CXT5401 TRANSISTOR (PNP)

1.BASE

2.COLLECTOR

3.EMITTER

SOT-89

FEATURE

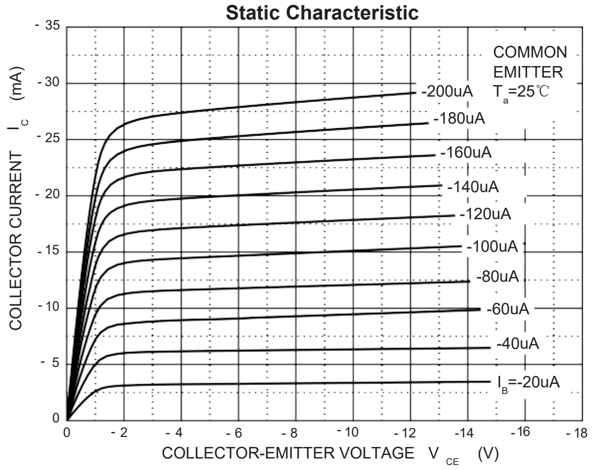
- **Switching and amplification in high voltage Applications such as telephony**
- **Low current(max. 500mA)**
- **High voltage(max.160v)**

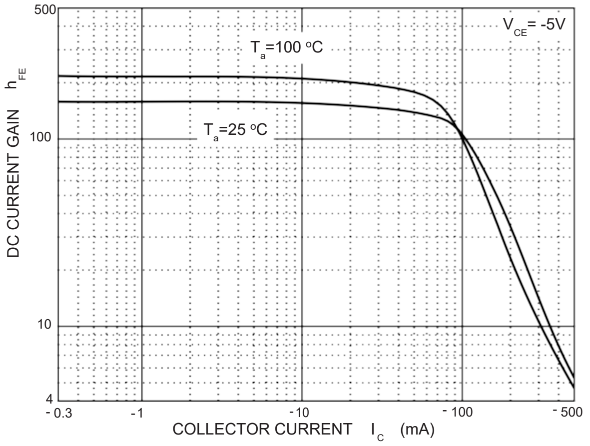
MAXIMUM RATINGS (T_a=25℃ unless otherwise noted)

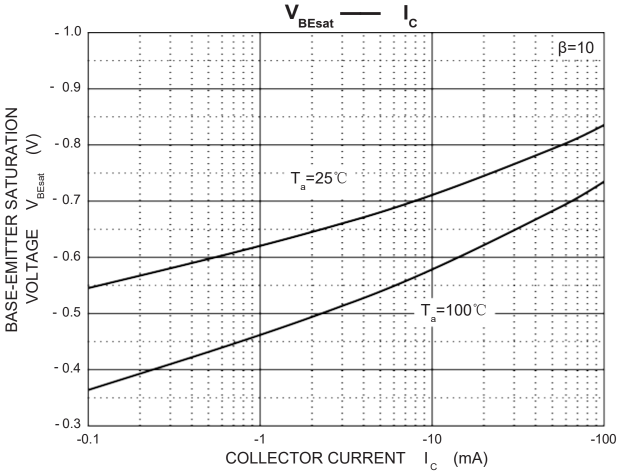
Symbol	Parameter	Value	Unit
V_{CBO}	Collector-Base Voltage	-160	V
V_{CEO}	Collector-Emitter Voltage	-150	V
V_{EBO}	Emitter-Base Voltage	-5	V
I_C	Collector Current -Continuous	-0.5	A
P_C	Collector Power Dissipation	0.5	W
$R_{\theta JA}$	Thermal Resistance From Junction To Ambient	250	℃/W
T_J, T_{stg}	Operation Junction and Storage Temperature Range	-55~150	℃

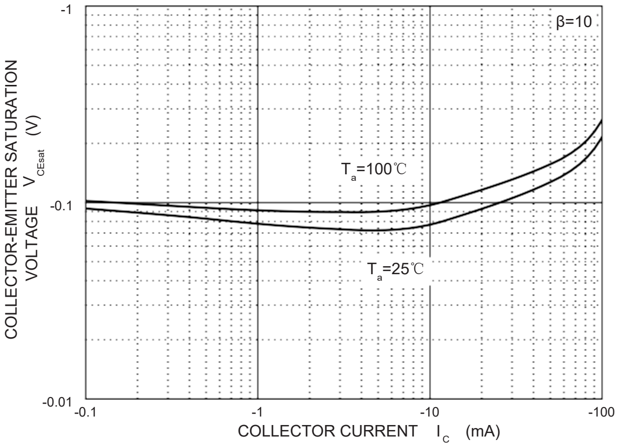
ELECTRICAL CHARACTERISTICS(T_a=25℃ unless otherwise specified)

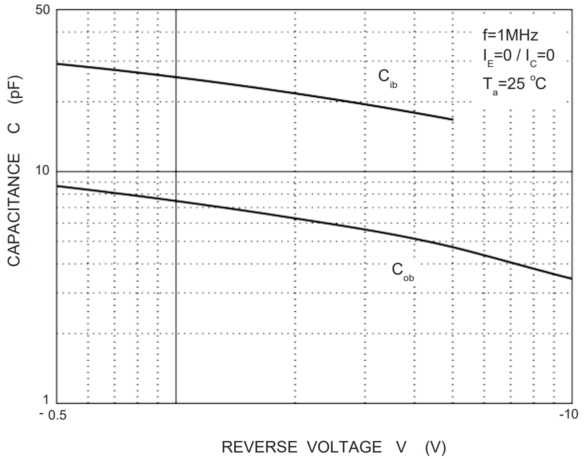
Parameter	Symbol	Test conditions	Min	Typ	Max	Unit
Collector-base breakdown voltage	$V_{(BR)CBO}$	I_C= -100μA, I_E=0	-160			V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	I_C = -1mA, I_B=0	-150			V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	I_E = -10μA, I_C=0	-5			V
Collector cut-off current	I_{CBO}	V_{CB} = -120 V, I_E=0			-50	nA
Emitter cut-off current	I_{EBO}	V_{EB}= -3V, I_C=0			-50	nA
DC current gain	$h_{FE(1)}$	V_{CE}= -5V, I_C=-1 mA	50			
	$h_{FE(2)}$	V_{CE}= -5V, I_C= -10 mA	100		300	
	$h_{FE(3)}$	V_{CE}= -5V, I_C=-50 mA	50			
Collector-emitter saturation voltage	$V_{CE(sat)}$	I_C= -10 mA, I_B= -1 mA			-0.2	V
	$V_{CE(sat)}$	I_C= -50 mA, I_B= -5 mA			-0.5	V
Base-emitter saturation voltage	$V_{BE(sat)}$	I_C= -10 mA, I_B= -1 mA			-1	V
	$V_{BE(sat)}$	I_C= -50 mA, I_B= -5 mA			-1	V
Transition frequency	f_T	V_{CE}= -10V, I_C= -10mA, f = 100MHz	100		300	MHz
Output Capacitance	C_{ob}	V_{CB}=-10V, I_E= 0,f=1MHz			6	pF
Noise Figure	NF	V_{CE}= -5.0V, I_C= -200μA, R_S= 10Ω,f =10Hz to15.7kHz			8	dB

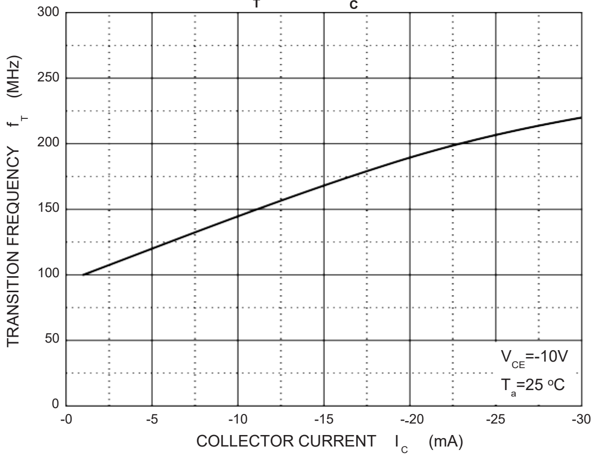

Static Characteristic

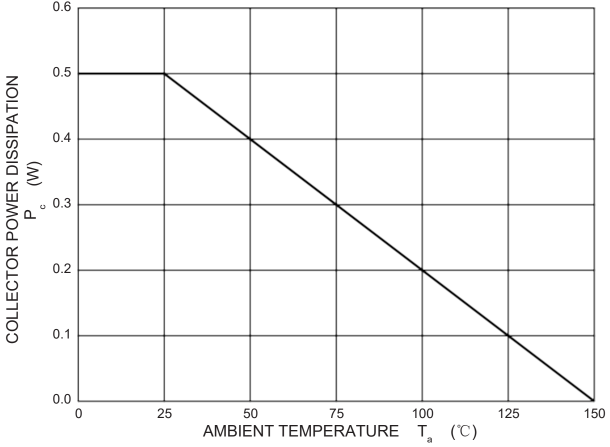

h_{FE} —— I_C


V_{BEsat} —— I_C


V_{CEsat} —— I_C


C_{ob}/ C_{ib} —— V_{CB}/ V_{EB}


f_T —— I_C


P_c —— T_a