CMPT5551E

ENHANCED SPECIFICATION
SURFACE MOUNT
NPN SILICON TRANSISTOR

ENHANCED E SPECIFICATION

SOT-23 CASE

Central Semiconductor Corp.

www.centralsemi.com

DESCRIPTION:

The CENTRAL SEMICONDUCTOR CMPT5551E is an NPN Silicon Transistor, packaged in an SOT-23 case, designed for general purpose amplifier applications requiring high breakdown voltage and small space saving packaging.

MARKING CODE: C555

APPLICATIONS:

- General purpose switching and amplification
- Telephone applications

FEATURES:

- High Collector Breakdown Voltage 250V
- Low Leakage Current 50nA Max
- Low Saturation Voltage 100mV Max @ 50mA
- Complementary Device CMPT5401E
- SOT-23 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}	6.0	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

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}=4.0V		50	nA
♦ **BV_{CBO}**	**I_C=100µA**	**250**		**V**
♦ **BV_{CEO}**	**I_C=1.0mA**	**220**		**V**
BV_{EBO}	I_E=10µA	6.0		V
♦ **$V_{CE(SAT)}$**	**I_C=10mA, I_B=1.0mA**		**75**	**mV**
♦ **$V_{CE(SAT)}$**	**I_C=50mA, I_B=5.0mA**		**100**	**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
♦ **h_{FE}**	**V_{CE}=5.0V, I_C=1.0mA**	**120**		
♦ **h_{FE}**	**V_{CE}=5.0V, I_C=10mA**	**120**	**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

♦ Enhanced specification

R1 (1-February 2010)

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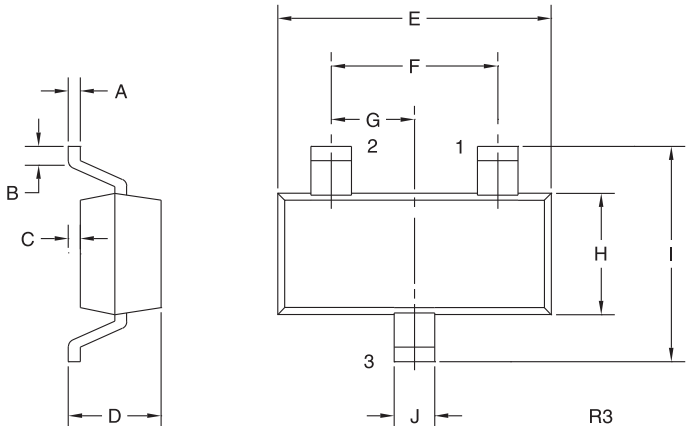
ELECTRICAL CHARACTERISTICS - Continued: (T_A=25°C unless otherwise noted)

SYMBOL	TEST CONDITIONS	MIN	MAX	UNITS
C_{ob}	V_{CB}=10V, I_E=0, f=1.0MHz		6.0	pF
C_{ib}	V_{EB}=0.5V, I_C=0, f=1.0MHz		20	pF
h_{fe}	V_{CE}=10V, I_C=1.0mA, f=1.0kHz	50	200	
NF	V_{CE}=5.0V, I_C=200μA, R_S=10Ω, f=10Hz to 15.7kHz		8.0	dB

SOT-23 CASE - MECHANICAL OUTLINE



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

MARKING CODE: C555

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	0.043	0.89	1.09
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	0.098	2.10	2.49
J	0.014	0.020	0.35	0.50

SOT-23 (REV: R3)

R1 (1-February 2010)