORMATION

Type No.	Marking	Package Code
UMZ1N	Z1	SOT-363

MAXIMUM RATING @ Ta=25℃ unless otherwise specified

Symbol	Parameter	Value		Unit
		T_{r1}	T_{r2}	
V_{CBO}	Collector-Base Voltage	60	-60	V
V_{CEO}	Collector-Emitter Voltage	50	-50	V
V_{EBO}	Emitter-Base Voltage	7	-6	V
I_C	Collector Current	150	-150	mA
P_c	Power Dissipation	150		mW
T_j, T_{stg}	Junction and Storage Temperature	-55 to +150		℃

General purpose transistor UMZ1N

ELECTRICAL CHARACTERISTICS T_{R1} Section @ Ta=25℃ unless otherwise specified

Parameter	Symbol	Test conditions	MIN	TYP	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_{EB}=7V I_C=0			0.1	μA
DC current transfer ratio	h_{FE}	V_{CE}=6V I_C=1.0mA	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_{ob}	V_{CB}=12V,f=1.0MHz,I_E=0A		2	3.5	pF

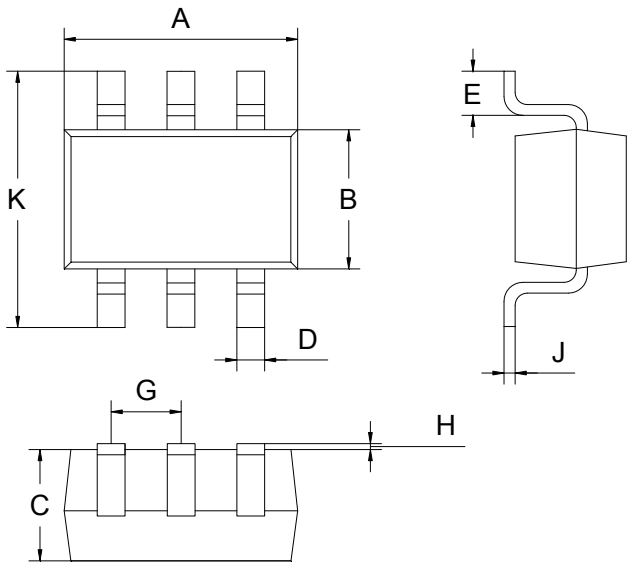
ELECTRICAL CHARACTERISTICS T_{R2} Section @ Ta=25℃ unless otherwise specified

Parameter	Symbol	Test conditions	MIN	TYP	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=-1.0mA I_B=0	-50			V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	I_E=-50μA 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_{EB}=-6V I_C=0			-0.1	μA
DC current transfer ratio	h_{FE}	V_{CE}=-6V I_C=-1.0mA	120		560	
Collector-emitter saturation voltage	$V_{CE(sat)}$	I_C=-50mA I_B=-5.0mA			-0.5	V
Transition frequency	f_T	V_{CE}=-12V I_E=2mA f=100MHz		140		MHz
Output Capacitance	C_{ob}	V_{CB}=-12V,f=1.0MHz,I_E=0A		4	5	pF
Noise Figure	NF	V_{CE}=-5V I_C=-200μA f=1.0KHz	-		8.0	dB

General purpose transistor UMZ1N

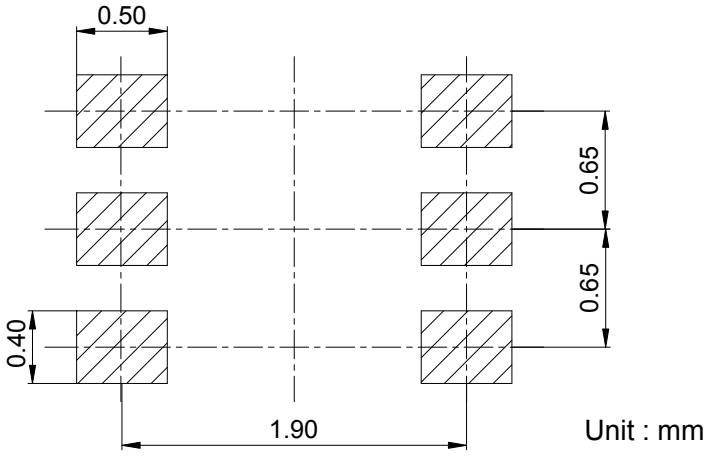
PACKAGE OUTLINE

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



Unit : mm

PACKAGE INFORMATION

Device	Package	Shipping
UMZ1N	SOT-363	3000/Tape&Reel