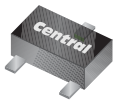
CMUT5401E

ENHANCED SPECIFICATION
SURFACE MOUNT
PNP SILICON TRANSISTOR

ULTRAmini™



ENHANCED E SPECIFICATION

SOT-523 CASE

Central Semiconductor Corp.

www.centralsemi.com

DESCRIPTION:

The CENTRAL SEMICONDUCTOR CMUT5401E is a PNP Silicon Transistor, packaged in an SOT-523 case, designed for general purpose amplifier applications requiring high breakdown voltage and small space saving packaging.

MARKING CODE: 4C5

APPLICATIONS:

- General purpose switching and amplification
- Telephone applications

FEATURES:

- High Collector Breakdown Voltage 250V
- Low Leakage Current 50nA Max
- Low Saturation Voltage 150mV Max @ 50mA
- Complementary Device CMUT5551E
- SOT-523 Surface Mount Package

MAXIMUM RATINGS: (T_A=25°C)	**SYMBOL**		**UNITS**
♦ **Collector-Base Voltage**	**V_{CBO}**	**250**	**V**
♦ **Collector-Emitter Voltage**	**V_{CEO}**	**220**	**V**
♦ **Emitter-Base Voltage**	**V_{EBO}**	**7.0**	**V**
Continuous Collector Current	I_C	600	mA
Power Dissipation	P_D	250	mW
Operating and Storage Junction Temperature	T_J, T_{stg}	-65 to +150	°C
Thermal Resistance	Θ_{JA}	500	°C/W

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

SYMBOL	**TEST CONDITIONS**	**MIN**	**MAX**	**UNITS**
I_{CBO}	V_{CB}=120V		50	nA
I_{CBO}	V_{CB}=120V, T_A=100°C		50	µA
I_{EBO}	V_{EB}=3.0V		50	nA
♦ **BV_{CBO}**	**I_C=100µA**	**250**		**V**
♦ **BV_{CEO}**	**I_C=1.0mA**	**220**		**V**
♦ **BV_{EBO}**	**I_E=10µA**	**7.0**		**V**
♦ **$V_{CE(SAT)}$**	**I_C=10mA, I_B=1.0mA**		**100**	**mV**
♦ **$V_{CE(SAT)}$**	**I_C=50mA, I_B=5.0mA**		**150**	**mV**
$V_{BE(SAT)}$	I_C=10mA, I_B=1.0mA		1.00	V
$V_{BE(SAT)}$	I_C=50mA, I_B=5.0mA		1.00	V

♦ Enhanced Specification

R1 (9-February 2010)

CMUT5401E

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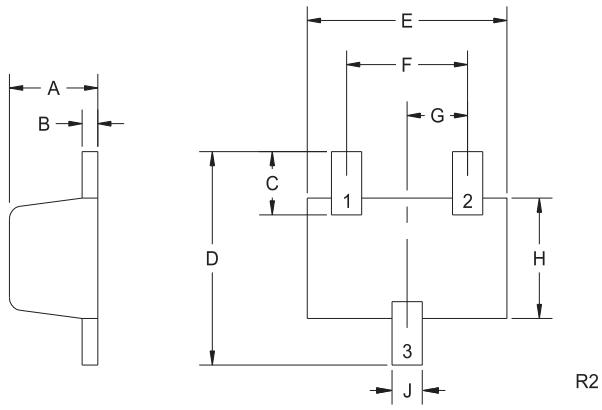
ELECTRICAL CHARACTERISTICS - Continued: (T_A=25°C unless otherwise noted)

	SYMBOL	TEST CONDITIONS	MIN	MAX	UNITS
♦	**h_{FE}**	**V_{CE}=5.0V, I_C=1.0mA**	**100**		
♦	**h_{FE}**	**V_{CE}=5.0V, I_C=10mA**	**100**	**300**	
♦	**h_{FE}**	**V_{CE}=5.0V, I_C=50mA**	**75**		
♦	**h_{FE}**	**V_{CE}=10V, I_C=150mA**	**25**		
	f_T	V_{CE}=10V, I_C=10mA, f=100MHz	100	300	MHz
	C_{ob}	V_{CB}=10V, I_E=0, f=1.0MHz		6.0	pF
	h_{fe}	V_{CE}=10V, I_C=1.0mA, f=1.0kHz	40	200	
	NF	V_{CE}=5.0V, I_C=200μA, R_S=10Ω, f=10Hz to 15.7kHz		8.0	dB

♦ Enhanced Specification

SOT-523 CASE - MECHANICAL OUTLINE



R2

(Bottom View)

DIMENSIONS				
	INCHES		MILLIMETERS	
SYMBOL	MIN	MAX	MIN	MAX
A	0.023	0.031	0.58	0.78
B	0.002	0.008	0.04	0.20
C	0.013	0.021	0.34	0.54
D	0.059	0.067	1.50	1.70
E	0.059	0.067	1.50	1.70
F	0.035	0.043	0.90	1.10
G	0.020		0.50	
H	0.031	0.039	0.78	0.98
J	0.010	0.014	0.25	0.35

SOT-523 (REV: R2)

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

MARKING CODE: 4C5

R1 (9-February 2010)