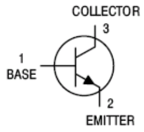
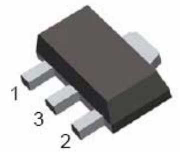
NPN Silicon Epitaxial Planar Transistor **CXT5551**

FEATURES

- Switching and amplification in high voltage.
- Low current(max. 600mA)
- High voltage (max. 180V)

Lead-free





SOT-89

APPLICATIONS

- High voltage amplifier application.

ORDERING INFORMATION

Type No.	Marking	Package Code
CXT5551	1G6	SOT-89

MAXIMUM RATING @ Ta=25℃ unless otherwise specified

Symbol	**Parameter**	**Value**	**Units**
V_{CBO}	Collector-Base Voltage	180	V
V_{CEO}	Collector-Emitter Voltage	160	V
V_{EBO}	Emitter-Base Voltage	6	V
I_C	Collector Current -Continuous	600	mA
P_C	Collector Dissipation	0.625	W
$R_{\theta JA}$	Thermal resistance	250	℃/W
$T_{j,}T_{stg}$	Junction and Storage Temperature	-65 to +150	℃

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ELECTRICAL CHARACTERISTICS @ Ta=25℃ unless otherwise specified

Parameter	Symbol	Test conditions	MIN	MAX	UNIT
Collector-base breakdown voltage	$V_{(BR)CBO}$	I_C=100μA,I_E=0	180		V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	I_C=1.0mA,I_B=0	160		V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	I_E=10μA,I_C=0	6		V
Collector cut-off current	I_{CBO}	V_{CB}=120V,I_E=0		50	nA
Emitter cut-off current	I_{EBO}	V_{EB}=4V,I_C=0		50	nA
DC current gain	h_{FE}	V_{CE} = 5V; I_C= 1mA V_{CE} = 5V;I_C = 10mA V_{CE} = 5V;I_C = 50mA	80 100 30	300	
Collector-emitter saturation voltage	$V_{CE(sat)}$	I_C=10mA, I_B= 1mA I_C=50mA, I_B= 5mA		0.15 0.20	V
Base-emitter saturation voltage	$V_{BE(sat)}$	I_C=10mA, I_B= 1mA I_C=50mA, I_B= 5mA		1.0 1.0	V
Transition frequency	f_T	V_{CE}=10V, I_C= 10mA, f=100MHz	100	300	MHz
Collector output capacitance	C_{ob}	V_{CB}=10V,I_E=0,f=1MHz		6.0	pF
Small-signal current gain	h_{fe}	I_C=1mA,V_{CE}=10V, f=1.0kHz	50	200	
Noise Figure	NF	I_C=200uA,V_{CE}=5V, f=10-15.7kHz,R_S=1.0Ω		8	dB

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TYPICAL CHARACTERISTICS @ Ta=25℃ unless otherwise specified

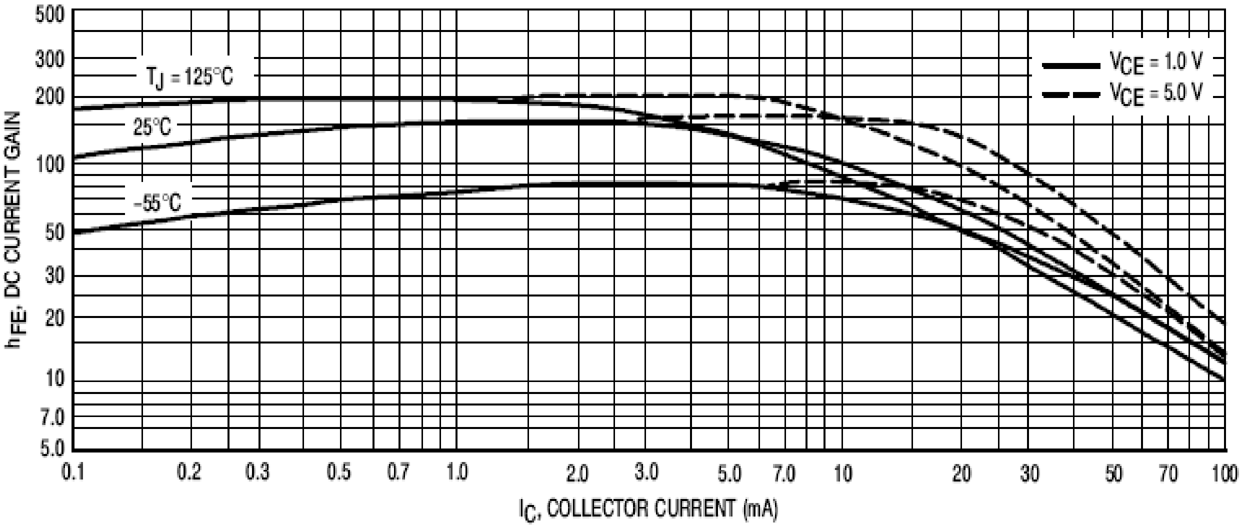

Figure 1. DC Current Gain

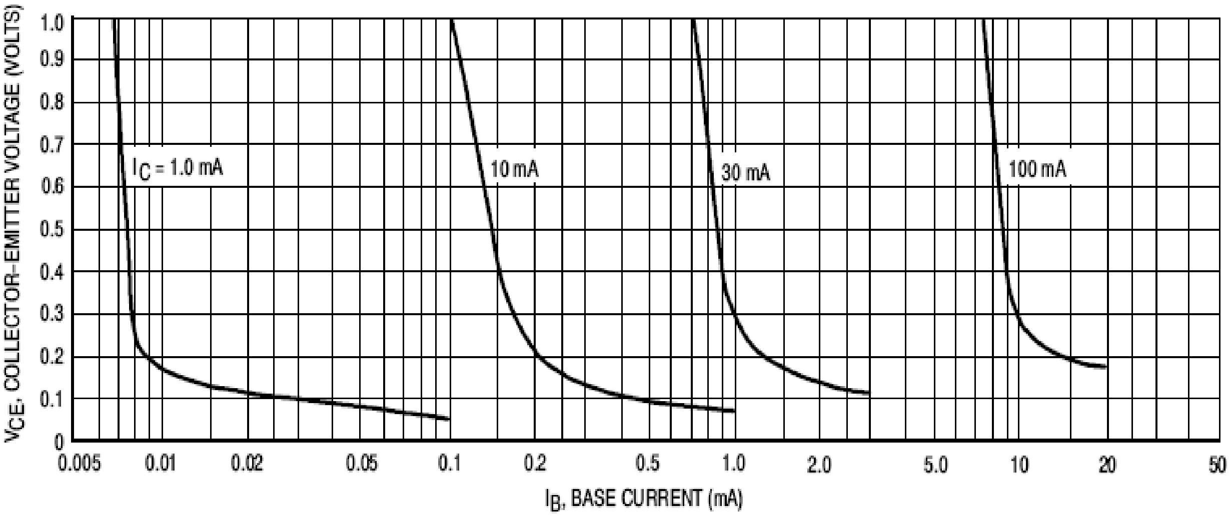

Figure 2. Collector Saturation Region

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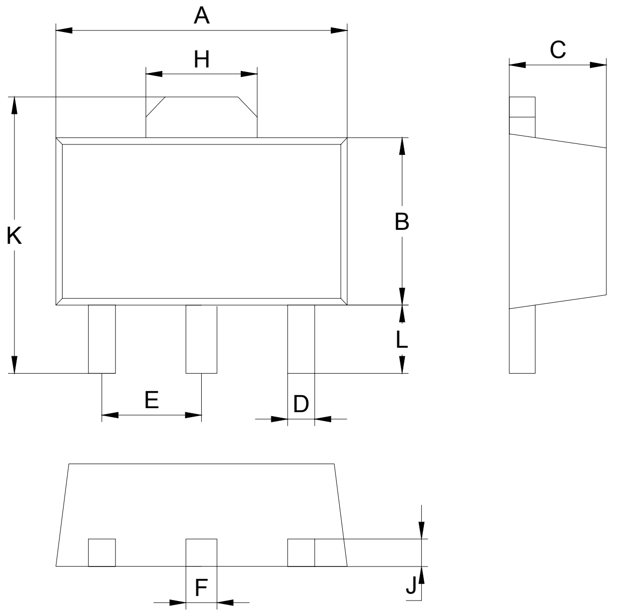
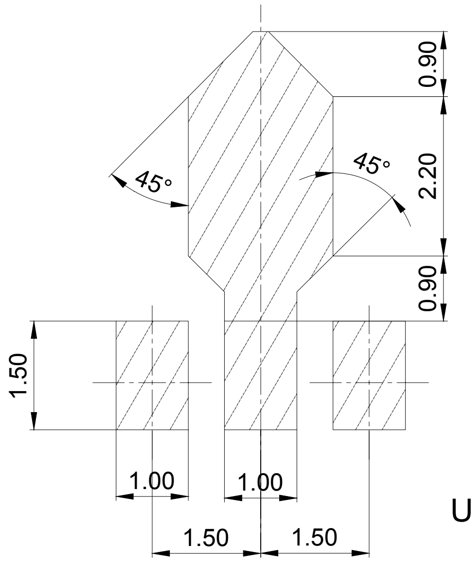
PACKAGE OUTLINE

Plastic surface mounted package SOT-89



SOT-89		
Dim	Min	Max
A	4.30	4.70
B	2.25	2.65
C	1.50 Typical	
D	0.40 Typical	
E	1.40	1.60
F	0.48 Typical	
H	1.60	1.80
J	0.40 Typical	
L	0.90	1.10
K	3.95	4.35
All Dimensions in mm		

SOLDERING FOOTPRINT



Unit:mm

PACKAGE INFORMATION

Device	Package	Shipping
CXT5551	SOT-89	1000/Tape&Reel