CMPT4401 NPN
CMPT4403 PNP

SURFACE MOUNT
COMPLEMENTARY
SILICON TRANSISTORS



SOT-23 CASE

Central Semiconductor Corp.

www.centralsemi.com

DESCRIPTION:

The CENTRAL SEMICONDUCTOR CMPT4401 and CMPT4403 are complementary silicon transistors manufactured by the epitaxial planar process, epoxy molded in a surface mount package, designed for small signal general purpose amplifier and switching applications.

MARKING CODES: CMPT4401: C2X
CMPT4403: C2T

MAXIMUM RATINGS: (T_A=25°C)	**SYMBOL**	**CMPT4401**	**CMPT4403**	**UNITS**
Collector-Base Voltage	V_{CBO}	60	40	V
Collector-Emitter Voltage	V_{CEO}	40	40	V
Emitter-Base Voltage	V_{EBO}	6.0	5.0	V
Continuous Collector Current	I_C	600		mA
Power Dissipation	P_D	225		mW
Operating and Storage Junction Temperature	T_J, T_{stg}	-65 to +150		°C
Thermal Resistance	Θ_{JA}	556		°C/W

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

		CMPT4401		**CMPT4403**		
SYMBOL	**TEST CONDITIONS**	**MIN**	**MAX**	**MIN**	**MAX**	**UNITS**
I_{CEV}	V_{CE}=35V, V_{EB}=0.4V	-	0.1	-	0.1	μA
I_{BEV}	V_{CE}=35V, V_{EB}=0.4V	-	0.1	-	0.1	μA
BV_{CBO}	I_C=100μA	60	-	40	-	V
BV_{CEO}	I_C=1.0mA	40	-	40	-	V
BV_{EBO}	I_E=100μA	6.0	-	5.0	-	V
$V_{CE(SAT)}$	I_C=150mA, I_B=15mA	-	0.40	-	0.40	V
$V_{CE(SAT)}$	I_C=500mA, I_B=50mA	-	0.75	-	0.75	V
$V_{BE(SAT)}$	I_C=150mA, I_B=15mA	0.75	0.95	0.75	0.95	V
$V_{BE(SAT)}$	I_C=500mA, I_B=50mA	-	1.2	-	1.3	V
h_{FE}	V_{CE}=1.0V, I_C=0.1mA	20	-	30	-	
h_{FE}	V_{CE}=1.0V, I_C=1.0mA	40	-	60	-	
h_{FE}	V_{CE}=1.0V, I_C=10mA	80	-	100	-	
h_{FE}	V_{CE}=1.0V, I_C=150mA	100	300	-	-	
h_{FE}	V_{CE}=2.0V, I_C=150mA	-	-	100	300	
h_{FE}	V_{CE}=2.0V, I_C=500mA	40	-	20	-	
f_T	V_{CE}=10V, I_C=20mA, f=100MHz	250	-	200	-	MHz
C_{ob}	V_{CB}=5.0V, I_E=0, f=1.0MHz	-	6.5	-	8.5	pF
C_{ib}	V_{BE}=0.5V, I_C=0, f=1.0MHz	-	30	-	30	pF

R7 (29-June 2021)

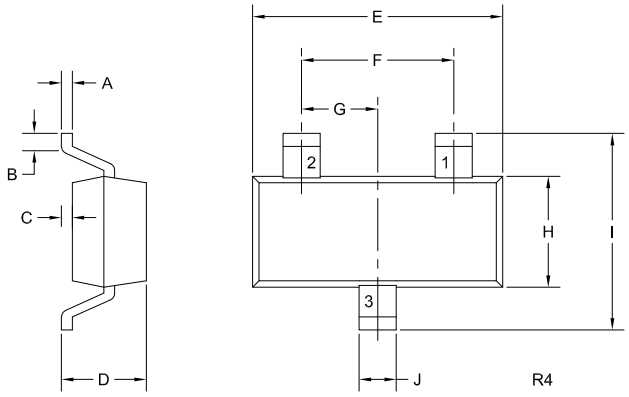
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ELECTRICAL CHARACTERISTICS - Continued: (T_A=25°C unless otherwise noted)

		CMPT4401		CMPT4403		
SYMBOL	**TEST CONDITIONS**	**MIN**	**MAX**	**MIN**	**MAX**	**UNITS**
h_{ie}	V_{CE}=10V, I_C=1.0mA, f=1.0kHz	1.0	15	1.5	15	kΩ
h_{re}	V_{CE}=10V, I_C=1.0mA, f=1.0kHz	0.1	8.0	0.1	8.0	$x10^{-4}$
h_{fe}	V_{CE}=10V, I_C=1.0mA, f=1.0kHz	40	500	60	500	
h_{oe}	V_{CE}=10V, I_C=1.0mA, f=1.0kHz	1.0	30	1.0	100	µS
t_d	V_{CC}=30V, V_{BE}=2.0V, I_C=150mA, I_{B1}=15mA	-	15	-	15	ns
t_r	V_{CC}=30V, V_{BE}=2.0V, I_C=150mA, I_{B1}=15mA	-	20	-	20	ns
t_s	V_{CC}=30V, I_C=150mA, I_{B1}=I_{B2}=15mA	-	225	-	225	ns
t_f	V_{CC}=30V, I_C=150mA, I_{B1}=I_{B2}=15mA	-	30	-	50	ns

SOT-23 CASE - MECHANICAL OUTLINE



DIMENSIONS				
	INCHES		MILLIMETERS	
SYMBOL	MIN	MAX	MIN	MAX
A	0.003	0.007	0.08	0.18
B	0.006	-	0.15	-
C	-	0.005	-	0.13
D	0.035	0.044	0.89	1.12
E	0.110	0.120	2.80	3.05
F	0.075		1.90	
G	0.037		0.95	
H	0.047	0.055	1.19	1.40
I	0.083	0.104	2.10	2.64
J	0.014	0.020	0.35	0.50

SOT-23 (REV: R4)

LEAD CODE:
1) Base
2) Emitter
3) Collector

MARKING CODES:
CMPT4401: C2X
CMPT4403: C2T

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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