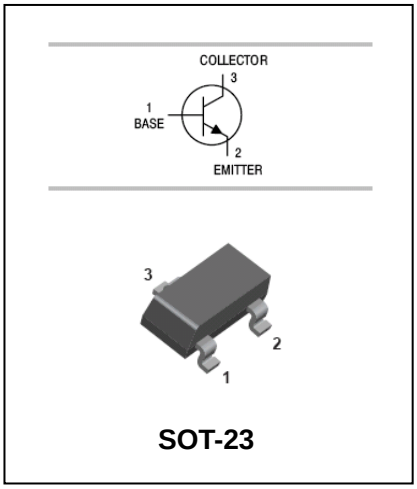
NPN General Purpose Amplifier MMBT5550

FEATURES

- Epitaxial planar die construction.
- Ultra-small surface mount package.

Lead-free



SOT-23

APPLICATIONS

- High voltage transistors.
- General purpose application.

ORDERING INFORMATION

Type No.	Marking	Package Code
MMBT5550	M1F	SOT-23

MAXIMUM RATING @ Ta=25℃ unless otherwise specified

Symbol	**Parameter**	**Value**	**Unit**
V_{CBO}	Collector-Base Voltage	160	V
V_{CEO}	Collector-Emitter Voltage	140	V
V_{EBO}	Emitter-Base Voltage	6	V
I_C	Collector Current -Continuous	600	mA
P_C	Collector Dissipation	300	mW
$R_{\theta JA}$	Thermal resistance,Junction to ambient	417	℃/W
T_j, T_{stg}	Junction and Storage Temperature	-55 to+150	℃

NPN General Purpose Amplifier MMBT5550

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	160		V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	I_C=1.0mA I_B=0	140		V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	I_E=10μA I_C=0	6		V
Collector cut-off current	I_{CBO}	V_{CB}=100V I_E=0		100	nA
Emitter cut-off current	I_{EBO}	V_{EB}=4V I_E=0		50	nA
DC current gain	h_{FE}	V_{CE}=5.0V I_C=1.0mA V_{CE}=5.0V I_C=10mA V_{CE}=5.0V I_C=50mA	60 60 20	 250 	
Collector-emitter saturation voltage	$V_{CE(sat)}$	I_C=10mA I_B=1.0mA I_C=50mA I_B=5.0mA		0.15 0.25	V
Base-emitter saturation voltage	$V_{BE(sat)}$	I_C=10mA I_B=1.0mA I_C=50mA I_B=5.0mA		1.0 1.2	V

TYPICAL CHARACTERISTICS @ Ta=25℃ unless otherwise specified

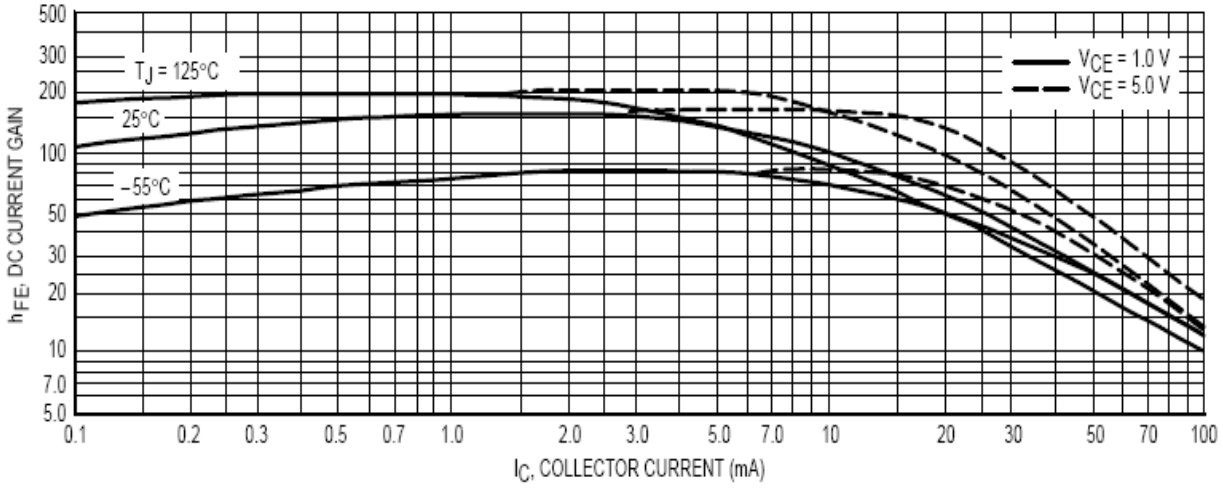


Figure 1. DC Current Gain

NPN General Purpose Amplifier MMBT5550

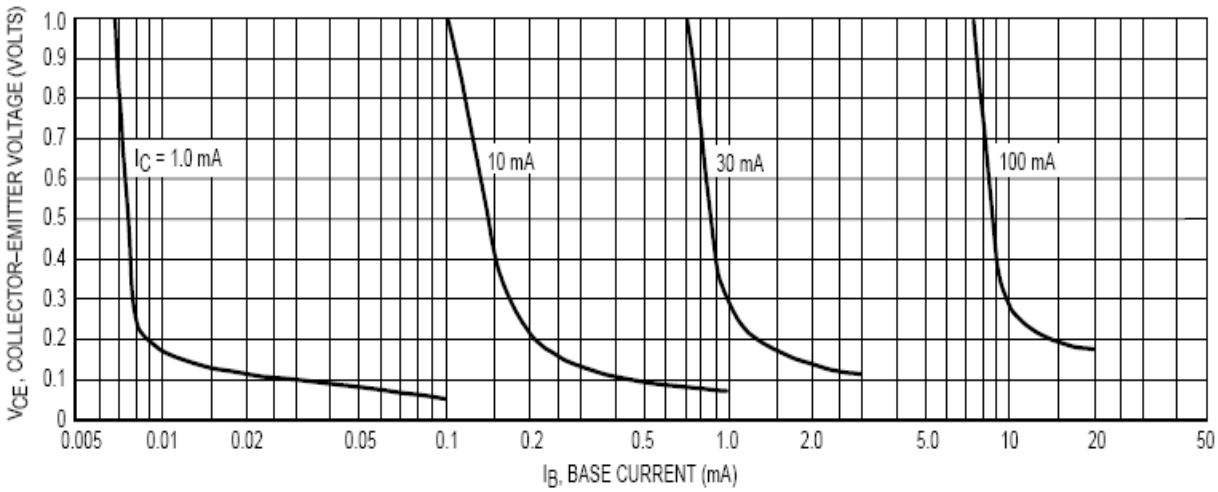


Figure 2. Collector Saturation Region

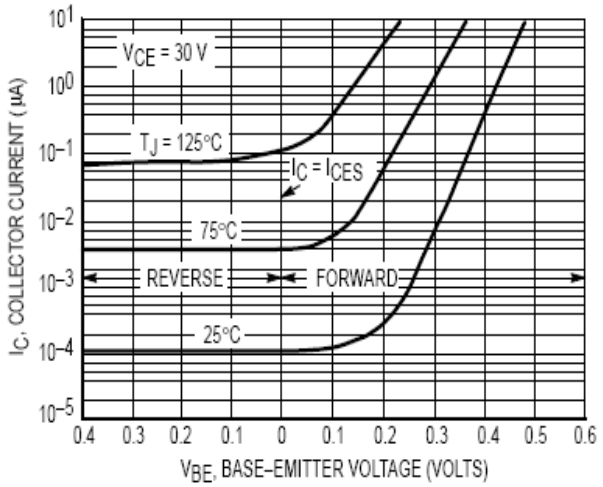


Figure 3. Collector Cut–Off Region

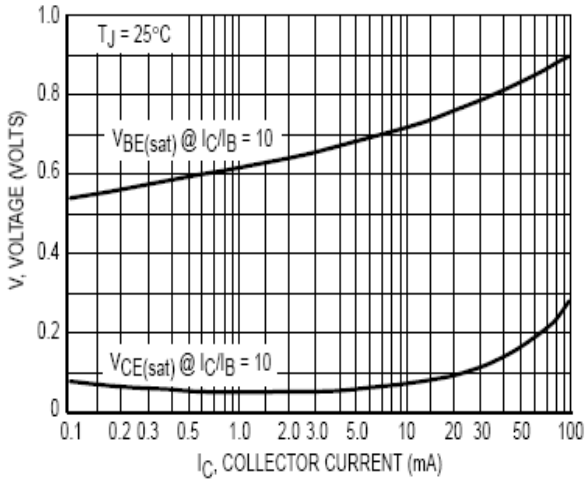
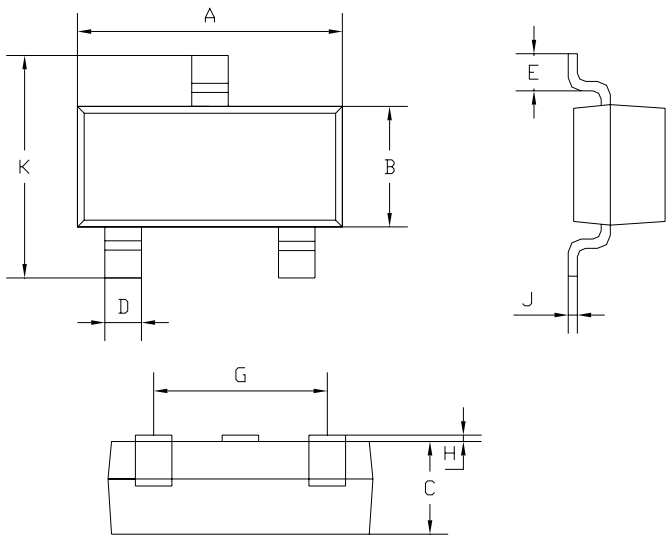


Figure 4. "On" Voltages

NPN General Purpose Amplifier MMBT5550

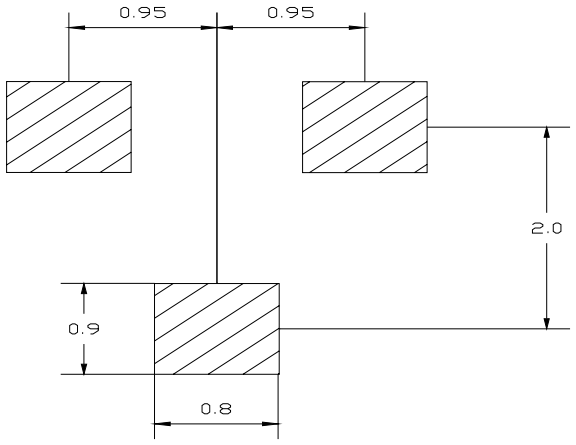
PACKAGE OUTLINE

Plastic surface mounted package SOT-23



SOT-23		
Dim	Min	Max
A	2.85	2.95
B	1.25	1.35
C	1.0Typical	
D	0.37	0.43
E	0.35	0.48
G	1.85	1.95
H	0.02	0.1
J	0.1Typical	
K	2.35	2.45
All Dimensions in mm		

SOLDERING FOOTPRINT



Unit：mm

PACKAGE INFORMATION

Device	Package	Shipping
MMBT5550	SOT-23	3000/Tape&Reel