

RoHS Compliant Product  
A suffix of "-C" specifies halogen & lead-free

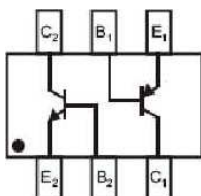
**SOT-363**

**FEATURES**

- DUAL TRANSISTOR (NPN+PNP)
- Epitaxial Planar Die Construction
- Ideal for low Power Amplification and Switching
- One 5551(NPN), one 5401(PNP)

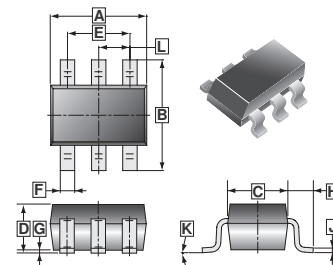
**MARKING : KNM**

**EQUIVALENT CIRCUIT**



E1, B1, C1 = PNP 5401

E2, B2, C2 = NPN 5551



REF.	Millimeter		REF.	Millimeter	
	Min.	Max.		Min.	Max.
A	2.00	2.20	G	0.100	REF.
B	2.15	2.45	H	0.525	REF.
C	1.15	1.35	J	0.08	0.15
D	0.90	1.10	K	8°	
E	1.20	1.40	L	0.650 TYP.	
F	0.15	0.35			

**ABSOLUTE MAXIMUM RATINGS at Ta = 25°C**

PARAMETER	SYMBOL	NPN RATINGS	PNP RATINGS	UNIT
Collector-Base Voltage	$V_{CBO}$	180	-160	V
Collector-Emitter Voltage	$V_{CEO}$	160	-150	V
Emitter-Base Voltage	$V_{EBO}$	6	-5	V
Collector Current -Continuous	$I_C$	0.2	-0.2	A
Collector Power Dissipation	$P_C$	0.2	0.2	W
Thermal Resistance. Junction to Ambient Air	$R_{\theta JA}$	625		°C/W
Junction & Storage temperature	$T_J, T_{STG}$	150, -55~150		°C

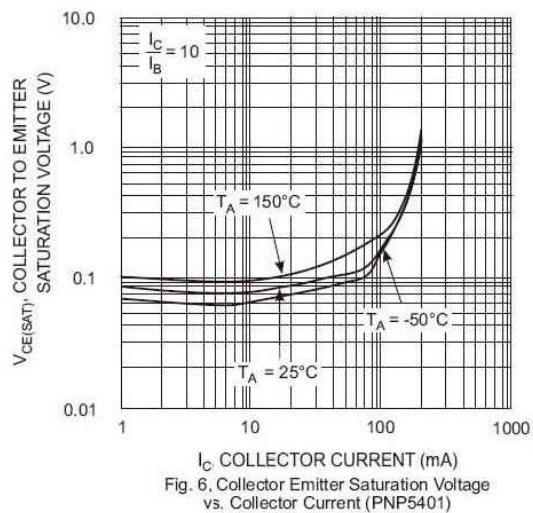
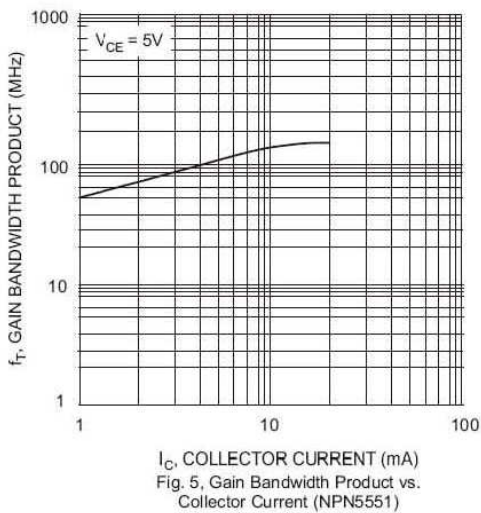
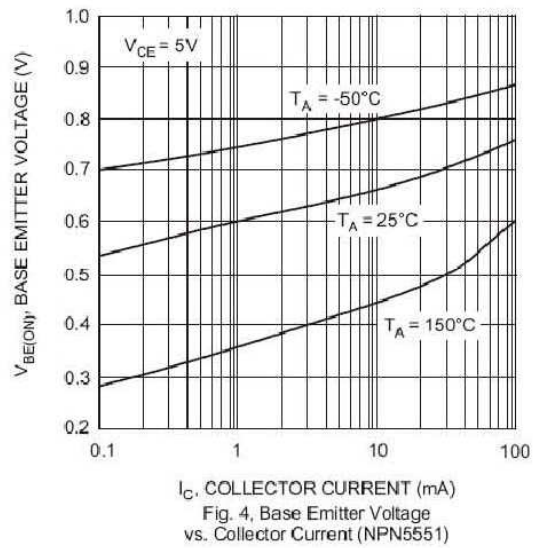
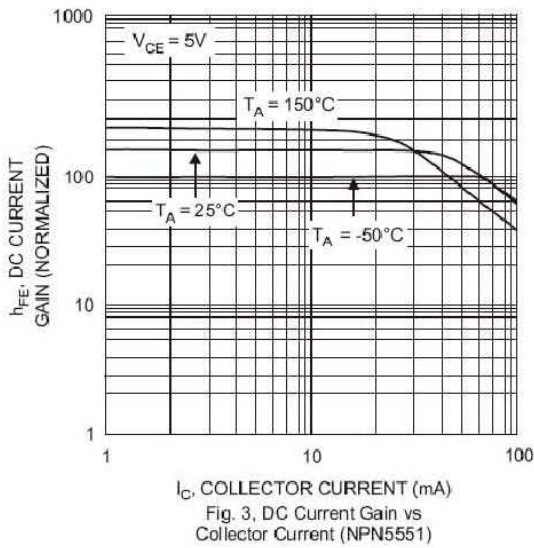
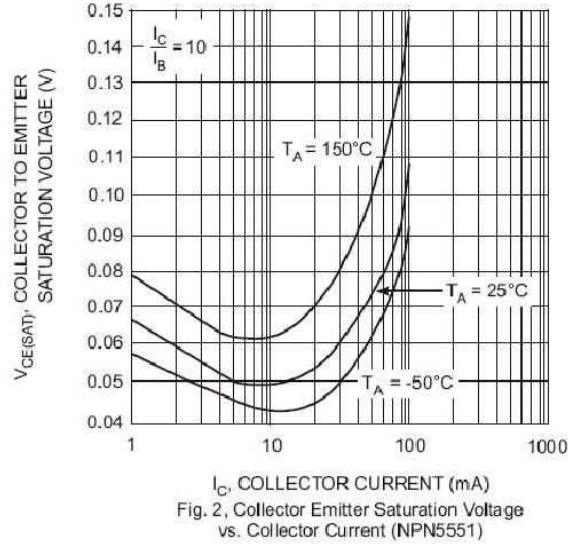
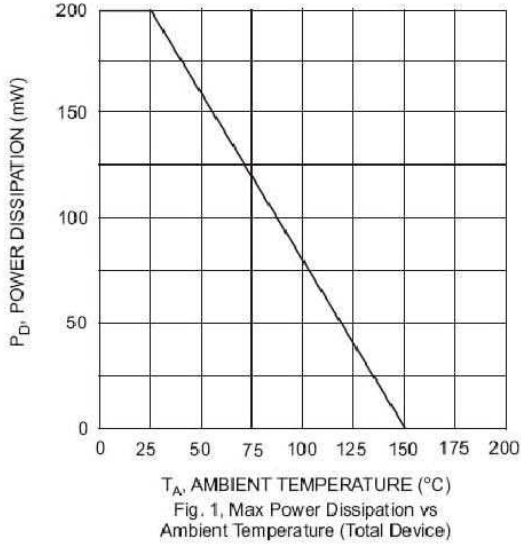
**NPN5551 ELECTRICAL CHARACTERISTICS at Ta = 25°C**

PARAMETER	SYMBOL	MIN.	MAX.	UNIT	TEST CONDITIONS
Collector-base breakdown voltage	$V_{(BR)CBO}$	180	-	V	$I_C=100\mu A, I_E=0$
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	160	-	V	$I_C=1mA, I_B=0$
Emitter-base breakdown voltage	$V_{(BR)EBO}$	6	-	V	$I_E=10\mu A, I_C=0$
Collector cut-off current	$I_{CBO}$	-	0.05	$\mu A$	$V_{CB}=120V, I_E=0$
Emitter cut-off current	$I_{EBO}$	-	0.05	$\mu A$	$V_{EB}=4V, I_C=0$
DC current gain	$h_{FE(1)}$	80	-		$V_{CE}=5V, I_C=1mA$
	$h_{FE(2)}$	80	250		$V_{CE}=5V, I_C=10mA$
	$h_{FE(3)}$	30	-		$V_{CE}=5V, I_C=50mA$
Collector-emitter saturation voltage	$V_{CE(sat)1}$	-	0.15	V	$I_C=10mA, I_B=1mA$
	$V_{CE(sat)2}$	-	0.2	V	$I_C=50mA, I_B=5mA$
Base-emitter saturation voltage	$V_{BE(sat)1}$	-	1	V	$I_C=10mA, I_B=1mA$
	$V_{BE(sat)2}$	-	1	V	$I_C=50mA, I_B=5mA$
Transition frequency	$f_T$	100	300	MHz	$V_{CE}=10V, I_C=10mA, f=100MHz$
Output Capacitance	$C_{OB}$	-	6.0	pF	$V_{CB}=10V, f=1.0MHz, I_E=0$
Noise Figure	NF	-	8.0	dB	$V_{CE}=5.0V, I_C=200\mu A, R_S=1.0k\Omega, f=1.0kHz$

**PNP5401 ELECTRICAL CHARACTERISTICS at Ta = 25°C**

PARAMETER	SYMBOL	MIN.	MAX.	UNIT	TEST CONDITIONS
Collector-base breakdown voltage	$V_{(BR)CBO}$	-160	-	V	$I_C=-100\mu A, I_E=0$
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	-150	-	V	$I_C=-1mA, I_B=0$
Emitter-base breakdown voltage	$V_{(BR)EBO}$	-5	-	V	$I_E=-10\mu A, I_C=0$
Collector cut-off current	$I_{CBO}$	-	-50	nA	$V_{CB}=-120V, I_E=0$
Emitter cut-off current	$I_{EBO}$	-	-50	nA	$V_{EB}=-3V, I_C=0$
DC current gain	$h_{FE(1)}$	50	-		$V_{CE}=-5V, I_C=-1mA$
	$h_{FE(2)}$	60	240		$V_{CE}=-5V, I_C=-10mA$
	$h_{FE(3)}$	50	-		$V_{CE}=-5V, I_C=-50mA$
Collector-emitter saturation voltage	$V_{CE(sat)1}$	-	-0.2	V	$I_C=-10mA, I_B=-1mA$
	$V_{CE(sat)2}$	-	-0.5	V	$I_C=-50mA, I_B=-5mA$
Base-emitter saturation voltage	$V_{BE(sat)1}$	-	-1	V	$I_C=-10mA, I_B=-1mA$
	$V_{BE(sat)2}$	-	-1	V	$I_C=-50mA, I_B=-5mA$
Transition frequency	$f_T$	100	300	MHz	$V_{CE}=-10V, I_C=-10mA, f=100MHz$
Output Capacitance	$C_{OB}$	-	6.0	pF	$V_{CB}=-10V, f=1.0MHz, I_E=0$
Noise Figure	NF	-	8.0	dB	$V_{CE}=-5.0V, I_C=-200\mu A, R_S=10\Omega, f=1.0kHz$

**CHARACTERISTIC CURVES**



**CHARACTERISTIC CURVES (cont'd)**

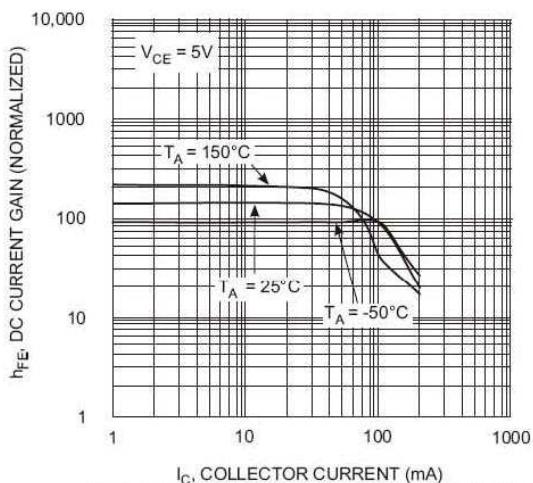


Fig. 7, DC Current Gain vs. Collector Current (PNP5401)

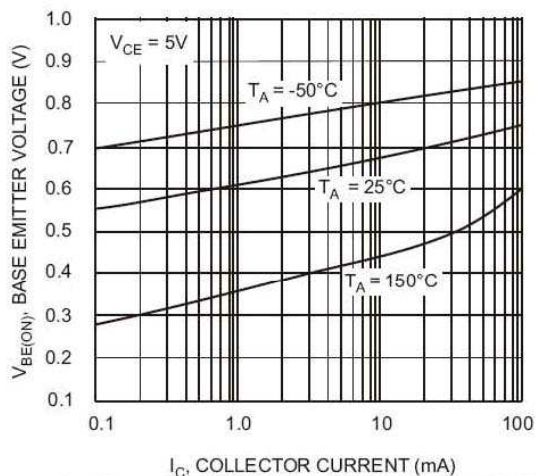


Fig. 8, Base Emitter Voltage vs. Collector Current (PNP5401)

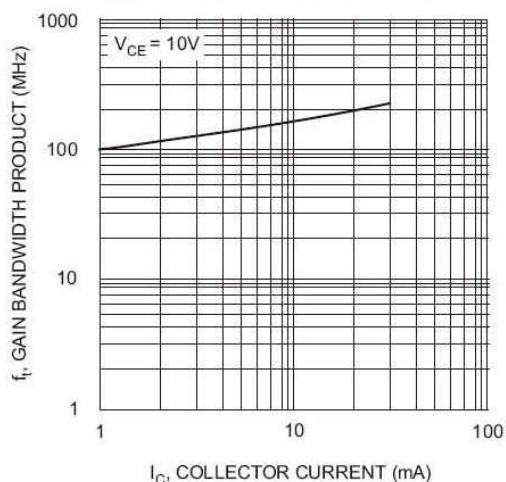


Fig. 9, Gain Bandwidth Product vs Collector Current (PNP5401)