

CMKT3920

SURFACE MOUNT SILICON  
DUAL, SMALL SIGNAL  
NPN SWITCHING TRANSISTOR

ULTRAm<sup>ini</sup>



SOT-363 CASE



www.centrasemi.com

#### DESCRIPTION:

The Central Semiconductor CMKT3920 (two single NPN transistors) is a dual combination in a space saving SOT-363 ULTRAm<sup>ini</sup>™ package, designed for small signal general purpose amplifier and switching applications.

#### MARKING CODE: K20

#### APPLICATIONS:

- Load switching
- Small signal amplification
- Lamp and relay drivers
- MOSFET gate drive

#### FEATURES:

- ULTRAm<sup>ini</sup>™ space saving package containing two 3920 NPN transistors

#### MAXIMUM RATINGS: (T<sub>A</sub>=25°C)

Collector-Base Voltage  
Collector-Emitter Voltage  
Emitter-Base Voltage  
Continuous Collector Current  
Power Dissipation  
Operating and Storage Junction Temperature  
Thermal Resistance

#### SYMBOL

V<sub>CBO</sub> 60  
V<sub>CEO</sub> 50  
V<sub>EBO</sub> 7.0  
I<sub>C</sub> 200  
P<sub>D</sub> 350  
T<sub>J</sub>, T<sub>stg</sub> -65 to +150  
Θ<sub>JA</sub> 357

#### UNITS

V  
V  
V  
mA  
mW  
°C  
°C/W

#### ELECTRICAL CHARACTERISTICS PER TRANSISTOR: (T<sub>A</sub>=25°C unless otherwise noted)

SYMBOL	TEST CONDITIONS	MIN	MAX	UNITS
I <sub>CBO</sub>	V <sub>CB</sub> =60V		100	nA
I <sub>EBO</sub>	V <sub>EB</sub> =7.0V		100	nA
BV <sub>CBO</sub>	I <sub>C</sub> =50μA	60		V
BV <sub>CEO</sub>	I <sub>C</sub> =1.0mA	50		V
BV <sub>EBO</sub>	I <sub>E</sub> =50μA	7.0		V
V <sub>CE(SAT)</sub>	I <sub>C</sub> =50mA, I <sub>B</sub> =5.0mA		0.4	V
V <sub>BE(SAT)</sub>	I <sub>C</sub> =50mA, I <sub>B</sub> =5.0mA		0.95	V
h <sub>FE</sub>	V <sub>CE</sub> =6.0V, I <sub>C</sub> =1.0mA	120	560	
f <sub>T</sub>	V <sub>CE</sub> =20V, I <sub>C</sub> =10mA, f=100MHz	300		MHz
C <sub>ob</sub>	V <sub>CB</sub> =12V, I <sub>E</sub> =0, f=1.0MHz		3.5	pF

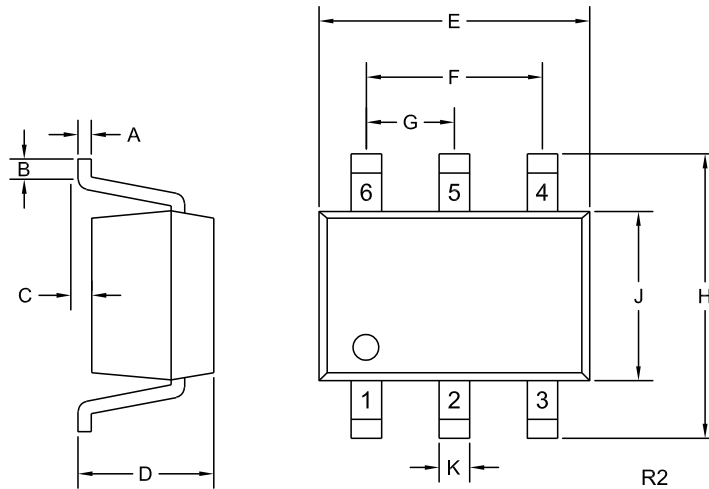
R1 (5-January 2012)

CMKT3920

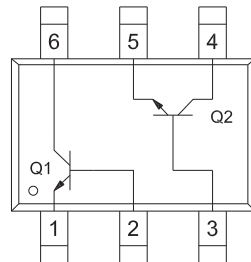
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SOT-363 CASE - MECHANICAL OUTLINE



PIN CONFIGURATION



LEAD CODE:

- 1) Emitter Q1
- 2) Base Q1
- 3) Base Q2
- 4) Collector Q2
- 5) Emitter Q2
- 6) Collector Q1

MARKING CODE: K20

SYMBOL	INCHES		MILLIMETERS	
	MIN	MAX	MIN	MAX
A	0.004	0.010	0.10	0.25
B	0.005	-	0.12	-
C	0.000	0.004	0.00	0.10
D	0.031	0.043	0.80	1.10
E	0.071	0.087	1.80	2.20
F	0.051		1.30	
G	0.026		0.65	
H	0.075	0.091	1.90	2.30
J	0.043	0.055	1.10	1.40
K	0.006	0.012	0.15	0.30

SOT-363 (REV: R2)

R1 (5-January 2012)

## OUTSTANDING SUPPORT AND SUPERIOR SERVICES



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### PRODUCT SUPPORT

Central's operations team provides the highest level of support to insure product is delivered on-time.

- Supply management (Customer portals)
- Inventory bonding
- Consolidated shipping options
- Custom bar coding for shipments
- Custom product packing

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### DESIGNER SUPPORT/SERVICES

Central's applications engineering team is ready to discuss your design challenges. Just ask.

- Free quick ship samples (2<sup>nd</sup> day air)
- Online technical data and parametric search
- SPICE models
- Custom electrical curves
- Environmental regulation compliance
- Customer specific screening
- Up-screening capabilities
- Special wafer diffusions
- PbSn plating options
- Package details
- Application notes
- Application and design sample kits
- Custom product and package development

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### REQUESTING PRODUCT PLATING

1. If requesting Tin/Lead plated devices, add the suffix " TIN/LEAD" to the part number when ordering (example: 2N2222A TIN/LEAD).
2. If requesting Lead (Pb) Free plated devices, add the suffix " PBFREE" to the part number when ordering (example: 2N2222A PBFREE).

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### CONTACT US

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