



Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



Contact us

Tel: +86-755-8981 8866 Fax: +86-755-8427 6832

Email & Skype: info@chipsmall.com Web: www.chipsmall.com

Address: A1208, Overseas Decoration Building, #122 Zhenhua RD., Futian, Shenzhen, China



CMKT2207

**SURFACE MOUNT
COMPLEMENTARY SILICON
TRANSISTORS**

ULTRAmulti™



SOT-363 CASE



www.centrasemi.com

DESCRIPTION:

The CENTRAL SEMICONDUCTOR CMKT2207 consists of one 2222A NPN transistor and an individually isolated complementary 2907A PNP transistor, manufactured by the epitaxial planar process and epoxy molded in an SOT-363 surface mount package. This ULTRAmulti™ device has been designed for small signal general purpose and switching applications.

MARKING CODE: K70

MAXIMUM RATINGS: (T_A=25°C)

Collector-Base Voltage	V _{CBO}	75	60	V
Collector-Emitter Voltage	V _{CEO}	40	60	V
Emitter-Base Voltage	V _{EBO}	6.0	5.0	V
Continuous Collector Current	I _C	600		mA
Power Dissipation	P _D	350		mW
Operating and Storage Junction Temperature	T _J , T _{stg}	-65 to +150		°C
Thermal Resistance	θ _{JA}	357		°C/W

SYMBOL	NPN (Q1)	PNP (Q2)	UNITS
V _{CBO}	75	60	V
V _{CEO}	40	60	V
V _{EBO}	6.0	5.0	V
I _C	600		mA
P _D	350		mW
T _J , T _{stg}	-65 to +150		°C
θ _{JA}	357		°C/W

ELECTRICAL CHARACTERISTICS PER TRANSISTOR: (T_A=25°C unless otherwise noted)

SYMBOL	TEST CONDITIONS	NPN (Q1)		PNP (Q2)		UNITS
		MIN	MAX	MIN	MAX	
I _{CBO}	V _{CB} =60V	-	10	-	-	nA
I _{CBO}	V _{CB} =50V	-	-	-	10	nA
I _{CBO}	V _{CB} =60V, T _A =125°C	-	10	-	-	μA
I _{CBO}	V _{CB} =50V, T _A =125°C	-	-	-	10	μA
I _{EBO}	V _{EB} =3.0V	-	10	-	-	nA
I _{CEV}	V _{CE} =60V, V _{EB(OFF)} =3.0V	-	10	-	-	nA
I _{CEV}	V _{CE} =30V, V _{EB(OFF)} =500mV	-	-	-	50	nA
BV _{CBO}	I _C =10μA	75	-	60	-	V
BV _{CEO}	I _C =10mA	40	-	60	-	V
BV _{EBO}	I _E =10μA	6.0	-	5.0	-	V
V _{CE(SAT)}	I _C =150mA, I _B =15mA	-	0.3	-	0.4	V
V _{CE(SAT)}	I _C =500mA, I _B =50mA	-	1.0	-	1.6	V
V _{BE(SAT)}	I _C =150mA, I _B =15mA	0.6	1.2	-	1.3	V
V _{BE(SAT)}	I _C =500mA, I _B =50mA	-	2.0	-	2.6	V
h _{FE}	V _{CE} =10V, I _C =0.1mA	35	-	75	-	
h _{FE}	V _{CE} =10V, I _C =1.0mA	50	-	100	-	
h _{FE}	V _{CE} =10V, I _C =10mA	75	-	100	-	
h _{FE}	V _{CE} =10V, I _C =150mA	100	300	100	300	
h _{FE}	V _{CE} =1.0V, I _C =150mA	50	-	-	-	
h _{FE}	V _{CE} =10V, I _C =500mA	40	-	50	-	
f _T	V _{CE} =20V, I _C =20mA, f=100MHz	300	-	-	-	MHz
f _T	V _{CE} =20V, I _C =50mA, f=100MHz	-	-	200	-	MHz
C _{ob}	V _{CB} =10V, I _E =0, f=1.0MHz	-	8.0	-	8.0	pF
C _{ib}	V _{EB} =0.5V, I _C =0, f=1.0MHz	-	25	-	-	pF

R5 (26-January 2018)

CMKT2207

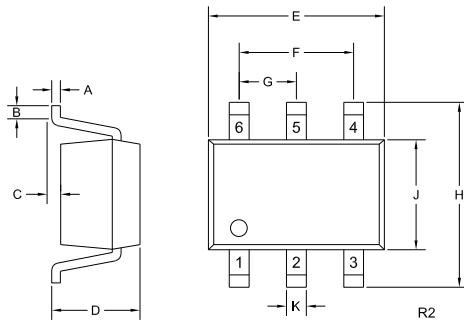
**SURFACE MOUNT
COMPLEMENTARY SILICON
TRANSISTORS**



ELECTRICAL CHARACTERISTICS PER TRANSISTOR - Continued: (T_A=25°C)

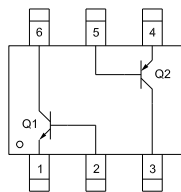
SYMBOL	TEST CONDITIONS	NPN (Q1)		PNP (Q2)		UNITS
		MIN	MAX	MIN	MAX	
C _{ib}	V _{EB} =2.0V, I _C =0, f=1.0MHz	-	-	-	30	pF
h _{ie}	V _{CE} =10V, I _C =1.0mA, f=1.0kHz	2.0	8.0	-	-	kΩ
h _{ie}	V _{CE} =10V, I _C =10mA, f=1.0kHz	0.25	1.25	-	-	kΩ
h _{re}	V _{CE} =10V, I _C =1.0mA, f=1.0kHz	-	8.0	-	-	x10 ⁻⁴
h _{re}	V _{CE} =10V, I _C =10mA, f=1.0kHz	-	4.0	-	-	x10 ⁻⁴
h _{fe}	V _{CE} =10V, I _C =1.0mA, f=1.0kHz	50	300	-	-	
h _{fe}	V _{CE} =10V, I _C =10mA, f=1.0kHz	75	375	-	-	
h _{oe}	V _{CE} =10V, I _C =1.0mA, f=1.0kHz	5.0	35	-	-	μS
h _{oe}	V _{CE} =10V, I _C =10mA, f=1.0kHz	25	200	-	-	μS
rb _{C_C}	V _{CB} =10V, I _E =20mA, f=31.8MHz	-	150	-	-	ps
NF	V _{CE} =10V, I _C =100μA, R _S =1.0kΩ, f=1.0kHz	-	4.0	-	-	dB
t _{on}	V _{CC} =30V, V _{BE} =0.5V, I _C =150mA, I _{B1} =15mA	-	-	-	45	ns
t _d	V _{CC} =30V, V _{BE} =0.5V, I _C =150mA, I _{B1} =15mA	-	10	-	10	ns
t _r	V _{CC} =30V, V _{BE} =0.5V, I _C =150mA, I _{B1} =15mA	-	25	-	40	ns
t _{off}	V _{CC} =6.0V, I _C =150mA, I _{B1} =I _{B2} =15mA	-	-	-	100	ns
t _s	V _{CC} =30V, I _C =150mA, I _{B1} =I _{B2} =15mA	-	225	-	-	ns
t _s	V _{CC} =6.0V, I _C =150mA, I _{B1} =I _{B2} =15mA	-	-	-	80	ns
t _f	V _{CC} =30V, I _C =150mA, I _{B1} =I _{B2} =15mA	-	60	-	-	ns
t _f	V _{CC} =6.0V, I _C =150mA, I _{B1} =I _{B2} =15mA	-	-	-	30	ns

SOT-363 CASE - MECHANICAL OUTLINE



SYMBOL	DIMENSIONS			
	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)



LEAD CODE:

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

MARKING CODE: K70

R5 (26-January 2018)

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

Corporate Headquarters & Customer Support Team

Central Semiconductor Corp.
145 Adams Avenue
Hauppauge, NY 11788 USA
Main Tel: (631) 435-1110
Main Fax: (631) 435-1824
Support Team Fax: (631) 435-3388
www.centalsemi.com

Worldwide Field Representatives:
www.centalsemi.com/wwreps

Worldwide Distributors:
www.centalsemi.com/wwdistributors

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