

CMKT3920

**SURFACE MOUNT SILICON  
DUAL, SMALL SIGNAL  
NPN SWITCHING TRANSISTOR**



[www.centrasemi.com](http://www.centrasemi.com)

**ULTRAmimi™**



**SOT-363 CASE**

**DESCRIPTION:**

The Central Semiconductor CMKT3920 (two single NPN transistors) is a dual combination in a space saving SOT-363 ULTRAmimi™ 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:**

- ULTRAmimi™ space saving package containing two 3920 NPN transistors

**MAXIMUM RATINGS:** ( $T_A=25^\circ\text{C}$ )

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

**SYMBOL**

$V_{CBO}$	60
$V_{CEO}$	50
$V_{EBO}$	7.0
$I_C$	200
$P_D$	350
$T_J, T_{stg}$	-65 to +150
$\theta_{JA}$	357

**UNITS**

V
V
V
mA
mW
°C
°C/W

**ELECTRICAL CHARACTERISTICS PER TRANSISTOR:** ( $T_A=25^\circ\text{C}$  unless otherwise noted)

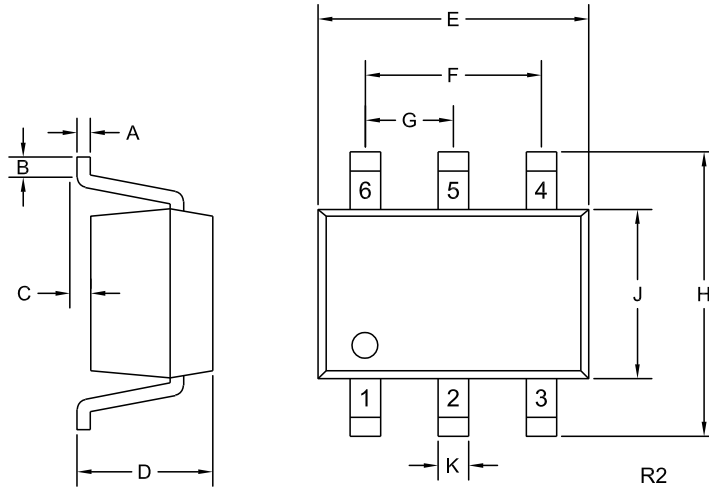
SYMBOL	TEST CONDITIONS	MIN	MAX	UNITS
$I_{CBO}$	$V_{CB}=60V$		100	nA
$I_{EBO}$	$V_{EB}=7.0V$		100	nA
$BV_{CBO}$	$I_C=50\mu A$	60		V
$BV_{CEO}$	$I_C=1.0mA$	50		V
$BV_{EBO}$	$I_E=50\mu A$	7.0		V
$V_{CE(SAT)}$	$I_C=50mA, I_B=5.0mA$		0.4	V
$V_{BE(SAT)}$	$I_C=50mA, I_B=5.0mA$		0.95	V
$h_{FE}$	$V_{CE}=6.0V, I_C=1.0mA$	120	560	
$f_T$	$V_{CE}=20V, I_C=10mA, f=100MHz$	300		MHz
$C_{ob}$	$V_{CB}=12V, I_E=0, f=1.0MHz$		3.5	pF

CMKT3920

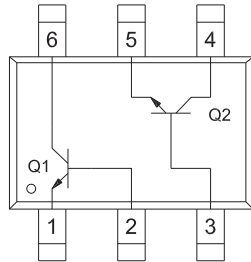
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SOT-363 CASE - MECHANICAL OUTLINE



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

DIMENSIONS

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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