

CMKT3920

SURFACE MOUNT SILICON
DUAL, SMALL SIGNAL
NPN SWITCHING TRANSISTOR

ULTRAmⁱⁿⁱ



SOT-363 CASE

Central
Semiconductor Corp.

www.centrasemi.com

DESCRIPTION:

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

- ULTRAmⁱⁿⁱ 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		UNITS
V_{CBO}	60	V
V_{CEO}	50	V
V_{EBO}	7.0	V
I_C	200	mA
P_D	350	mW
T_J, T_{stg}	-65 to +150	$^\circ\text{C}$
θ_{JA}	357	$^\circ\text{C/W}$

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

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

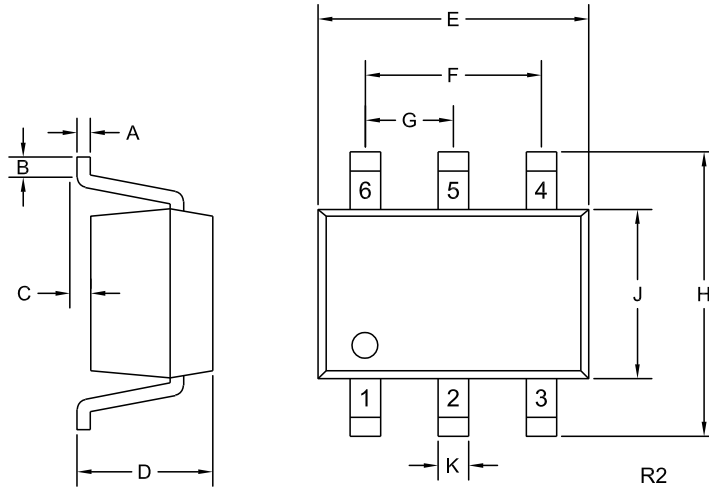
R1 (5-January 2012)

CMKT3920

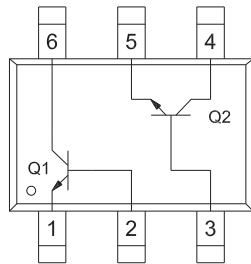
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SOT-363 CASE - MECHANICAL OUTLINE



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

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



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

DESIGNER SUPPORT/SERVICES

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

- Free quick ship samples (2nd 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

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).

CONTACT US

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